

A Medieval Catalan Horticultural Treatise, *Memòria de les maneres de les llaurons*: Introduction, Critical Edition, Translation, Notes and Glossary

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ABSTRACT

The seven known witnesses to a hitherto unpublished medieval Catalan horticultural treatise are compared and analyzed. A critical edition is presented, with introduction, notes, English translation, and glossary. In an appendix, a synoptic edition provides transcriptions of all accessible witnesses to this text.

KEYWORDS

Medieval Catalan culture; manuscripts; philology; horticulture; Barcelona; Miquel Agustí; gardening

RESUM

Es comparen i analitzen els set testimonis coneguts d'un tractat d'horticultura medieval fins ara inèdit. S'hi presenta una edició crítica, amb introducció, notes, traducció a l'anglès i glossari. En apèndix, una edició sinòptica ofereix transcripció de tots els testimonis accessibles d'aquest text.

PARAULES CLAU


Cultura catalana medieval; manuscrits; filologia; horticultura; Barcelona; Miquel Agustí; horts



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TABLE OF CONTENTS

- 1 **Introduction** – 3
- 2 **Critical Edition** – 19
- 3 **English Translation** – 35
- 4 **Works Cited** – 42
- 5 **Appendix I: Synoptic Edition of the Seven Witnesses of the *Memòria de les maneres de les llaurons*** – 46
- 6 **Appendix II: Comparison of a sample *Memòria* chapter with corresponding chapters in six representative medieval treatises on agriculture** – 87
- 7 **Index and glossary of terms related to horticulture** – 91



1 Introduction

In 2015 in the pages of *Manuscrits: Revista d'Història Moderna*, I laid out arguments for the existence of an early Catalan treatise on horticulture, the *Memòria de les maneres de les llaurons*. This late medieval opusculum gives instructions for Barcelona and its environs on the cultivation of four types of garden crops: cabbages and other leafy vegetables; members of the onion family; root vegetables; and garden fruit such as melons, watermelons and calabash. The treatise has not come down to us whole but rather in fragments – some of which are much more complete than others – contained in six manuscript witnesses and adapted in one printed work, i.e., the first part of Miquel Agustí's well-known *Llibre dels secrets de agricultura* (1617), expanded and translated into Castilian in 1626 as *Libro de los secretos de agricultura*. With my aforementioned article on the *Memòria* serving as backdrop, the present study endeavors to create a critical edition based on these fragments, and to serve as a guide for the identification of other witnesses to the *Memòria* that may come to light in the future.

The six manuscript fragments are summarized in the following list, presented in approximate chronological order. The initial abbreviations reference the city of the library where each manuscript is housed, followed by a tentative date of composition. Full codicological descriptions, when available, are referenced in footnotes.

M = Late 14th century. Sixteen chapters, undifferentiated from the texts that precede and follow them, beginning on f. 211v3 and extending to f. 213v1 of ms. 10211 of the Biblioteca Nacional de España, Madrid (*Sciència.cat DB* ms1363; *BETA* manid 2288).¹

N = 15th century, second quarter. A fragment titled *Memorial per lo exercici del conrear* (f. 53r) containing seventeen chapters that occupy ff. 53r-55v of ms. Brancacciana III A 11 of the Biblioteca Nazionale Vittorio Emanuele III of Naples in a codex dating to the 15th century.²

A = 15th century, third quarter. Folios 1r-5v of a manuscript (*BITECA* manid 2891) in the private collection of the American hispanist Joseph Gwara, Annapolis, Maryland, USA, titled *Memòria de les maneres de les llaurons* (incipit: “En nom de deu sia / asso es mamorja deles maneres deles laurons...”).³

V = 1475-1525.⁴ Most of two folio sides (ff. 95r9-95v25) consisting of fourteen sections bearing the title “De la ortalisa quant se deu sembrar” of ms. 6437 of the Fons Serrano Morales of the Biblioteca Municipal de València (*Sciència.cat DB* ms475; *BITECA* manid 1029).

1. Mario Schiff (1905: 152) dates this copy to the extreme end of the 14th c. (“Écriture de l'extrême fin du XIV^e siècle”). For documentation of other datings and a full codicological analysis, see *Sciència.cat DB* ms1363.

2. The *Catalogo dei manoscritti della Biblioteca Brancacciana* of the Biblioteca Nazionale di Napoli dates this ms. to the 15th c. Lluís Cifuentes i Comamala has dated the script of this fragment more specifically to the second quarter of the 15th c. (personal correspondence). For a description, see Benavent (2007: 14-15, 152-153, 351).

3. Described in Thomas M. Capuano (2006: 236-237). This is the only witness in our corpus for which no published edition yet exists. It is therefore not included in the present study, except for isolated fragments cited in this 2006 article. Lluís Cifuentes i Comamala has dated the script of this fragment to the third quarter of the 15th c. (2013-2014: 37).

4. Dated with full description in Giner Sánchez (1989: 514-517).

B = After 1495.⁵ The fifth part (“Libre quint o quinta part” 119v7) of the *Libre o regla* of ms. 754 of the Biblioteca de Catalunya, Barcelona, beginning at f. 119v7 and extending to f. 122r19.

P = End of the 15th - beginning of the 16th century. Twenty chapters, occupying folios 56v8-62r2 and bearing the title “Del libre quint paladi” (f. 56v), i.e., the fifth part of a treatise titled “De agricultura paladi” (f. 30v) of ms. espagnol 291 of the Bibliothèque Nationale de France, Paris.⁶

As shown in the aforementioned study (Capuano 2015), all the textual witnesses share one remarkable feature in common: although each one shares space in their respective codices with other writings, the *Memòria* material is presented mostly together in each codex as one integral whole. The only exception to this pattern is the sole non-manuscript witness, Miquel Agustí's *Llibre dels secrets...* (1617)⁷, which does not present the *Memòria* material together but rather interspersed with information from various sources. Nonetheless, the *Memòria* material is confined even in this witness to one section titled “Secrets dels horts y de les herbas y hortalisas de menjar” (Agustí 1617: ff. 21r-30r) and surprisingly, even though diverse sources frequently intervene, the *Memòria* borrowings follow the same basic order of presentation of vegetable crops as those presented in the manuscript witnesses.

However, the fragments also differ, and in very significant ways, as can be seen in complete detail in the synoptic edition offered in Appendix I below. Some of the most glaring divergences include the following: *M* and *V* (which follow each other very closely) radically abbreviate the text found in the other witnesses; both *P* and *B*, unlike the others, present the *Memòria* material as the fifth part of a larger work;⁸ *N* contains barely one third of the chapters of the other manuscripts and yet is the only witness to include a chapter on fava beans; and *A* is the only one to provide what may be the original title. Other occasional discrepancies concern the content itself, as, for example, when the witnesses recommend contrary lunar phases for certain operations, or when the prescribed planting, transplanting and harvest times for certain crops vary among witnesses. In an age when the agricultural reality of every community was physically all-encompassing and imposed itself on the collective consciousness, discrepancies such as the latter, when not reducible to simple copying errors, may reflect the climatological constraints known or assumed by each scribe for his region, or perhaps reflect an awareness of local horticultural practice.

In addition to the obvious ways our witnesses diverge from each other, lesser discrepancies beset them on virtually every level as well, including the phonetic, morphemic, lexical, and syntactic dimensions, expressive of the varying time periods and locations of each copyist. The copies span a period of over one hundred years, from the late fourteenth to the early sixteenth centuries, and represent diverse geographical areas. Although there is much uncertainty regarding the specific locations proposed for their places of composition, these range from Aragon for *M* (*Sciència.cat DB* ms1363) to Sicily for *P* (*Sciència.cat DB* ms206) and from València and the Baix Maestrat for *V* and *B*, (respectively, *Sciència.cat DB* ms376; Luna-Battle 2011:10) to Barcelona, the site of the original text, according to the title rubric of copy *A*. No evidence has yet emerged for the location of copy

5. See Capuano (2014: 6) for an explanation of this dating.

6. For a codicological analysis see *Sciència.cat DB* ms206. Also described in Giner-Trenchs (1988:149-151) and García Sánchez (1993-1994: 396).

7. Both this and the Castilian version, published during Agustí's lifetime (Perpiñán, 1626) have been consulted for this study, as well as later editions. For a bibliographic study of this work, see Pablo Núñez (2007-2008).

8. This larger work has seen three recent editions: Luna-Battle (2011), Martí Escayol (2012: 25-29, 95-125) and Capuano (2014). This larger work is attested in yet another witness containing six parts, of which the fifth is “de sembrar e plantar ortolises” as reported by Gabriel Llabrés (1895: 151), but the whereabouts of this manuscript is currently unknown.

A, nor for *N*. Add to these disparate elements the unique stylistic conventions each scribe seems to prefer, and the result is a horticultural treatise represented by an unusually wide range of variants. By comparing the versions of all seven of our witnesses yet another layer of variation appears: only in rare instances did the copyists feel compelled to copy verbatim from their antecedents, opting instead for a paraphrasing strategy that imprints with a unique stamp each manifestation of the *Memòria*. Indeed, each scribe appears to eschew the task of copying *stricto sensu* and opts instead to scan his source and then, taking his eyes away from its forms, render its ideas in his own local idiom. Appendix I shows many examples of this strategy along with the aforementioned discrepancies of time and place, as does this sample passage on cultivating winter cabbages. *V⁹ A¹⁰ P B N Agustí 1617*

<i>V⁹</i>	<i>A¹⁰</i>	<i>P</i>	<i>B</i>	<i>N</i>	Agustí 1617
[f. 95r] Labor de cols verts de ivern se sembren de mijant juny a mijant juliol y deuse tresplantar de mijant agost fins a mijant de hembre ab molts fems en lluna vella y fan a regar de .III. en .III. dies fins que sien preses y apres segons quen haura mester	[f. 11r] Cols qui son bones djuern ço es que hom les menja en aquell temps sembra hom migant juny ho entorn en luna vella, e que agen bon goret fet ab eras & ab molts fems no massa empero mas per cominalesa. E fan a regar souen & deu les hom tresplentar de migant agost tro migant setembre en luna vella. & volen molts fems al tresplentar mes que al sembrar. E deu les hom regar de tres en tres dies tro que son preses e [pulys	[f. 56v] de cols de yuern les quals fan a sembrar migant juny en luna vella e que hi aja e stia ben barbeytada cauada e femada la terra pero ab mesura lo femar ni maça ni poch, e fan a regar soujnt he deuen se tresplantar de migant agost fins migant setembre en luna que sia vella e no volen masa fem be que en lo tresplantar ne volen molt mes que al sembrar e regales dos vegades la sepmana entro que sien ben preses	[f. 119v] cols que son bones diuern ço es que hom les menge en aquell temps, sembra les hom mijant juny en la luna vella e quey hage bon guaret feyt ab vores e ab fems covinentment, no massa. E fan a reguar souin e deuse tresplantar de mijant agost a mijant setembre en la luna vella e no volen molts fems, e al tresplantar molt mes que al sembrar e reguense de IIII en IIII tro son ben preses puy fan a reguar dues vegades la	[f. 54r] les Cols que hom vol que sien bones per ljuern sembrar les mijant Juny e en Juliol en luna vella e que hagen bon goret fet ab eres fan a transplantar de mijant Agost tro a mijant setembre en luna vella e no spiguen ne son tan longues e volen molts fems al transplantar molt mes que no al sembrar. E regales hom tantost com son plantades e despuys de tres en quart dies. Despuys que sien preses fan a regar dues voltes la setmana	[f. 23r] Si voleu menjar Cols en lo hiuern, se sembran en lo luny en Lluna vella, apres que haura fet lo ple, fent-los bon goret, ab molt fems, ben podrits y reposats, hanse de regar souint, trasplantantlas à mig Agost, fins à mig Setembre, apres al cap detres setmanas collarles ab fems y terra. Lo tresplantar tambe ha de ser en Lluna vella, que en la noua posarian molt molt argull, y espigarian prest: se han de regar de [fol. 23v] tres

9. In this table the two Castilian versions (*M* and Agustí 1626) are omitted in order to allow for a comparison among monolingual (Catalan) renderings only. However, it will be noticed in the Appendix that *M* follows *V* very closely indeed, even favoring the subject noun 'seeds' ("simjente" in *M*, "lauor" in *V*). See Appendix, rows 2-15 to compare all the versions together of this passage.

10. No published edition of *A* exists as of this writing, although Joseph Gwara, owner of the codex, has promised a full edition and study. For this reason, all quotations from *A* presented in this article derive solely from published excerpts in Capuano 1994: 254-256 and Capuano 2015, and from the facsimile of folio 11 as published in Capuano 2006: 240.

	com hom veu que son preses, se deuen regar dues vegades la setmana		setmana		en tres dias, fins sian agafades, y vnides ab la terra, [f. 23v] y quant veureu ò hauran menester.
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Leaving aside the obvious discrepancies of phonetic, morphemic and lexical quality, other discrepancies noticeable here include diverse syntactic structures, paraphrasing, and content that all corroborate our claim of a broad scribal license to diverge, adapt, and interpret a common source. We note, for example, that only three of these witnesses (*A*, *B*, Agustí 1627) clarify the term *cols d'ivern* as those that are consumed at this time; only two (*V*, *N*) allow explicitly for a July sowing; only three (*A*, *B*, *N*) qualify the soil preparation with the phrase *fet ab eras/vores/eres* (i.e., formed into beds); only three (*A*, *P*, *B*) caution that the manuring of the soil, while heavy, should not be excessive, expressing this concept through unique paraphrasing (respectively, “no massa empero mas per cominalesa”; “ab mesura lo femar ni maça ni poch”; “e ab fems covinentment, no massa”); that the watering regime prescribed for the transplants varies from every three days (*V*, *A*, Agustí 1617) to every four (*B*) to every three or four (*N*), to every other day (*P*); and that the watering regime prescribed for the period after the transplants are established varies from as needed (*V*, “segons que haura mester”) to twice weekly (*A*, *B*, *N*), while Agustí 1617 appears to conflate both watering periods (“se han de regar de tres en tres dias, fins sian agafades, y unides ab la terra, y quant veureu ho hauran menester”) and *P* omits this second watering regime altogether.

Such wide ranging discrepancies have made difficult the selection of a base text for the present edition, but we have settled on *B* for three reasons: it is the most unencumbered by obscure readings, it is the least incomplete of our witnesses, and it has received the careful attention of no less than three publications in the last decade.¹¹ We then devised editorial criteria that we believe represent the most conservative approach to a text as incompletely documented as the *Memòria*: into this base text we have merged every complementary passage from each textual witness, provided that the merged passage does not violate or obscure the logic that informs the medieval horticultural science manifested in the *Memòria*. In the process of knitting together into the base text each discrepant passage we have made no attempt to reconcile the variations of form on the phonetic, morphosyntactic or lexical levels, but have rather concerned ourselves solely with content, striving to create a composite of the horticultural instructions contained across the corpus. In so doing we have created a linguistically artificial hybrid edition that weaves together the differing dialectal features of all the witnesses. Each insertion into the base text is accompanied by footnotes indicating its provenance. Because the printing of Agustí's *Llibre dels secrets de agricultura* postdates most of our manuscript witnesses by well over a century, the incorporation of this version's early 17th century prose style into an edition of a 15th century base text produces a reading excessively unnatural in places, but we believe that such inharmonious merging helps underscore the diverse provenance of each witness and serves as a constant reminder that our text is one for which no authoritative version has yet been found. In Appendix I each version is presented separately on its own terms, and for ease of comparison with all other available witnesses is presented synoptically.

There is evidence that as Miquel Agustí composed his work he held in his hands a copy of the *Memòria*, and that it was perhaps more comprehensive than any extant witness. We are indebted

11. Luna-Battle (2011), Martí Escayol (2012: 25-29, 95-125) and Capuano (2014).

to María Antònia Martí Escayol (2008) for discovering the relationship between his *Llibre dels secrets* and *B*, our base text. As he begins his discussion of many horticultural crops in his first book (“*Llibre Primer*”), chapters 4-6,¹² Agustí presents material extracted from the *Memòria*, as Martí Escayol has shown and as can be seen in our synoptic edition. Only after he has incorporated from the *Memòria* what he considers of importance for his purposes does he begin to elaborate from his own experience or cite other authors. It is especially noteworthy that, despite the broad sweep of his *Llibre dels secrets*, despite the complete editorial control he exerts over the wide array of texts he compiles, and despite the unfettered license he gives himself to incorporate, unannounced, observations from his own experience, Agustí almost slavishly incorporates phrases of the sort “com esta dalt dit de las altrás” (23v; ‘as mentioned above regarding the others’). Such phrases are the editorial deictics which the author of the *Memòria* uses to cross-reference topics treated elsewhere in his treatise.¹³ Other examples of this cross-referencing in our six manuscript witnesses include “axi com dich amunt”, “axi com es dit deles altres”, and “axicom dessus es dit” (see Appendix I, row 36).

Such aspects of the editorial process adopted by Agustí are often quite easy to pick out: when he draws from other authors, he usually cites them by name in the right or left margins of the 1617 ed. (though not in the 1626 Castilian version). Although he is not consistent in this practice (as shown by Luna-Batlle 2015), he often takes pains to credit each source individually, at times crowding the margins with attributions to his many sources. The fact that he never mentions an author at the outset of each of the sections on horticultural crops – precisely when he is incorporating material from the *Memòria* – is both perplexing and fascinating. Why would a compiler who takes such pains to credit so many of his sources neglect to do so even once for the *Memòria* material he borrows? We believe that the complete absence of source citations in the opening instructions on each vegetable crop suggests that he was working from a hand written copy of the *Memòria*, and, because the text was most certainly anonymous, as it is in all our manuscript witnesses, Agustí felt it impossible to quote it with attribution. To visualize more effectively his process, we offer a short section below: in the first column we cite from our critical edition of the *Memòria*; in the second, Agustí’s text; and in the final column, the marginal notes including citation of sources as given in the 1617 Catalan version. The text corresponds to rows 45-49 in Appendix I.



12. Chapter 4 is “Secrets dels horts, y de les herbas y hortalsas de menjar” (f. 21r-25v), Chapter 5, “Secrets de las raelas de las herbas de ortalsas” (f. 25v-28v), and Chapter 6 “De secrets de les fruytes de les herbes” (f. 28v-30r).

13. For examples of a similar adaptation of his sources, see the discussion of Agustí’s “traducció servil” in Luna-Batlle (2015: 120).

Critical Edition. (See Appendix I rows 45-49).	Miquel Agustí, 1617, f. 24r.	Agustí's marginal citations (1617, f. 24r)
<p>[8] De spinachs</p> <p>Spinachs menja hom en l'Avent de Nadal. E haquests se volen sembrar mijant agost ab la luna vella ab molts fems, e fan a reguar a vagades com hom coneix que o han ops. E aquests spinachs són bons de ivern [e] en Quaresma.</p>	<p>Per fer espinachs que seran bons en lo luern y Quaresma</p> <p>Si voleu fer Espinachs que seran bons en lo luern y Quaresma, los sembrareu en lo mes de Agost en Lluna vella, ab molt fems, y fan a regar quant veureu ho auran menester, y axi seran bons de luern y Quaresma</p>	<p>Espinachs per lo luern y Quaresma</p>
<p>[9] De spinachs encara</p> <p>Encara, altres spinachs sembra hom mijant setembre tro mijant octubre en la luna vella. E regua'ls hom com ho han mester, e sembra'ls hom ab molts fems. E són bons de tota Quaresma, si és alta o baixa.</p>	<p>Altres Espinachs podreu fer per la Quaresma, o sia alta, o baixa, si los sembrau a mig mes de Setembra, fins en mig de Octubre, en Lluna vella, ab molt fems, y regarlos com los altres,</p>	
<p>[10] De spinachs encara</p> <p>Alguns ortolans diuen que la lavor vella és millor que la de l'any mateix</p>	<p>y se fan millors de sement vella</p> <p>Los espinachs son molt bons per menjar en temps de Quaresma: perque sen aparellan de moltes maneres. Lo vs dels Espinachs es bo per aquells qui estan impeditas de la hale, y de la veu, y catarro espes, principalment als matins, prenent brou de Espinachs cuyts ab Mantega fresca, o de Ametlles dolces.</p>	<p>Esteua. Per lo hale, y per la veu, y tos espesa.</p>

As can be seen on this table, Agustí follows the *Memòria* very closely in the first two paragraphs, abbreviates the *Memòria* in the third section (“y se fan millors de sement vella”), and then takes leave of this source to go off on his own in the fourth. There he seems to speak first from his own experience, declaring that spinach is especially good as a Lenten dish because it can be prepared in many ways, and then, citing “Esteua” (Charles Estienne, author of *L'Agriculture et maison rustique*, 1564),¹⁴ he gives the multiple medicinal applications of spinach according to this author. In treating the cultivation of other vegetables, the citations and medicinal indications are often quite extensive, as in the case of lettuce (Agustí 1617: f. 24r-25r) where the initial *Memòria* material (two paragraphs) is followed by an entire folio side of borrowings from Florentino, Mizaldo, Columela, Porta, Pallari,

14. Luna-Batlle (2015: 116) provides a careful analysis of Agustí's sources, showing that the Prior made recourse to several editions of the *Maison rustique*, including the 1570 edition co-authored with Jean Liébaut.

Didimo and Esteua. From all this it should be clear that Agustí's departures from the *Memòria* material are on the whole quite detectable simply by making note of the inception of his marginal attributions and comparing the material preceding them to our other witnesses.

For several horticultural crops, Agustí's marginal citation of authors such as Esteua and Mizaldo begins right away at the outset of the section. This makes it easy to assume that the *Memòria* version he was using simply did not contain information on this crop, whence his immediate recourse to other sources. Examples include Swiss chard (*bledas*, f. 25r); parsley (*iulivert*, f. 25r); asparagus (*esparechs*, f. 25v); and cardoons (*cartes*, f. 28v). Indeed, none of these vegetables is taken up in any of the other *Memòria* witnesses.

However, occasionally we find sections devoted to vegetables and other horticultural products that do not belong to any known *Memòria* tradition, and yet these sections likewise begin with paragraphs for which no sources are named in the margin. Examples include hemp and flax (*canem* and *lli*), f. 25v; artichokes (*carxoferas*), f. 28v; and parsnip (*xaravilles*), f. 28r.¹⁵ Luna-Batlle (2013: 68-69) and Martí Escayol (2008: 295) make it clear that Agustí makes frequent use of his own experiences in his treatise, so we are tempted to assume that he is doing precisely this in the opening passages for these four crops, since they do not coincide with any chapter in our other witnesses. However, Luna-Batlle (2015: 114) shows that many uncited passages are also taken directly or indirectly from sources that Agustí – inexplicably – leaves unnamed. Thus, we must leave open the possibility that such uncited passages reflect this inconsistency. It is less likely, we believe, that they represent parts of the *Memòria* tradition that have been lost in the other witnesses.

Curiously, Agustí avoids the opportunity to acknowledge his use of any manuscript such as the hypothetical handwritten document that we posit as his source. Notably, he does not mention any Catalan source at all on the title page, where he makes his first pronouncement of his indebtedness to previous writers on agriculture. While he dutifully credits French, Latin, and Italian sources, he makes no mention whatsoever of Castilian or Catalan precursors: “Llibre dels secrets de agricultvra casa rvstica pastoril. Recopilat de diversos autors antichs y moderns, de llenguas llatina, Italiana, y Francesa, en nostra vulgar llengua Catalana, per Fra Miquel Agustí Prior del Temple de la fidelissima Vila de Perpinya...” (Agustí 1617, title page). Likewise, in his “Nomina dels autors dels quals se son tretes les materies del present llibre dels Secrets de agricultura, Casa Rustica y Pastoril, los quals estan notats al marge” given in the front material following the dedication to don Fra Onofre de Copons Batlliu, there is no indication among the eighty-six names listed there that any anonymous sources were used for any part of his book. Furthermore, in his “Prolech del autor als aficionats en la professio, o art de la Agricultura...” which immediately follows the “Nomina”, Agustí appears to claim not only that none of his sources were written in his native language, but also that no texts on agriculture even existed in Catalan:

...y encara que moltes persones, de mes subtil ingeni, y en mes auentatjada experiencia, han escrit diuerses coses, y secrets de la Agricultura, Casa Rustica y Pastoril, vns en llengua Llatina, altres en llengua Castellana, altres en llengua Italiana, altres en llengua Francesa, y altres en altres diuerses llengues, vehent que *ningu se es ocupat à escriure en nostra llengua Cathalana*, y pot esser que los que vuy exercitan la dita Agricultura, en nostra Cathalunya, no acertan en fer y posar les coses qual se deu, causantho per ventura, lo no entendre les llengues, perço en consideracio destas cosas, y per estar afectat à dita Professio, y tenir algunas experiencias della, me ha aparegut emplear algunas vigilies, y ratos de temps, particularment, estant desocupat dels negocis de ma Iglesia, en pendre

15. The cultivation of parsnips may indeed belong to the *Memòria* tradition, since we find this crop taken up by two other witnesses. However, there is no correspondence among these three witnesses on this root vegetable (see Appendix, row 123.)

treball de recopilar de diuersos y graues autors, antichs y moderns, y traduyr en nostra llengua Cathalana, modos y traças, per encaminar los que exercitan o voldran exercitar la Agricultura, y ofici pastoril, ajustanthi lo que per experiencia yo sabia, certificantlos, que mon intent, no es estat sino pera que los infinits secrets de la Agricultura, y ofici pastoril fosse comunicats, à tota nostra nacio Cathalana, y especialment als curiosos, y aficionats a ella... (Agustí 1617: f. 5r⁶)

The only way to understand Agustí's apparent unfamiliarity with prior Catalan writing on agriculture and his easily disprovable claim that on this subject “ningu se es ocupat à escriure en nostra llengua Cathalana” (‘no one has taken the trouble to write in our Catalan language’) is to assume that for him and his peers, the only sources worthy of consideration were those that had been authenticated by the printing press. Until someone had “taken the trouble to write”, i.e., to write *about* a certain source text – i.e., to consecrate it by editing it – a manuscript text could be considered, in a way, non-existent. Only printed editions could convey the approbation of the intellectual community of that time, and the stamp of true modernity was borne only by those texts issuing forth from a printing press under the editorship of the “graues autors, antichs e moderns” that he references in this “Prolech”.

If, in spite of his failure to cite the *Memòria*, we accept as obvious the debt that Agustí owes to the *Memòria* tradition, as Maria Antònia Martí Escayol has so amply demonstrated (2008, 2012), a question still remains regarding the material in Agustí that is presented without any source attribution. How much of this material is taken directly from his own experience, how much may derive from lost *Memòria* sections, and how much comes from other unrelated anonymous texts that he might have had at hand in manuscript form, likewise orphaned from any of the “graues autors” that might have given them credibility? This question can be asked not only of textual material found in Agustí, but also of all the material, in any of our extant witnesses, that is not shared with any of the others. For example, only *N* contains a chapter on fava beans; only *P* contains a chapter on head-forming cabbage (“cols de capdell”); and only *B* contains instructions for planting calabash in hills (Appendix I, rows 51, 38, 108, respectively), as well as a chapter on nutsedge (row 124), and one on parsley (row 125¹⁷). In addition, there are many other passages, even those within chapters shared across all the witnesses to the *Memòria* tradition, that are unique to only one witness. How much of this material would have been part of the *Memòria* as it was originally conceived?

The answer to this question will perhaps only become clear as more examples of the *Memòria* tradition come to light. In the meantime, in the present edition, we have endeavored to merge all compatible elements of the seven extant *Memòria* fragments with the goal of reconstructing a tentative version based on what we know so far about this text. By comparing the seven versions side by side and analyzing their style, omissions, abbreviations and elaborations, we have arrived at a version that attempts to incorporate all relevant cultivation instructions for each crop as they may have been presented by the original author. For editorial decisions that seemed unusually problematic, and in particular, for material we have opted to omit from our edition, we have given justification via footnotes,¹⁸ but even the omitted material can be evaluated by means of Appendix I, where we bring together in one place the full transcriptions of all seven witnesses.

16. Emphasis added. This unnumbered fifth folio is the last of the preliminary material in Agustí 1617. Folio 6r begins the work proper with the heading “F. 1r”.

17. Agustí's section on parsley is completely unrelated to the section in *B*.

18. For example, two chapters in *P*, one containing instructions on how to grow a huge calabash and the other on growing mint, begin by appealing to the authority of King Solomon. No other *Memòria* witness makes any mention of Solomon, and due to this marked divergence from the *Memòria* tradition we have excluded these chapters from our edition (but preserved them in the Appendix, row 51, footnote).

Much remains unknown about the *Memòria de les maneres de les llaurons*. It is still not clear why *V* (and *M*, which mirrors it) and *N* contain passages on grapes, fruit trees, grafting, cereal cultivation and wine correction, in contravention to the evidence identifying the *Memòria* as a text devoted to horticulture.¹⁹ *V*, for example, immediately following the chapter on carrots and turnips (95v23-25), adds statements relating to arboriculture and viticulture, including recommendations on grafting, transplanting, and pruning (95v26-96r13) before passing on to an unrelated agricultural menology, the *Capitols singulars de les llauors que deuras sembrar en tot l'any cascun mes* (96r14).²⁰ In fact, the horticultural trajectory that we have assumed throughout this study, and that is announced in the title of the *Memòria* (in *V*, *A*, and *N*) is challenged from one notable historical record. Emilie Goujaud, in her registry of books in circulation in Perpignan in the late medieval period, includes “un livre traitant de la manière de jardiner, de tailler la vigne et de labourer [qui] appartenait au notaire Jean Candell de Perpignan”; this book is cited in the Cartulary d’Alart of 1454 with the entry “un libre del art de Ortalisa e de la podaho e de laurar continent en si dos sisterns de paper”.²¹ Although the current whereabouts of this book is not known and no further details about it have come down to us, the joining together in its title of horticulture with pruning and working the soil (“labourer”, “laurar”) is a clear reminiscence of the similar chapters contained in *M*, *V*, *A*, and *N* relating to viticulture, arboriculture, and wine correction. If we are to continue upholding our theory of a *Memòria* with an exclusively horticultural perspective, then the title cited in the Cartulary d’Alart suggests that already by the middle of the 15th century compilers had merged the treatise on horticulture, or parts of it, with chapters from other writings that they considered important for their purposes. The clear prominence given to horticulture in the title of this lost volume, “un libre del art de Ortalisa...”, together with the titles announcing the same in *V*, *A*, and *N*, reinforces this notion.

This argument has been put forth previously (Capuano 2015: 58-59). The heading given to the chapters on horticulture in *V*, “De la ortalisa quant se deu sembrar” (95r), and the title of the same in *A*, “Memòria de les maneres de les llaurons, de plantar, & de sembrar e de pensar que hom deu fer a tota ortalissa; la qual memòria es presa dels mjors ortolans de Barchinona, specialment qui pensen de orts qui-s reguen” (1r), provide the most compelling evidence that this text had a unique genesis. Now with the information contained in Goujaud’s registry we can speculate that it arose before the middle of the 15th century. Notwithstanding this theory, as an acknowledgement of the uncertainty surrounding the *Memòria* tradition, and in the interest of providing as much information as possible concerning this text and the topics that were adjoined to it in the codices that preserve the *Memòria*, we have opted to provide in synoptic format in Appendix I an overview encompassing even the material *not* related to horticulture (rows 126- 154). It is our hope that as other researchers chance upon fragments of the *Memòria* tradition, our Appendix I will provide a convenient point of reference for this text and its place among the many Catalan agricultural writings that were in circulation during the 15th century and earlier.

It will be noticed by the folio indications given in the synoptic edition that the non-horticultural material is never found integrated into the chapters on garden vegetables in any of the witnesses, although it does immediately follow in *M*, *V*, *A* and *N*. The corresponding passages in *P* and *B* are not even contiguous with the chapters on vegetable cultivation. We offer these facts as further evidence that this non-horticultural material belongs to a source separate from the *Memòria*. Other indications that the add-on chapters are not part of the original *Memòria* include peculiarities of

19. Capuano (2015: 58-59).

20. For an edition of the *Capitols singulars...* see Capuano 1998.

21. Goujaud (2010: 18).

content and style, and these will be taken up briefly now.

One feature that stands out as unique to the chapters appended to the horticultural treatise is a certain penchant for quantification and measurements not found in the *Memòria*. Often found as a way to open a new chapter or section, they include phrases like “Al empeltar deu hom guardar dues coses...” (row 136), “E són tres maneres d’empeltar; la una manera es...” (row 145) and “Podar deu hom les vinyes en dos mesos de l’any, ço es en lo mes de dehembre e en lo mes de janer” (row 126). In another passage we note a similar concern for quantification when the author prescribes how many young grape plants (*mayols*) are needed to plant one *mujada* of vinyard.²² Another stylistic device found only in the non-horticultural material are the sweeping generalizations beginning with “Tot(es)...” as in the phrases “totes plantes de arbres o de vinyes se deuen fer...” (row 154, *P*), “tots arbres que hom vol plantar...” (row 154, *M*), “Tot podar se deu fer en la luna vella” (127) and “Tot mayol de sarment se deu tallar...” (130, *V*). No generalizations of this type appear in any of the chapters on horticulture.

One of the most salient aspects of the *Memòria* is its insistence on performing each horticultural operation in the correct lunar phase, either waxing or waning moon. Waxing moon is referred to as “luna nova” throughout the *Memòria*, but this locution should not be confused with the English phrase “new moon”, when the moon’s illuminated surface is not visible from the Earth. The entire period immediately following the new moon up until the full moon is “luna nova” in the *Memòria*,²³ and this phrase (appearing as “lluna nova” and “luna nueva”) occurs over 20 times. For the period immediately following the full moon, the phrase “luna vella” is used, and for the garden operations discussed in the *Memòria* this phase of the moon, the old or waning moon, is preferred over the “luna nova” by a ratio of 5:1. This imbalance results from the innovation, introduced by the *Memòria* author, of recommending a waning moon not only for planting root vegetables, as per ancient tradition, but also for vegetables cultivated for their aerial parts (leaves and stems), which traditionally are planted in the waxing moon.²⁴ The logic at work in this innovation is that the “downward” influence of the waning moon works as a sort of braking action, preventing leafy greens from growing too fast and bolting, and this renders them more productive over a longer period of time. The phrase “l(l)una nova” (and “luna nueva”) occurs only about 20 times in the *Memòria* chapters (rows 1-125 in Appendix I) while, because of the novel theory on the benefits of a waning moon on aerial vegetative parts, “l(l)una vella” (or “luna vieja”) occurs well over 120 times in the same span.

However, being guided by lunar phase can entail much greater detail than merely knowing whether the moon’s light is approaching fullness or declining toward the new moon. Some passages dictate not just waxing or waning phases, but also specify that garden operations be performed in certain quarters of the moon, as in the following example specifying second quarter: “les [carabaces] que voldreu transplantar las transplantareu en lo mes de abril, tambe en la lluna nova al segon quart”

22. Qui vol plantar huna mujada de vinya espessa ha mester mayols .v. mil .dc.xxv. (V f. 95v; Appendix, row 152).

23. This meaning of *lluna nova* is not registered in Alcover’s *Diccionari català-valencià-balear*; although *lluna vella* ‘the old of the moon’ is (see next footnote).

24. This most basic of astrological tenets has been transmitted uninterrupted into modern times: “Sow all such seeds as root downward, as carrots, parsnips, beets, &c. before the new of the moon” in Robert B. Thomas, *The Farmer’s Almanack* (1799: f. 7r). Even in 21st century almanacs the same instructions appear year after year: “The light or new of the moon (increasing) is in the first and second quarters, and the dark or old of the moon (decreasing) is in the third and fourth quarters. Plant your above-ground crops in the light of the moon. (...) it is widely believed that planting crops that grow above the ground when the moon is waxing will produce rapid germination and growth. On the other hand, plant your below-ground crops in the dark of the moon when it is waning, but not during the last quarter” (Lucas McFadden ed., *The Almanac for Farmers and City Folk*, 2017: 38).

(Agustí f. 29r; Appendix I row 102), and in these examples specifying third quarter:

- [Cols se sembran en lo juny] en lluna vella, après que haurà fet lo ple (Agustí f. 23r; Appendix I row 5).
- [Cols pera Pasqua] sembrareu (...) en lluna vella a la quarta haurà fet lo ple (Agustí f. 23v; Appendix I rows 27-28).
- Les carabaces haveu de sembrar en lo mes de febrer après la lluna haurà fet lo ple (Agustí f. 29r; Appendix I row 94).
- Les pastenagues se sembran en lo mes de juliol en la lluna vella, après que ha fet lo ple en lo matex quart (Agustí f. 27v; Appendix I row 120)
- Los naps se han de sembrar en lo mes de juliol en la lluna vella, en lo quart ha fet lo ple (Agustí f. 28r; Appendix I row 121)
- [Les xaravilles] sembrareu en lo mes de Mars en la lluna vella, après ha fet lo ple (Agustí f. 29r; Appendix I row 123)

All these examples, it will be noticed, come from Agustí 1617, and this insistence on lunar quarters may constitute an elaboration of his own making and not a reflection of his source. Agustí's agricultural theory prioritizes such precision and is amply demonstrated in the complex graphic "Taula pera conixer lo temps en lo qual se pot sembrar moltes maneres de llauor de herbas" (in Agustí 1617: f. 16v-18r).

Other passages prescribe agricultural tasks with even greater specificity – to be performed on certain days within a quarter of the lunar cycle – as in the following example: "Tot podar se deu fer en la luna vella. E deu se hom gordar que no pot hom en lo jorn que és plena car lo ple de la luna no val a les plantes si hom les tocha ans los nou. Mas pessat aquell dia és bo lo podar tota hora, e com pus prop és de la plena val més lo podar (*B*, f. 111r; Appendix I row 127);²⁵ in this recommendation to prune vines only after the seventh day of the moon: "Emperò les vinyes velles deuen esser podades a cap de dos o de tres anys en la luna nova per renovellar emperò tota hora haia la luna mes de .vii. jorns. (*B*, f. 111r; Appendix I row 128);²⁶ and these instructions to plant new vines in the full moon or in the following three days: "E quant seràs en la luna plena aquell dia o pasats dos o tres dies només en la vella lauos planta la vinya" (*P*, f. 30v; Appendix I row 130).²⁷ Other examples of specifying that agricultural tasks be performed only within a certain number of days before or after the new or the full moon can be found in rows 133 ("de la deena fins a la xv luna és millor"), 151 ("que sia passada quinta"), 153 ("La Luna hage .x. djes que sia girada tro en .xv."), and 154 ("en luna crexent com ha x dies que és girada") and crop up in all five of our manuscript witnesses. Significantly however, there is only one example of this degree of lunar specificity in the *Memòria*, and then only in *P* (row 123). The passage in question happens to be one of the few chapters (this one, on parsnips) that show no correspondence among the versions that carry it, and for this reason its place in the *Memòria* tradition may be safely questioned. In other words, outside this one dubious example there is virtually no interest shown in any of the chapters on garden vegetables in any manuscript witness of the *Memòria* toward specifying lunar phase beyond the broad "waxing" or "waning" periods of the moon. It is only after we pass on to the non-horticultural chapters that the prescription of lunar

25. 'All pruning should be done in the old of the moon, and take care to never prune in the day of a full moon because the moon's fullness is not good for working on plants but rather it harms them. But once the full moon is past any time is good for pruning, although the sooner after the full moon, the better'. Note that the same specificity is prescribed in *N*.

26. 'However, old vineyards should be pruned after two or three years in the light of the moon to reinvigorate them, but be sure the moon has been waxing for at least seven days'. Note that the same specificity is prescribed in *N*.

27. 'And when the full moon comes along, on that very day, or within the next two or three days but no later, that's when you should plant your new vines'. Note that the same specificity is prescribed in *B*.

phase begins to specify lunar quarters and days.

This conspicuous shift in degree of specificity within lunar phases sets the non-horticultural chapters even further apart from the *Memòria*, since it is hard to accept that for one and the same author the attention to lunar phase should differ so markedly between horticultural tasks, on the one hand, and those pertaining to viticulture and arboriculture on the other. Yet there is still another aspect of agricultural astrology that distinguishes the horticultural from the non-horticultural chapters in our witnesses: while throughout the entire *Memòria* (Appendix I rows 1-125) the waxing moon is referred to regularly as “luna noua” as shown above, in the non-horticultural chapters this same phrase alternates with the synonymous “luna crexent”. In the chapters dealing with vines and trees the ordinary term “luna noua” is found 20 times, but “luna crexent” also appears (7 times), and it does so in all five witnesses except *M*. In the *Memòria* chapters, on the other hand, “luna crexent” simply does not occur, except once in the same chapter of dubious authenticity on parsnips noted above in *P* (row 123). This suggests that the copyists of the non-horticultural material were all following a distinct textual tradition, one that preserved to a greater or lesser degree what was perhaps the preferred phrase of the original.

There is further lexical evidence that the non-horticultural material found appended to the *Memòria* in *M*, *V*, and *N* derives from a distinct source. Several broadly serviceable phrases that would be unsurprising to find in the *Memòria* simply do not occur there, while in the non-horticultural passages and chapters, they contribute to a sense of distinct authorship. These include the emphatic “sens dupte”, which occurs in the chapter on preserving fruit in *P* (row 150); the phrase *aparellar-se de* ‘to be ready to’, occurring in all five witnesses²⁸ in a chapter on grafting (row 137); and the phrase *cuytar a/de* ‘to be early in’ in *P*, *B*, and *N*, as in the phrase “segons quels arbres se cuyten a brotar o tarden” (*N*, f. 54v; Appendix I row 139).²⁹ It is surprising that this phrase does not occur in the *Memòria*, since the latter places such a premium on early vegetable sowings and early-maturing crops.

Finally, we note a subtle shift in the cast of saints whose feast days mark the inception of many yearly agricultural tasks. The use of saints’ and liturgical feast days as markers for yearly tasks is characteristic of many medieval vernacular writings on the subject, with universally observed feasts such as Christmas day and the feast of St. John the Baptist being among the most common. In Catalunya, the first such reference in an agricultural text comes in one of Ferrer Saiol’s intermittent expansions on his translation (1385) of Palladius’s *Opus agriculturae*, presented here as preserved in the Castilian version of ms. *M*: “E deues saber saber que en el mes de juñjo *antes de sant iohan* quando comença el sol estiçi del estiu... tu deues colgar delos mas gruesos cabrafigos ensartados en vn filo *a manera de paternostres* & fazer vna gujrlanda” (116v, Capuano 1990: 126; italics in the original). Other examples can be drawn from other early Catalan texts on agriculture, such as this reference to Christmas in the *Untitled Miscellany*, “tallaras lo en hun colp lo mati de nadal”; the invitation to practice a sort of *cabañuelas* (Carril Ramos 1988: 126-127) or weather prognostication on the feast of Saint Peter, “Si vols saber dela carestia, o larguesa del any tu pendras esment lo dia de sent pere qui es en juny...” (Capuano 2009: 11, 13); this assurance from the *Capitols singulars deles llauors que deuras sembrar* that nothing will damage spinach after Michaelmas “Spinax poras sembrar dela llauor vella y si non has de vella poras sembrar dela nouella remullada axi com damunt hauem dit, car no li noua res puix sent miquel sia passat” (96r, Capuano 1998: 29); and this advice, from the Catalan translation of the *Pelzbuch* included in codex *V* to plant on the feast of St. Lambert “y si vols quel arbre nos podreixqua plantal a xvij de setembre ques la festa de sent lambert” (*V*,

28. Counting the cognate form *aparejarse* in *M*.

29. This verb phrase appears eight times across all three witnesses in Appendix, row 139. See also row 151, footnote.

101v18-19).³⁰

The *Memòria* is no exception, with numerous tasks assigned on or around the feast of Saint John the Baptist (“sant Johan de juny” *B* 120r, §4 in the present edition), Michaelmas (“sant Miquel” *N* 54v, §27), St. Valentine (“sent Valentí” *P* 6iv, §24), St. Agatha (“sancta Àgatha” *B* 121v, §23) and others. The feast days of lesser known saints enjoying a more localized patronage occasionally appear as agricultural calendar markers as well, as in the example of St. Lambert in the *Pelzbuch* cited in the previous paragraph, perhaps reflecting the devotional customs of the writer’s own community. This may be the case with the mention of the feast of St. Matthias, which is notably absent from the *Memòria* while figuring frequently in the non-agricultural material found appended to it in *M*, *V*, and *N*. The feast of the apostle St. Matthias, celebrated on February 24th, is referenced in *P*, *B*, and *N* as propitious for grafting. In the *Memòria*, on the other hand, none of the eight operations prescribed for February mention this feast day.³¹ This suggests that only for the author of the non-horticultural material was the feast of St. Matthias an important marker. The same could be said regarding the 3rd century Sevillian martyrs Justa and Rufina, whose feast day (July 17) is used to mark the inception of the sowing of turnip seed in two separate chapters in the *Memòria*,³² but July operations do not occur in any of the non-horticultural chapters so no contrast is possible in this latter case.

Finally, we note that both the *Memòria* and the non-horticultural material make recourse to local toponymy. In the purported title of the *Memòria* given in *A* it is “Barchinona” (“...laqual memorja es presa dels mjors ortolans de barchinona...”, f. 1r) while in the non-horticultural material we find two place names: “Valencia” in *B* “hage de cep a cep .vii. palms de alna de Valencia a tots cayres a manera de taulell de stachs” (*B* 110r, row 130),³³ and “Cathalunya” in *N* “En Cathalunya poden les vinyes de deembre de de [sic] Janer” (*N* 56r, row 126). Nothing conclusive can be made of this contrast in place names, considering that such references are constants in medieval Catalan agricultural texts³⁴ and yet they may indeed reflect divergent geographical frames of reference.

In summary, we believe that important elements of style, lexicon and focus create a distance between the *Memòria* and the non-horticultural material that follows it in *M*, *V*, and *N*. This material, consisting in *M* and *V* of somewhat random phrases, and in *N*, of complete chapters on grafting, viticulture and similar non-horticultural concerns, in our view belongs at its source to a tradition totally separate from the *Memòria*, notwithstanding the title of the lost book from the Cartulary of Alart. We look forward to Joseph Gwara’s edition of *A*, and to other possible future discoveries, to determine if these conclusions are justified.

To attempt to understand the socio-cultural context of the *Memòria* is a difficult undertaking, since in our witnesses the authorial voice is so refracted across many generations and the original plan of the work is so obscured by the various formats into which it has been forced. In *M* and *V*, for example, we see a radical reduction of the full text into a series of snippets, where entire chapters are boiled down to a single phrase and the entire work, in this digest form, appears on barely two folio sides. In *N* there is a seemingly arbitrary selection of chapters – just seven of the twenty-six

30. See the Aragonese version of this last example in Capuano 2011: 191.

31. See rows 36, 38 (footnote), 83, 94, 111, 112, 118, and 123. The only saints’ days mentioned in the *Memòria* for February are Saints Agatha and Valentine.

32. One on obtaining head cabbage (*P* 57v-58r, §5) and one in an adage in the chapter on turnips “A sancta Justa e Rufina, sembra la tua nabina” (*B* 121r, §20).

33. “Space the young vines evenly apart seven handbreadths of the Valencian *alna* as when laying out a garden bed with stakes”. The *alna* is a unit of linear measurement equivalent to about one meter (*DCVB* s.v.) The same passage in *P* is “que aja de sep a sep ho [sic] dotze pams ha tots quayres” (Appendix, row 130).

34. See for example, Capuano (1990: xvii-xix; 2009: 4-5).

that appear in *B* – selected, perhaps, to meet the specific needs of the copyist’s local audience. In *B* and *P*, as indicated above, we find the *Memòria* to be incorporated into a larger composition with no indication that it could derive from a separate work. In Miquel Agustí’s *Secrets d’agricultura* (1617) we find, thanks to Martí Escayol’s discovery, that much *Memòria* material is hidden, with no attribution, alongside information taken from numerous other sources, written and oral. And finally, in *A*, judging from the title rubric and the published descriptions of its contents, we confront a version of the *Memòria* that extends beyond horticulture and that recalls the “libre del art de ortalissa e de la podaho e de laurar continent en si dos sisterns de paper” reported by Emílie Goujaud from the Cartulary d’Alart (see above). Only in *M*, *V*, and *P* are we addressed by a first person singular voice, but this voice sheds no light on the obscure origins of the treatise, and in no case does it belong to the original author.³⁵ Still, it is not unreasonable to hope that other versions of this text remain yet to be discovered, and the expectation remains that Joseph Gwara’s edition of *A*, with its strikingly descriptive title, may provide more clues regarding the genesis and historical context of the *Memòria*.

In the meantime, we are left to speculate on its origins and on the historical situation that gave rise to this treatise. To establish a *terminus ante quem* we must begin with *M*, which is the oldest of our witnesses if we accept Mario Schiff’s assessment, who places the script of this MS in the final years of the 14th century.³⁶ The fact that it appears appended, along with numerous other lesser works on agriculture, to a copy of Ferrer Saiol’s 1385 Catalan translation of Palladius’ *Opus agriculturae* (*OA*) raises a number of questions. Was this digest form of the *Memòria* already circulating before it was appended to Saiol’s work? Did Saiol himself append it to his translation? Did Saiol abridge it himself? It is tantalizing to posit that Saiol himself had access to the *Memòria* and that he may be the author of this abridgement, because we know from his own commentary to his translation of *Opus agriculturae* §7.9 that he consulted “diuersos libres”, more than one of which contained the weather prognostication technique that he attributes to “lalcabit moro” (V 73r). This technique, akin in purpose to the Salmantine *cabañuelas* (Carril Ramos 1988: 126–127), is inserted both within his translation of *OA* §7.9 and again at 210v, in one of the lesser unrelated tracts on agriculture, the “Untitled Miscellany” (Capuano 2009: 12), appended to Saiol’s *Libro de Palladio*. If Saiol had access to the “Untitled Miscellany” and did not hesitate to insert it into his translation of Palladius, it is easy to imagine that he likewise had access to some, or all of the other lesser, unrelated tracts at the end of *M* and *V*. Since we know that Saiol finished his translation in 1385, it is not unrealistic to move our *terminus ante quem* back to this year.

In another line of reasoning, we can speculate that if the oldest version of the *Memòria* is the drastically reduced version in *M*, it seems likely that it had already existed in its full form for a significant period before it was abbreviated. This leads us to posit that its origins date to the middle of the 14th century, and one final detail seems to corroborate this dating. The final two folios of BNE MS 10211 (*M*) contain two chapters on the artificial pollination of date palms which to our knowledge remain unidentified and have so far elicited no critical interest. The second of the two chapters deals with how this pollination is to be carried out when the male and female flowers do not open at the same time.³⁷ When the male flower is not open but the female flower is, the gardener is to drill a hole the size of a *cruzado* into the male spathe and extract the male flowers for pollination:

35. For examples in *P* see Appendix, rows 36 and 38 (footnote); in *M* and *V*, row 24. In *P* this *yo* is the voice of the compiler of BnF esp 291, and can be found in several of the texts in this codex. In *M* and *V* it is the voice of the copyist grappling with a perceived inconsistency in the text.

36. Lluís Cifuentes i Comamala (private correspondence) has judged it slightly later, to the first quarter of the 15th c.

37. The date palm *Phoenix dactylifera* is dioecious, i.e., the male and female flowers are on separate individuals.

“sea fecho un forado de la grandeza de un cruzado en la fillola del masclo” (*M*, fol. 245r). The fact that the *cruzado* is a coin minted by Enrique II (died 1379) and that, according to Mateu y Llopis, underwent a devaluation in 1360³⁸ is significant, considering that the same hand that copied these chapters on the date palm also copied the *Memòria* in the same codex. All these details taken together allow us to situate the composition of the *Memòria*, tentatively, around the middle of the 14th century.

Even with this approximate date of composition to guide us, we have found in the *Memòria* scant internal evidence that might explain or help identify the specific local forces that motivated its composition. We are obliged, therefore, to posit only in the most general terms the circumstances that might have surrounded its origin. The plague, which afflicted Barcelona and its environs intermittently during the latter half of the 14th century would have created two parallel demographic pressures on agriculture during this period, one to replace the stricken and another to compensate for the dramatic depopulation via migration away from the region.³⁹ Crop failures, the financial burden of frequent interregal warfare, and endemic social unrest likewise characterize this period and would have necessitated maximizing agricultural output. These factors together could have created a demand among the literate landowners of Barcelona to seek out and document the best agricultural practices of the time. One passage in particular, on the casual intercropping of radishes and cabbages (see note 121) suggests just such an audience. In the chapter on radishes (§18 of the present edition) the author clarifies that, unless one is marketing radishes, they do not need to occupy much space: “Ràvens no deu hom per ells triar terra car baste a hom qui no·ls vol vendre que en los crestes dels solchs de les cols ne fasa hom plantar”. This suggests that a considerable portion of the intended readers may have been proprietors of small, self-sufficient holdings who would benefit from this space-saving technique. MS *N* states explicitly that the provision of this vegetable for use in the home (“per a casa”) is accomplished by planting them in just such spaces: “Per ràvens (...) basten per a casa (...) que·n mete hom en els crestes dels solchs de les cols” (*N* 54v; see Appendix I, row 60). This intercropping detail and the phrase “per a casa” in *N* provide strong support for the theory that the *Memòria*, with its brevity, its simplicity of structure and its straightforward, objective instructions may have been created for landed, literate families occupying the lands and farmhouses around the Barcelona city walls, i.e., for “un públic de propietaris rurals que valora l’autosuficiència de l’explotació agrària” (Cifuentes 2002: 89).

Whatever may account for its origins, the *Memòria* can take its place in the remarkably rich array of early agricultural writing in Catalan. Although of much more modest trajectory than contemporary translations from the Latin and Arabic agronomic traditions, the *Memòria* is significant precisely for its independence from prior models, and for the further evidence it provides for a flourishing school of agricultural writing in the Catalan speaking lands of the fourteenth and fifteenth centuries.⁴⁰

The base text used in our edition here is the text of the fifth chapter (“Libre quint o quinta part”, f. 119v) of the *Libre o regla o ensenyament de plantar o senbrar vinyes e arbres...*, incipit f. 104v) of MS 754 of the Biblioteca de Catalunya. We theorize that the compiler of the *Libre o regla* incorporated the *Memòria* as the fifth of his six part treatise. This incorporation is mirrored in *P*, where the *Memòria* material likewise appears as the fifth book (“Del libre quint paladi”, f.

38. Felipe Mateu y Llopis (1946: 35). Note that *V*, which usually runs parallel to *M*, does not contain these chapters on the date palm. If *M* is a translation from a Catalan source that did in fact contain them, this *cruzado* could conceivably be seen as a calque of *croat*, a term denoting various coins in circulation from the 13th to the 15th century (ibid. 35).

39. Outlined in Ruiz 2007: 42-44.

40. See Appendix II for an illustration of the independence of the *Memòria* from other major agronomic traditions.

56v) of *De agricultura paladi* (30v). The attribution to Palladius is unfounded but common in the late Middle Ages, either because the writers truly believed they were copying Palladius's *Opus agriculturae* or because they wished to invoke its authority.

The editorial norms of *Els Nostres Classics* have been applied throughout the critical edition. Appendix I, however, presents a semi-paleographic transcription of each witness.



2 Critical Edition



En nom de Déu sia. Assò és mamòria de les maneres de les laurons, de plantar e de sembrar e de pensar que hom deu fer a tota ortalissa, la qual memòria és presa dels milors ortolans de Barcelona, specialment qui pensen de ortos qui·s reguen.⁴¹

[1] E primerament parlem de cols, per so com més ne usam que d'altre⁴² Primerament, de cols que són bones d'ivern, ço és, que hom les menge en aquell temps, sembra-les hom de mijant juny a mijant joliol⁴³ en la luna vella, après que haurà fet lo ple,⁴⁴ e que y hage bon guaret feyt ab eres⁴⁵ e ab fems covinentment, no massa; e fan a reguar sovín. E deuen-se tresplantar de mijant agost a mijant setembre en la luna vella, e no spiguen ne són tan longues⁴⁶. E no volen molts fems, e al tresplantar molt més que al sembrar. E reguen-se tantost com són plantades e despuys de tres en quatre dies.⁴⁷ E [pu]lys, com hom veu que són preses, se deuen regar dues vegades la setmana⁴⁸. E no-s deuen metre massa

41. En nom de Déu... reguen] *A*, 1r. No other witness offers a title with such rich information regarding the genesis of this text.

42. E primerament... d'altre] *A*, 1r. The first person plural forms “parlem” and “usam” and the justification given here for treating cabbages before other vegetables suggest a control of the overall design of the text and convey the distinct confidence of authorship. None of the other witnesses attempt to preserve so faithfully such an authorial tone. This feature, among many others, is what makes *A* so indispensable for a complete understanding of the *Memòria* text. However, Professor Gwara's long promised edition of *A*, in his private collection, has not yet been published, a fact which must define the present edition as provisional. The few references to *A* that have been incorporated into the present edition derive solely from previously published excerpts; here, from the plate, published through the generosity of Prof. Gwara, in Capuano 2006: 241. The fact that cabbages are treated first in the *Memòria* may not be arbitrary, since the preeminence of cabbages among all other vegetables has a long tradition, as seen in Cato “*Brassica est quae omnibus holeribus antistat*” (Hooper-Ash 1936: 140).

43. de mijant juny a mijant joliol] *V*, 95r. Four of the seven witnesses prescribe the roughly one-month span of mid June to July for sowing cabbage seed. Those that fail to allow for a July planting (specifying June only) contravene the requirement of sowing in the waning moon, since a new moon falling too early in June would create an impractically short window for sowing. Most temporal prescriptions give a one-month span, whence this emendation.

44. après... ple] Agustí 1617, 23r. Agustí 1617 is the only witness that occasionally specifies lunar quarters. All the others are content to indicate simply whether the moon should be in its waxing or waning phase. Curiously, Agustí 1626 (79) omits this phrase.

45. eres] *N*, 54r. For a similar use in Castilian of *era* ‘garden bed’ see Capuano 1987. *B* gives “fet ab vores” (119v); literally, ‘made with borders’, i.e., in delineated beds.

46. e no... longues] *N*, 54r. The benefit of planting and transplanting cabbages in the waning moon is explained here: in this phase its power to augment is at its lowest point, so the transplants are less apt to bolt or become leggy. Cf. Miquel Agustí 1617: “Lo tresplantar també ha de ser en lluna vella, que en la nova posarian molt argull, y espigarian prest”. The same explanation is given a few lines below by *P* and our base text (*B*). Lettuce plants whose flowering stage can be forestalled by planting in the waning moon are thus “pus saboroses” (*P*, fol. 59r; see also §12).

47. tantost ... dies] *N*, 54r.

48. E [pu]lys... regar] *A*, 1r. We suspect that the original contained three prescribed waterings, all of which are attested if the seven witnesses are taken together, but that are conflated into one

pregon car no se'n fan tant bé. Aprés, al cap de tres setmanas collar-les ab fems y terra.⁴⁹ E per ço les deu hom sembrar e plantar en luna vella,⁵⁰ que no spiguen tantost com ferien en la luna nova ni argullen tant de créxer en alt ni són tant longues com serien. E si per ventura hi romania planter que no fos bo ab les altres, planta-les hom avant tota hora que sia a plantar [e seran bones]. E seran bones a Pascha si seran tart plantades. E si les dites cols han la cama massa longa al plantar, faça-les hom que de aquella part hon deu venir l'aygua al reguar tenga l'ull, car vinent l'aygua les dreçe.⁵¹ E aquestes són bones en Quaresma y ans de Nadal.⁵²

[2] De cols de Pascha

Si vols cols bones al Pascuor, sembra-les en l'agost o en la desexida de setembre fins per tot lo mes de octubre e de noembre, qui-s vol, emperò en la luna vella, e tresplant-les hom tantost que hom coneix que són bones a tresplantar, també en lluna vella,⁵³ ab fems al plantar e al tresplantar, axí com havem dit en les altres, e gita del fem en la rahel de la col dos mostes ha cascuna.⁵⁴ E axí fan a rregar. Mas aquestes fan a plantar spesses per ço com de tals n'i ha que spiguen, les quals fan a rrencar⁵⁵ primeres com hom les veu spiguar.

[3] [fol. 120r] De cols d'estiu

or two in each manuscript either by scribal error or by intentional omission. The first watering is upon setting out the plants, as seen in *N*; the second is every third or fourth day up to the point when the transplants have taken root, as in this phrase from *A* ("com hom veu que son preses"); and the third is twice a week thereafter. Several witnesses, seeing little difference between the middle watering and the ensuing regime, conflate the latter two watering periods. See Appendix, row 14.

49. Aprés ... terra] Agustí 1617, 23r.

50. E per ço...vella] *A*, 1r.

51. This difficult passage elicits an editorial intervention in *V*: "Mas yo dich que més val que-ls giren les rahels a l'aygua" (95r). After all, it makes little sense to lay a sprawling plant with its leaves (and not its roots) toward the irrigation flow. For a full discussion of this passage and this editorial comment, found only in *V* and *M*, see Capuano 2014: 7-8.

52. E aquestes... Nadal] *V*, 95r. Cabbages (*Brassica oleracea*) are generally harvested in the cold weather at the end of the growing season, and can withstand considerable frost, whence this observation to harvest and consume cabbages from this late sowing (performed between June and July) from Christmastime through Lent (December-March). For an even later harvest, see the next section "Cols de Pascha" and for an earlier harvest, see "De cols d'estiu" below. It will be noticed that for each of these sowings the time until harvest is roughly six months. All three of these chapters refer to the cultivation of leaf cabbage and not to the head-forming cabbage variety (*Brassica oleracea* var. *capitata*), which is treated below in "Cols de capdell". Andrés Laguna, referring to head cabbage as *repollo murciano*, provides an overview of the four varieties of cabbage known in 16th Castile (Dubler 1955: 204).

53. també... vella] Agustí 1617, 23v. Cf. "en luna vieja," *M*, 21IV.

54. e gita... cascuna] *P*, 57r. *Mosta* is a variant form of *ambosta* 'the amount that can be taken between the hands' (See *DCVB* s.v. *ambosta*).

55. a rrencar] Agustí 1617. This reading is confirmed by *M* ("y sy brotonaran fazen a descabesçar") even though *B* and *P* present "fan a regar". The latter is in error since here the objective is not to water but to thin out the plants that bolt (i.e., that send up flower stalk).

Cols d'estiu que són bones en veremes e al setembre sembra-les de mig febrer fins a⁵⁶ mijant març en la luna vella e tresplanta-les hom sempre que són bones de tresplantar en luna vella. E volen molt fems al sembrar, mas al tresplantar ne volen molt més, axí com és dit de les altres. Axí mateix del reguar. E seran bones en venemes.⁵⁷

[4] De cols de Sicília

Si vols fer planter de cols de Sicília, sembra-les a .viii. dies ans o après de sant Johan de juny e ti-les a prop de reguar. E com sien grans tresplanta-les e guarda que y fira lo sol tot lo dia.⁵⁸

[5] De cols de capdell.

De cols de capdell se volen ni pus ni més sembrar com les altres cols, però hull-te mostrar en qual manera, no tenint de aquella sement, en qual forma ne poràs fer prodoyr. Primerament, tu cavaràs hun troç de terra, tanta com de les dites cols volràs plantar o sembrar, e aquella faràs molt bé femar. E quant vinga a la festa de santa Justa e Rufina, qui és ha .xvii. de juliol, sembraràs aquella terra de sement de naps, molt espesa, tant que los huns estigen mesclats ab los altres, e rega'ls dos o tres vegades, emperò guardar en lo sembrar que la terra estiga de sahó, e no'ls culles. E com vendrà en la luna plena de febrer com una exada tallant escabesaràs tots aquells naps e sembra sements de cols de qualsehulla natura. E puys sia cuberta aquella sement de terra [e] fem ben podrit, hun dit en groç, e rega-les en covinent e, despuys, un dia per altre ruxa-les ab algun vexell en asò bo fins a tant que sien exides, e despuys dona'ls aygua de dos en dos dies. E quan seran granetes, tresplanta-les e seran cols copades o de capdell.⁵⁹

[6] De erbolam de Pascha.⁶⁰

56. de mig... a] Agustí 1617, 23v.

57. e seran... venemes] *V*, 95r.

58. tot lo dia] *P*, 57v.

59. *P* (57v-58r) is the only witness containing this chapter. The anomalous use of first person singular ("hull-te mostrar") may suggest to some that this is a later accretion, to others it may show the primitive immediacy of authorship. We find the marvelous nature of the process described to be a significant departure from the norm in the *Memòria* traditions discovered so far. In addition, the seven month growing period prescribed here (July to February) seems suspect, for it far exceeds the average span of days to harvest for turnip (50-60) when planted for its own sake; despite the crowded sowing this planting would most certainly run to seed well before February. Nonetheless, the verb *escabesaràs* 'you shall decapitate' (i.e., you shall drag a sharp hoe across the soil cutting away the green growth from the roots), as preposterous as the overall process may seem, does allow us to posit just such advanced maturity as the intended state of the crop. In addition, this chapter shares with another quite typical *Memòria* section (also related to turnips) its use of the feast of Saints Justa and Rufina as a point of reference in the yearly cultivation calendar, thus permitting it to cohere somewhat to the whole. For other references to this feast day, see "De naps" in *P*, 61v and in *B*, 121r, and Appendix, row 121.

60. *Erbolam de Pascha* is 'Easter salad mix' i.e., a mix of the seeds of various vegetable greens sown together for harvest and consumption around Easter time. In Miquel Agustí 1617 this chapter

Arbolam lo qual és bo al Pascuor,⁶¹ ço és, spinachs, colills, bledes e almolls e altres frasques⁶² sembra hom en la entrada de giner, e no y guarda luna qui no·s vol. E volen molts fems e reguar sovint, e no·s tresplanten.⁶³

[7] De erbolam encara⁶⁴

Altre⁶⁵ erbolam semble hom per semblant mijant març, e ab molts fems y regar sovint,⁶⁶ e no s'hi guorda [*sic*]⁶⁷ luna ni·s tresplanten. Tambe podreu fer altre⁶⁷ erbolam, ço és, blets e bledes ab alguns grans d'espínachs⁶⁸ sembra hom a la entrada de abril, e·s fan a femar e a rreguar e no·ls cal tresplantar ni guardar luna.

is entitled “Arbolam de pastors” (24r). We speculate that Agustí encountered in his *Memòria* source either the antiquated form *pascor* ‘Easter’ (found also in *B pascuor*, 119v), or perhaps even more likely, a copyist’s error of *pastor* ‘shepherd’ for *pascor*; since misreadings of *-c-* for *-t-* are ubiquitous in many manuscripts of the period. In either case, in his attempt to make sense out of an unfamiliar word, Agustí mistakenly interpreted this salad mix to be typical not of Easter time but of *shepherd’s* fare, whence his error “de pastors”, his elaboration “y de companya”, and his marginal note “Ortalisa per los pastors y moços”. This misinterpretation results in “Arbolam de pastors, y de companya, fareu en la entrada del mes de janer...” (24r). In his Castilian translation of his own text this error solidifies itself further in the opening lines of the same section on *arbolam*: “Para la familia de la casa de campo, como són trabajadores, y pastores, hareys un arbolam en el principio del enero...” (81r). In *M*, the other Castilian translation of the *Memòria*, no reflex of the word *erbolam* occurs, and no rubric heads up this chapter.

61. At this point we get the strongest evidence yet that a commentator has intervened in the *Memòria* transmitted in *P*, because in this witness we find here a somewhat confusing and unnecessary succession of two lists of the greens making up an *arbolam* ‘mesclun, mix of salad greens’. It seems quite clear that an original author would not have allowed such a succession, which comes about because the copyist or commentator of *P* first feels the need to gloss *arbolam* by giving a list of typical greens making up such a mix, and then returns to the text to faithfully copy the list of greens that comprise the specific *arbolam* presented in this chapter, i.e., the Easter *arbolam*: “Erbolam de Pasqua *se entén la ensalada, ço és, morrito[r]t, ruques, julivert e altres herbes qui són bones per fer ansalada* quant encara espinachs, bledes e altres frasques sembra hom a la entrada de jener...” (*P*, 58r; italics added to emphasize the gloss). Of the herbs mentioned in the gloss in *P*, *morritot* (*morritort*) is garden cress (*Lepidium sativum*); *ruques* (singular, *ruca*) is rocket or arugula (*Eruca sativa*); *julivert* is parsley. The greens making up Easter *arbolam* are spinach, *colills* (tender young cabbage leaves), *bledes* (Swiss chard, *Beta vulgaris* var. *cicla*) and *almolls* (orache, *Atriplex hortensis*). *M* and *V* conflate the sowing times for this and the *arbolam* (or *erbolam*) treated in the following chapter by prescribing both January and March or April sowings. However, the chapter title for this *erbolam* in our base text *B* clearly distinguishes this mix of greens from other combinations of greens by their consumption around Easter time.

62. e altres frasques] *P*, 58r. *Frasques* ‘sprigs’ (singular, *frasca*; *DCVB*: “branqueta prima; cast[ellà] *ramia*”) here appears to mean ‘salad greens’ in a general sense.

63. Found only in *M* (212r) is the phrase “las espinacas solas quieren mucho estiercol” (only spinach requires a lot of manure). Rather than incorporate this phrase into our edition, we have chosen to consider it an anticipation on the part of the compiler of this codex of the treatment of spinach cultivation, which does in fact call for ample manuring (see chapter on spinach below).

64. De erbolam encara] *P*, 58r.

65. Altre] Agustí 1617, 24r. In our base text (*B*) all three types of *erbolam* are treated in the same chapter and no labels are used to distinguish them from each other.

66. e regar sovint] Agustí 1617, 24r.

67. Tambe... altre] Agustí 1617, 24r.

68. ab... espinachs] Agustí 1617, 24r. The copyist of the base text (*B*) slips here, giving “spinachs e alguns grans”.

D'aquí avant no sembra hom spinachs fins a⁶⁹ migant agost.

[8] De spinachs

Spinachs menja hom en l'Avent de Nadal. E haquests se volen sembrar⁷⁰ mijant agost ab la luna vella ab molts fems, e fan a reguar a vagades com hom coneix que o han ops. E aquests spinachs són bons de ivern [e] en Quaresma.

[9] De spinachs encara⁷¹

Encara, altres spinachs sembra hom mijant setembre tro mijant octubre en la luna vella. E regua'ls hom com ho han mester, e sembra'ls hom ab molts fems. E són bons de tota Quaresma, si és alta o baixa.⁷²

[10] De spinachs encara⁷³

Alguns ortolans diuen⁷⁴ que la labor vella és millor que la de l'any mateix⁷⁵ e fan axí: meten la labor en huna senalla e cusen-la, e puys, ab huna corda,⁷⁶ meten-la en hun pou en l'aygua e lexen star .vi. o .vii. jorns. En après, descusen-la e meten la labor dins en altra⁷⁷ senalla; puys tornen cosir la senalla e meten-la en lo pou en guisa que no toch en l'aygua e stigue-y .iiii. o .v. jorns. E lavors la labor és grillada, e sembra-la hom ab molts fems e ixen tantost.⁷⁸

[11] [fol. 120v] De letugues

69. fins a] *P*, 58r.

70. menja... sembrar] *P*, 58r. The base text (*B*) does not mention the practice of consuming spinach during Advent, although it does use the same phrase ("en l'Avent de Nadal") in the chapter on lettuce that follows.

71. encara] *P*, 58v.

72. The harvest of this fall sowing of spinach lasts throughout Lent, whether the lenten season falls early (*alta*) or late (*baixa*). Cf. "Altes o baixes, a l'abril les Pasqües" (*DCVB* s.v. *Pasqua*).

73. encara] *P*, 58v.

74. Both the base text *B* and *P* make direct report here of what "some farmers say" ("alguns ortolans diuen...") regarding saving spinach seed and regarding the method they use ("e fan axí") of pre-soaking the seed, in this way reinforcing the claim made at the outset of the work (in *A*) that the agricultural practices of the *Memòria* are indeed taken from the best farmers of the region ("és presa dels milors ortolans de Barcelona, specialment qui pensen de orts qui-s reguen", *A* 1r). Germination rates of viable spinach seed can vary widely depending on soil temperature, so pre-soaking is recommended and widely practiced in modern horticulture as well.

75. Agustí (1617) confirms this preference for aged spinach seed: "En açò fa molt al cas la edat de la llavor, (...) perquè, com tinc dit, que lo porro, cogombre, llimoners y toronger venen més prest de llavor nova que de vella y, al contrari, lo julivert, *espinachs*, morritort, orenga, seliandre venen millor de sement algun poch vella" (23r, italics added for emphasis).

76. ab huna corda] *P*, 58v.

77. altra] *P*, 58v.

78. e ixen tantost] *P*, 58v.

Les letugues primarenques sembra hom mijant hagost o de⁷⁹ setembre tro mijant octubre en la luna vella ab molt fems e fan a regar com ops ho han. E tresplanta-les hom en l'Avent de Nadal ab fems en la luna vella,⁸⁰ e regua-les hom de .viii. en nou dies per amor de les jelades.⁸¹

[12] De letugues encara⁸²

Algunes letuges sembra hom de noembre tro a mijant deembre e tresplanta-les hom de giner. Al sembrar e al tresplantar guarda hom la luna vella perquè ne són pus saboroses. E met-hi hom⁸³ molt fems, reguant quant ops o han.⁸⁴

[13] De alls

Alls planta hom mijant dehembre⁸⁵ en la luna vella en terra ben cavada e guaretada menys de fems, e fan a reguar en loch de reguiu en manera que·s pugen regar⁸⁶ de .viii. en .viii. jorns. E si no·ls planta hom de dehembre, plante'ls hom de giner en la luna vella, mas més valen los primarenchs de dehembre per ço com la neula⁸⁷ de maig no·ls pot noure per ço com són ya crescuts. E no fan a plantar clars, ans deu haver de hun a altre .iiii. o .v. dits, no pus.⁸⁸ E quisvol bé pot sembrar entre los alls primarenchs alguns grans de spinachs e fan se fort bells, e de letugues e fan-se belles. Si vols que·ls alls no grillen, fes que si los alls són plantats en luna vella, arranqua'ls en luna nova, e si són plantats en luna nova, arranqua'ls en luna vella. E nota com los plantaràs volen ésser solament hun gra d'all, e de gra en gra axí fan

79. hagost o de] *P*, 58v.

80. vella] *P*, 58v.

81. per... jelades] *P* 58v. *P* is the only other witness that allows for sowing late season lettuce in August and the only one that establishes an explicit connection between watering and protection against frost (“regar-les has (...) per amor de les jelades”). Maintaining proper soil moisture can prevent damaging heat loss in the light frosts of Advent (December).

82. encara] *P*, 59r.

83. guarda... met-hi hom] *P*, 59r.

84. Following this chapter and preceding the next on garlic, *P* inserts (59r-v) two long anomalous chapters attributed to Solomon the Wise (“lo savi Salamó”), one on how to grow an unusually large calabash and another on the propagation of mint by means of fly feces. We have opted to omit both since they appear to be accretions by the compiler of *P*. Transcriptions of these two chapters are offered in our synoptic edition (Appendix, row 51, footnote) and in Martí Escayol 2012: 123.

85. *P* (6or) and *B* are the only witnesses that prescribe mid December for planting garlic; the other witnesses prescribe mid November. Agustí 1617 (27v) contrasts the late planting in January with a November planting two months earlier.

86. en manera... regar] *P*, 6or.

87. *B* has “luna” and *P* “lluna” (6or), both in error; here low cloud cover and haze (“neula” ‘fog’ in the other witnesses; “niebla” in *M*, 212r) are associated with May weather patterns and are blamed for the slow maturation of garlic planted in January.

88. o... pus] *N* (54v). There should be a space of about a hand’s breadth between each garlic clove, an interval that is here considered a thick, not thin sowing (“no fan a plantar clars”). This is consonant with the spacing prescribed in *P*, “fan a plantar clars en modo que aja huna gran mà de la hu al'altra” (6or).

a plantar.⁸⁹

[14] De scalunyes

Si vols fer scalunyes, hages una ceba e tall les rahils e après leve'n la terça⁹⁰ part de la ceba envés lo grill, en rodó, e fica-li grans de alls, .iii. o .iiii., e cobre-u de terra e hauràs scalunyes.⁹¹ Ítem, en après altre manera: prend[r]e les scalunyes, una mota, e lexa-les devall terra e en lo mes de maig trau-les de la mota, fe'n de cascuna scalunya sa part e planta cascuna per si e fer s'à de cascuna scalunya huna mota.⁹²

89. E nota... plantar] *P*, 6or. To close out this chapter on garlic, *P*, 6or–6ov adds instructions on how to make garlic taste like mustard. We suspect this to be another accretion by the compiler of *P* (see note 84) because of the anomalous instance of second person possessive (“e puys planta ton all”) not found elsewhere, and because of this compiler’s penchant for marvels and manipulations of nature (such as here, the insertion of a mustard seed into a garlic clove). Here is the full text: “E si per ventura volies fer de huna cabeza d’alls que vingués axí groça com lo puny o pus groça, pendràs lo gra de l’all e foradar-l’as ab huna estaqua que sia molt prima, però que lo forat no li pas, e puys dins aquell forat metràs hun gra de senapi e puys planta ton all e farà’s molt gros. Però nota que sempre la sua sabor tira al senapi, però és molt bella cossa”.

90. terça], *P* 6ov; *B* terra.

91. This chapter on growing “scalunyes” by inserting garlic cloves into an onion qualifies as one of the “marvels of nature” of the dubious sort such as are so often encountered in medieval scientific literature. As such, it seems somewhat out of step with the objective horticultural practices of the rest of the text. However, our understanding of the passage hinges on the meaning of this “scalunyes” (s.v. *ascalunya* in *DCVB*). The term may here refer to immature onions, i.e., the greens or tender stems of the onion before bulb formation (in English, “scallions” or “green onions”), since, after all, the “grill” or shoot that emerges from a stored onion is indeed a type of “green onion”. However, *DCVB* s.v. *ascalunya* gives the meaning ‘shallot’ (“Planta liliacea: *Allium ascalonicum* L. (Cat[alunya].; cast[ellà] *escaluña, chalote*”). Botanically, the shallot is considered a variety of onion (*Allium cepa* var. *aggregatum*) which, like garlic, has bulbs consisting of numerous cloves; this similarity may have given rise to the process described. More likely, *scalunya* in this chapter refers to chives (*Allium schoenoprasum*) as in the 14th century *Sinonima* (“Ynule galiçe, i. escalonas de çebollas muy pequennas”, in Mensching 1994: 161), since the use of the words *mota* ‘cluster, tuft’ in *B* and *mata* ‘clump’ in *P* suggest the latter species’ habit of growing in bunches (see also next footnote). Nonetheless, the process described is fraught with difficulty from a botanical standpoint, since garlic cloves (*Allium sativum*), even if inserted into a fresh onion, cannot themselves transform into separate species such as *Allium schoenoprasum* (chives) or *Allium cepa* (green onion). Whether the insertion of garlic cloves stimulates growth from an onion bulb that is somehow reminiscent of green onions is a matter for the horticultural laboratory. Note that *P* has a different version of these instructions, although the process described is the same: “Si vols fer escalunyes, pendràs una seba e talla-li molt bé les rahels e après despulla-la en manera que la terça part ne vaga en aquella despulla, però que la seba començ a grillar, e despulla-la tant fins que lo grill te romanga redó, e puys pren grans d’all e fica’ls en aquell grill en tant que n’i metes tres o quatre e cubri-los de terra, e axí auràs escalunyes” (6ov).

92. *P*, 6ov implies that it is by means of the first process (inserting garlic cloves into an onion that has had two-thirds of its bulb peeled away from the core) that a gardener may achieve a cluster of “escalunyes”: “E puys, com ne tingues una mata ne tendràs moltes, ço és, que tingues soterrada aquella planta dejús terra e com vinga en lo mes de maig trau-les e departex-les de cap en cap e puys planta cascun cap per si e de cascun cap auràs una planta. Cosa provada”. However, in *B* the corresponding passage constitutes a second set of instructions separate from the first, applicable to those who wish to propagate “escalunyes” from an already established cluster.

[15] De porros e cebes

Porros e ceba porrera⁹³ sembra hom en l'entrant de març en la luna vella tro mijant març, e no se poden cremar per lo fret,⁹⁴ y també de més primarenchs, en lo mes de janer y febrer. Per haver llavor de ells per tenir-ne en lo estiu, se plantaran en lo abril, maig o juny; per tenir-ne en lo hivern, se plantaran en lo agost, setembre y octubre.⁹⁵

La ceba fa a sembrar clareta per ço que faça més groça e bella e⁹⁶ meta millor mata, e volen bon guoret e no massa fems, e fan a reguar de .ii. en .ii. dies la setmana o més si ops o han. Emperò, los porros volen molts fems.⁹⁷ E dien alguns que hom deu cavar la llevada, e ben plana e sembrada de bon fem ben podrit, e despuys sia homplit aquella llevada de aygua e ab aquella aygua sembra la llavor de la seba e vendran molt millor.⁹⁸ E fan a tresplantar los porros, axí com la ceba porrera, de mijant agost fins mijant setembre⁹⁹ en la luna vella.

Los porros volen molts¹⁰⁰ fems al tresplantar, mas a la ceba porrera¹⁰¹ no cal fems, mas vol terra bé cavada. Com tresplanta hom los porros volen que hom los planta spessos, que no hage de hun a l'altre més de hun dit,¹⁰² e volen aygua de .iii. en .iii. dies tro sien presos.

La ceba deus tresplantar en maig fins migant lo mes de juny en luna plena e après la met dejús terra ab molt fem mesclat ab la terra.¹⁰³ No·s vol tresplantar tan spès mas bé vol que hom la plant spes covinentment. Mas puy sòn preses volen-se reguar .ii. vegades la setmana, [e] les primeres vegades se volen entrecavar molt.¹⁰⁴

E los solchs dels porros sien ben amples¹⁰⁵ E de hun solch a altre hage un bon

93. ceba porrera] *V*, 95r. *B* gives “cebes e porella” (“Porros e cebes e porrella sembra hom...” 120v), undoubtedly an error for *cebes porreres*, a variety of onion with a leek-like shape similar to the *calçot*, which is also known as *ceba porrera* (Vallès *et al.* 2014: 260) because it too is elongated and does not form a bulb. It is of interest to the history of the *calçot* that the *ceba porrera* in this chapter, like the *calçot*, is hilled in order to more thoroughly blanch the tender stems. This chapter thus creates a distinction between onions without bulbs (“ceba porrera”) and onions with bulbs (“ceba rodona”), the subject of the following chapter.

94. e no... fret] *P*, 60v. Although onions are frost hardy when mature, seedlings cannot survive a frost.

95. y també... octubre] Agustí 1617, 26r.

96. faça... bella e] *P*, 60v.

97. Emperò... fems] *V*, 95r.

98. E dien... molt millor] *P*, 61r. The horticultural sense of *llevada* is akin to a raised bed or seedbed, i.e., a portion of ground, usually rectangular, destined for planting one or more vegetable crops. *DCVB*: “En els bancals, llenca de terra més o menys llarguera on sembren llegums sense fer cavallons (Massalcoreig); llenca d’hort entre dos cavallons, que es rega d’una vegada (Calasseit)”.

99. los porros... setembre] *V*, 95r.

100. molts] *V*, 95r.

101. We have supplied “ceba porrera” here in keeping with the contrast in progress in this chapter between leeks and bulbless onions. In *B* a blank space is left in this place (“Mas a la [blank] no cal fems”).

102. *P* recommends a less dense spacing (“e fes per manera que de hun porro a l’altre aja dos o tres dits”, 61r), which is much more in line with modern practice.

103. deus tresplantar... ab la terra] *P*, 61r.

104. les primeres... molt] *P*, 61r.

105. y los solchs... amples] *V*, 95v. As seen above, the author alternates between instructions for leeks and instructions for bulbless onions. As *B* switches away from the transplanting regime for

forch o una mà de una a l'altra e seran belles.¹⁰⁶ E quisvol pot plantar cols e ràvens e fan-se molt bé entre los porros. E los porros fan a entracavar [fol. 121r] e cubrir¹⁰⁷ ab terra.

La labor dels porros e de les cebes pot hom axí tenir: que là hon són tresplantats leix hom hun solch o dos, aytants com hom se vulla, los quals spiguen, e leix hom assahonar la labor, e que hom l'astoig bé.¹⁰⁸

[16] De cebes rodones de salvar

Ceba rodona de salvar sembra hom mijant giner en luna vella per ser primarenca, y se'n sembra de febrer y de mars,¹⁰⁹ e en guaret ben fet ab molts fems. E rega'ls hom sovín e tresplanta-la hom com és creguda. Per guardar-la de fret y gelades fareu los remeys que tenim dits.¹¹⁰

cebes to that required by *porros*, he begins with the dubious phrase “E fan a plantar present [*sic*] los porro”, which is omitted here.

106. un bon forch... belles] *P*, 61r; *forch* is a linear measurement equal to the distance between the thumb and index finger fully extended (“Mida equivalent a la distància entre el cap del dit polze i el del dit índex, tan separats com sia possible” *DCVB* s.v. *forc*.)

107. In *B* we find *cullir*, which we have corrected to *cubrir* ‘to cover’. The full text of *B* here is “E los porros fan a entracavar [*sic*] e *cullir* [*sic*] ab terra axí com los porros [*sic*]”. The final phrase “axí com los porros” represents another error on the part of the copyist, who has apparently omitted the last example of how the cultivation of bulbless onions compares with that of leeks.

108. Agustí 1617 includes a detail not found in the other witnesses regarding the timing of leek plantings for seed collection: “per haver llavor de ells per tenir-ne en lo estiu, se plantaran en lo abril, maig o juny; per tenir-ne en lo hiuern, se plantaran en lo agost, setembre y octubre” (26r), but this note may derive from Agustí’s personal experience or “obra personal” (as in Luna-Batlle 2013: 69).

Note that at this point *P* adds a paragraph on stimulating the swelling of onion bulbs and on preventing stored onions from sprouting that seems to represent a later accretion. The fact that the passage appears at the end of the chapter reinforces this judgment; the use of the first person pronoun in “yo he vist”, the formulaic “e és provat” and the contrived borrowing from medicine of the cauterization process are features not prominent anywhere else in the corpus: “yo he vist que com són axí com la gruyxessa de hun bou les descalsen de la terra e fan-se'n molt grosses, e és provat. E si vols que no grillen axí prest, com les enforçaràs per voler-les salvar leva'ls ab un gabinet totes les barbes, ço és, les rahels. E puy met hun ferro en lo foch e com serà molt e ben vermell, crema allà hon an estat les barbes, e puy met-les a salvar. E açò val molt [per]què no grillen axí prest” (fol. 61r-61v).

109. per ser... mars] Agustí 1617, 26r. Another detail offered by Agustí 1617 relates to the usefulness of fertilizing onions with manure tea made from pigeon and chicken dung. However, the presence of vocabulary uncharacteristic of the *Memòria*, such as *samal* (a receptacle for transporting goods on horseback) and the verb *femar* ‘to fertilize’; and the very mention of specific animal sources for the manures prescribed suggest strongly that this passage is not original to our text and likely comes from Agustí’s own experience: “és molt bo destrempar ab aygua ab una samal fempta de coloms o de gallina y femar-ne la terra” (26r).

110. per guardar-la... dits] Agustí 1617, 26r. The phrase “que tenim dits” we suspect is a vestige of the primitive organization of the *Memòria*, because Agustí has *not* mentioned previously *any* measures that protect young onions from frost, nor is there any such passage in the previous chapter on leeks, a closely related crop with similar susceptibilities. In fact, nowhere in this division of his work (“Secrets dels horts, y de les herbas y hortalisas de menjar. Cap. IIII”, 21r) is there any mention of precautions to be taken against cold weather.

E decontinent que hom veu que és bona a tresplantar, en abril o en maig –que quant mes primarenca és,¹¹¹ mes val– fa a tresplantar en la luna vella, emperò lo Pal·ladi diu que en lluna que sia nova.¹¹² E fan a plantar¹¹³ com pus som pot hom,¹¹⁴ per ço com millor ceba met, e basta-li que solament sia cuberta de terra la caboça.¹¹⁵ No vol fems al tresplantar, mas vol-ne al sembrar axí com damunt havem dit. E fa a reguar, pus és tresplantada, de .iii. en .iii. dies e de entracavar hun dia la setmana. Guardar-se deu hom com la regua que la hora sia clara, car fort li nou com se regua ab leig temps e no se'n fa tant bella ni tant bé.

Qui vol haver de la lavor, planta de les cebes grosses, de les pus belles que trops, mijant noembre e faran lavor. E leix-les hom assahonar e stoig-les hom tro al temps que les deu hom sembrar. E no hix pus és sembrada tro a .xxx. dies, ans stà dins terra los dits .xxx. dies.¹¹⁶

[17] De cebes rodones

It is possible, but seems unlikely, that Agustí could be referring back to a previous chapter in his *Secrets d'agricultura...*, such as “Secrets per a saber en quin temps se han de sembrar los horts o camps” (15v-16r) and it is true that there he treats the threat of cold weather to seeds in general “Si emperò tindreu temor que per respecte dels frets y gelades [las sements] se cremen, podreu-las cobrir ab palla y desota posareu vergues o canyes o serments entravessades, perquè tingan la palla mofla y anayrada” (Agustí 1617: 16r) but this reference seems too far removed in topic and page number to warrant an allusion such as this “que tenim dits”. Barring this possibility, whatever these “remeys” may have been they have been lost in all the extant witnesses. See §23 for a similar instance of an empty reference (footnote 142).

111. que quant mes primarenca és,] Agustí 1617, 26v.

112. *V* has the contradiction “Emperò lo Pal·ladi diu que en lluna vella que sia nova” which we have corrected on the basis of *M* “Empero el Palladius dize que en luna que sea nueva” (212v), which may be a reference to Palladius §3.24.4 “si minuenta luna serantur, tenues et aciores proueniunt, si crescente, robustae et saporis umecti”.

At this point Agustí 1617 adds instructions on shaving off the roots of the onion transplants before setting them in the soil, along with the watering regimes to be used subsequent to this removal: “Quant la transplantareu, tallar-los totas las rael perquè ne fassen de novas, y regareu-las. Si no·ls llevau las rael, quant las haureu plantades dexareu de regar-las deu o dotze dias y en estos dias las rael se'ls moriran, y après regau-les y posaran rael novas, y se faran molt millors” (26v). There is no sign of these instructions in any other witness, and their improbability and complexity suggest that they are a later accretion, so we have omitted them entirely.

113. fan a plantar] Agustí 1617, 26v.

114. Luna-Batlle (2011: 60) and Capuano (2014:39) misread the phrase “com pus som pot hom” (*B* 121r), correcting it unnecessarily and illogically to “com pus com pot hom” (as much as one can). The transcription of *som* ‘shallow, close to the surface’ should be respected as it stands, giving “com pus som pot hom” ‘as close to the surface as one can’; *som* here is the adjective “superficial, poc profund” (*DCVB*) as is clear also from the corresponding passage in Agustí 1617 “y fan a plantar molt somas, que basta la cabeça sia cuberta de terra” (26v).

115. Luna-Batlle (2011: 60 n. 93), citing the second edition of the *DCVB*, for the form *cabossa* from the Maestrat and from Northwestern Catalonia gives the meaning ‘the thickest part of the onion’ (“la part més ampla de la ceba”).

116. Agustí 1617, 26v, adds the following, likely from his own experience: “Si voleu que las cebas se serven y que no·s grillen ni·s podrescan fins en lo mes de maig o de juny, procurau cullir-les lo mes de juliol o de agost o de setembre, quant estigan en sahó, dia axut y lluna vella, que no·s colpejan. Després les posareu en lo sol a axugar, que no·s banyen, y les posareu dins de una bota desfonsada de un cap, a sostres, posant a cada sostre cals viva, com si era sal. D’esta manera se salvaran com tinch dit”. The curing process prescribed here involves instructions and vocabulary that depart from the usual style of the *Memòria*.

Ceba redona aquella que hom menja tendra al Pascuor¹¹⁷ sembra hom en Agost ab ràvens¹¹⁸ e són bones a sopar.

[18] De ràvens

Ràvens se poden plantar per tot l'any, mas més valen aquells qui són plantats en lo mes de març y de juliol¹¹⁹ e no volen fems, mas volen terra ben cavada e bé tova. Ràvens plantats en lo mes de juliol valen més e són millors de l'any. Los uns e los altres se volen regar a vegades. Ràvens no deu hom per ells triar terra car¹²⁰ baste a hom qui no·ls vol vendre que en los crestes dels solchs¹²¹ de les cols ne fasa hom plantar.

[19] De pastanagues

Pastanagues sembra hom en juliol en luna vella, après que ha fet lo ple en lo matex quart,¹²² en terra ben cavada pregon e ben guaretada; no volen fems,¹²³ mas volen-se reguar sovín e no·s tresplanten, y no·s volen sembrar molt espeses perquè se pogan fer ben grosses y belles, y estas seran bones en la Quaresma. També ne podeu sembrar en la primavera, pero són millors las de la tardor. Si voleu que la rael sia bella y grossa, convé que los aneu levant las fulles per aclarir-les.¹²⁴

[20] De naps

117. We have inserted "al Pascuor" based on *M* ("cebolla redonda para pastor..." (213r), where *pastor* is undoubtedly a scribal error for *Pascor* (see note 60).

118. For another example of interplanting (radishes with cabbages), see next chapter.

119. y de juliol] *V*, 95r.

120. car] *N*, 54v. The sense of this difficult phrase is that it is not necessary to reserve a plot ("triar terra") specifically for radishes ("per ells"), since the typical homestead does not consume them in quantities as high as would be needed for market. See next note.

121. crestes... solchs] *N*, 54v. *B* gives "en los camps de les cols" (121r) and Agustí 1617 "als solchs de las cols, porros, y dels espinachs" (27r). The horticultural meaning of *cresta* from *N* is given in *DCVB* as "perfil superior de la terra que la rella talla o deixa en llaurar" and here may refer to the strip of earth that is turned up onto the turf lying adjacent to a garden plot when the plow makes its first pass in preparation for the cultivation of a crop. Cabbages are much slower to mature than radishes, so interplanting both crops would result in an economizing of cultivable space, and if we accept the reading from Miquel Agustí 1617, we see that such casual intercropping was used with leeks and spinach also. Herrera (1513) confirms the same practice with Swiss chard from his sources: "Puedenlas bien sembrar entre las otras ortalizas que no tienen necesidad de tener apartado por si lugar, sino o por los sulcos o entre las eras" (105v). The mass cultivation of radishes destined for market is quite another matter, and is described fully in Palladius §9.5.

122. après... quart] Agustí 1617, 27v-28r, i.e., in the third quarter. This degree of specificity regarding the proper lunar phase for planting is not at all common in any of the manuscript witnesses, suggesting that this detail may be original to Agustí.

123. Agustí 1617 claims just the opposite: "vol la terra... ben femada". However, it is well known that the application of manure immediately before sowing is detrimental to the root development of carrots.

124. y no·s ... aclarir-les] Agustí 1617, 28r. Thinning carrot leaves allows for better air flow and sunlight, discouraging disease. This passage is unique to Agustí and may be original to this author.

Naps sembra hom en juliol en luna vella axí com les pastanagues, e sie a la entrada del mes de juliol, per ço com més val que sien primarenchs que tardans; e aço se enten de tota ortaliça, que més val que sia primarencha que tardana. E diu l'eximpli del antich:¹²⁵ "A sancta Justa e Rufina, sembra la tua nabina",¹²⁶ la qual festa és .xvi. dies¹²⁷ a la desexida de juliol.

Lo nap vol la terra ben fangada y novament moguda, y la llavor no ha de ser de més de tres anys, que si és més vella no produex sinó cols.¹²⁸ Axí, quant los sembrareu, procurareu de sembrar-los ab terra prima, mesclada ab lo gra, perquè no·s sembran massa espeços. Si a cas són massa espessos, los aveu de aclarir. Per sembrar-los, haveu de esperar que la terra sia estada regada primer, o del cel o manualment, perquè seran millors, y no los sembreu en lloch de hombra, perquè la hombra los és molt contrària, si no és que la terra sia bona y fètil.¹²⁹

Alguns los sembren en la terra hon han arenquats alls e sebes, que s'i fan molt bons e ben saborosos e groços e no són corquats. Axí matex se planten o·s sembren les pastanagues.¹³⁰

[21] [fol. 121v] De xerevies

125. del antich] *P*, 6iv.

126. The preposition "a" in the phrase "a sancta Justa e Rufina" can be interpreted to mean 'by' this date; i.e., turnip seed should be planted not *on* but *by* the feast of Justa and Rufina. In *P* however, the sowing period prescribed is a nineteen-day window, from nine days before until nine days after the saints' day ("Si vols sembrar naps, sembrar-los has .viii. dies abans de senta Justa e Rufina, qui és a .xvii. de juljol, o .viii. dies après", *P*, 6iv). The more literal reading of this passage (to sow turnip on either of these two days, either nine days before or nine days after) is unlikely because of its impracticality and arbitrariness, both of which are uncharacteristic of the *Memòria*.

127. The meaning of ".xvi. dies a la desexida de juliol" is 'sixteen days before the end of July'; counting from August 1st, the tally falls on July 17, the feast day of the 3rd century martyrs Justa and Rufina, just as given in *P*: "...santa Justa e Rufina, qui és a .xvii. de juljol..." (6iv). However, the base text (*B*) gives ".vii. dies ala desexida de juliol", which we have corrected to ".xvi. dies..." to make the date fall on the 17th. This same witness (*P*) gives a variant form of the horticultural proverb featured in this chapter, incorporating carrots into the prescription: "diu lo exemple de l'antich: 'A santa Justa e Rufina, planta pastanages e napina'" (6iv). Agustí 1617, on the other hand, introduces a completely different adage "lo bon nap, per sanct Jaume ha de ser nat" (28r), i.e., by the feast of St. James, which is eight days later (July 25th), your turnip seed should have sprouted. Agustí 1626 repeats this saint's day in yet another (Castilian) variant of the theme "El buen Nabo, por Santiago tiene cabo" (p. 91). Turnip seed planted in the warm soil of July will germinate in as few as four days.

128. Despite the botanical error of this statement, turnip greens and leaf cabbage are indeed remarkably similar in appearance. On the close relationship alleged between turnips (*Brassica rapa* var. *rapa*) and cabbages (*Brassica oleracea*), see the passage from *P* above (§5), where cabbage seed, sown in the same bed where thickly sown turnip tops have been shaved away from their roots, supposedly develops into head cabbage. Conversely, 16th century writers such as Gabriel Alonso de Herrera (fol. 108r), citing Ibn Wafid and Palladius (§3.24.7); and Andrés Laguna (Dubler 1955: 205), citing Dioscorides, warn that cabbage seed four years old or older produces not cabbage but turnips. In the 4th century *Geoponika* the degeneration is mutual "Turnip seed produces cabbage in the third year, and vice versa" (Dalby 2011: 259).

129. Lo nap... bona y fètil] Agustí 1617, 28r. The phrases used to treat precipitation and other growing conditions in this passage are quite dissimilar from any other witness and suggest that this passage may be original to, or adapted by, Agustí.

130. Alguns... pastanagues] *P*, 6iv-62r.

Xerevies se sembren en la luna vella de giner après ha fet lo ple.¹³¹ E deuen-se sembrar en terra freda ben cavada y femada,¹³² que·ls fems sien bé podrits. E deuen-se sembrar clares per ço que millor se façen. També ne podreu sembrar tots los mesos de l'any, emperò las del mes de mars són las millors y de més virtut, y estan tot lo any en la terra.¹³³ Ítem, si tu has dels grans¹³⁴ de les xarovies, que són rahils de les xerovies, e si és massa gros parteix-lo en algunes parts e cascuna part mit-la devall terra, sol que tinga dos dits de terra desús, e hauràs de les xerevies. E volen-se fer en loch fret e que no·ls do massa lo sol.¹³⁵

[22] De xufes

Xufes fan a sembrar en maig. Deuen-se collir en agost. Deuen ésser reguades en la hora que n'hagen mester. Ítem, volen ésser sembrades en bona terra, car com en millor terra seran sembrades, millors seran.¹³⁶

[23] De carabaces

Carabaces sembra hom mijant giner tro a mijant febrer, ço és, que planta hom lo gra en la luna nova.¹³⁷ E met-hi hom molt fems, bé mig palm de alt, e sobre los fems mit los grans e cobre'ls hom ab una poqua de terra mesclada ab los fems, que sols estigan cuberts un través de dit.¹³⁸ E han ops loch hon toch lo sol tots dies e

131. après ha fet lo ple] Agustí 1617, 28r.

132. ben... femada] Agustí 1617, 28r.

133. També... terra] Agustí 1617, 28r.

134. *B* gives “grams” which we have corrected. The word *gra* (plural, *grans*) commonly refers to ‘seed’ or ‘pip’ (as in the chapter below on calabash), but here refers to small pieces of the parsnip root (*DCVB* s.v., meaning 4, “tros petit de qualsevol matèria...”) which can be used as cuttings as an alternative method of propagation.

135. Only two other witnesses include a chapter on planting *xirivia* (‘parsnip’), and neither coincides with *B*. It is significant that in *P* the *Memòria* material has come to an end; its chapter “De plantar cherevies”, along with another on artificially coloring and seasoning fruit (“De donar color e sabor”) immediately precede the Catalan translation of Ibn Wafid’s *Tractat d’agricultura* in this codex (here titled “De agricultura: altra obra” 62r), which suggests that both these final chapters in *P* are later accretions from a different source altogether. In Miquel Agustí the passage on parsnips (28r) coincides with *B* only in one detail, that they should be planted in a waning moon; with *P*, not at all.

136. No other witness includes a chapter on the *xufa* ‘yellow nutsedge, tiger nut sedge’ (*Cyperus esculentus*), source of the tuber used to make *orxata*.

137. For the first time in this text, a waxing moon (“luna nova”) is prescribed. This is in keeping with the general rule of thumb that crops developing underground should be planted in the waning moon (when the moon’s power to cause downward growth is at its highest), and those developing above ground should be planted in the waxing moon, when the moon’s power to augment is greatest. The author of the *Memòria* made a deliberate departure from this rule when he prescribed a waning moon for leafy vegetables (cabbages, spinach, lettuce, mesclun, etc.), reasoning that the diminishing moon would forestall bolting (upward growth) in these crops and thus prolong their usefulness. In the case of calabash, there is no need to forestall flowering, whence the return to the traditional lunar planting prescription.

138. que sols... dit] Agustí 1617, 29r.

no y pusque toquar gran vent. E si fahie gran fret com deuen exir, cobri-les hom ab draps o ab stores en guisa que·l fret no y mogue. E fan a reguar de .iii. en .iii. jorns, e com pus sovín les regue hom, pus tost se fan, e si l'aygua era calenta del sol, hi valria més.

Los grans de les carabaces fan a remullar ab ayga tèbea, quisvol, e seran pus tost exides de .iiii. o .v. dies, e com seran remullades plant-les hom en la manera desusdite. Ops és que·ls grans de les carabaces, ans que sien mesos a remullar, sien ben sechs, e si no eren ben sechs, seque'ls al sol e puys remulla'ls axí com demunt és dit. [E diu lo] eximpli: “per sancta Àgatha sembra ta carabaça, si vols que bé te fasa”, la qual festa és a .v.¹³⁹ dies de febrer. Emperò, les carabasses novelles que voldreu trasplantar¹⁴⁰ fan a tresplantar en lo mes de abril, en la luna nova, hon toque bé lo sol, ab molts fems, y fan a regar sovint,¹⁴¹ y si fa fret o gelades, les cubrireu ab draps o estores o ab los remeys [que] tenim dits.¹⁴² E planta-les hom axí: fa hom hun clot que hage bé dos o tres palms o més d'ample e de pregon hun palm e mig, e fa-li hom entorn lo clot orle de terra e puys, en mig loch, posa hom molt fems mesclat[s] ab terra e fa-li hom un mont alt en mig del clot e plante-y hom tres planters de carabaces. E açò fa hom per ço que lo clot omple hom d'aygua al reguar de la mota de mig, per tal que aygua no toch a l'ull de la carabaça, car menys ne valria, e regue-les hom de .iii. en .iii. dies, de sesta, ab calor, tro que sien ben preses. E si per ventura fahia gran fret, cobre-les hom.

[24] De carabaces primarenques¹⁴³

Si vols haver carabaces primarenques abans de sent Johan de juny, ajes bon fem d'estable que sia ben podrit he solegat e mesclat en bona terra graça. Allí sien

¹³⁹. The feast of St. Agatha, 3rd century virgin and martyr, is universally celebrated on February 5th. *B* gives February 10th, in error.

¹⁴⁰. que voldreu trasplantar] Agustí 1617, 29r. Note that in addition to the direct sowing of calabash prescribed above, the transplanting of seedlings was likewise practiced.

¹⁴¹. hon... sovint] *V*, 95v.

¹⁴². y si fa... dits] Agustí 1617, 29r. The phrase “los remeys [que] tenim dits” (“the countermeasures we have mentioned”) is strong evidence that this passage from Miquel Agustí is original to the *Memòria*. Since no remedial measures have yet been mentioned in this chapter (titled “Secrets de les carabaces y cogombres”), Agustí must have been copying a text that contained this phrase. The reference here is to the safeguards to be used against cold weather damage to seedlings, given in the prior passage on direct sowing: “cobri-les hom ab draps o ab stores”. However, these instructions do not appear in Miquel Agustí, rendering illogical the phrase “[que] tenim dits”.

¹⁴³. The three witnesses that give instructions for early calabash diverge significantly. The base text chooses to abbreviate this chapter (“sembra-les segons que en lo capítol desús és dit”, *B*, 121v), and because *P* does in fact repeat much of the sowing instructions of the previous chapter, our emendations are based on this source. As always, these emendations incorporate the text of *P* verbatim, except that here we have intentionally omitted the phrase “com pose en lo capítol del fem” (61v; “as I stated in the chapter on manure”), in which the compiler of the codex refers back to the chapter “Del millor fem” (55r) of a previous text in the codex (“De agricultura Paladi” 30v). Miquel Agustí's instructions for early calabash (Agustí 1617: 29r-29v) bear no resemblance to those of *B* or *P*, but rather involve sowing seed in pots and moving the pots each evening back into the house to protect them from the cold, echoing instructions given in the ancient *Geoponika* (Dalby 2011: 257).

sembrades les carabases lo jorn de sent Valentí, qui és a .xiiii. de febrer. E sien plantades en loch de sol, per mesura, e sien regades sovint.¹⁴⁴ E com seran exides no les regues ab aygua, mas regua-les ab leyt de vaques o de ovelles o de cabres, e hauràs carabaces molt primarenques. Ha voler-les hun poch pus tardanes, se volen sembrar en lo mes de març, com aquell mes sia la mare de les semençes.¹⁴⁵

[25] De melons, albudeques, cindries, cogombres e albergínies

Cogombres, melons, cindries, albudeques e albergínies sembra hom mijant febrer e per tot lo dit mes,¹⁴⁶ ab luna nova, e ab molts fems, bé [fol. 122r] mig palm d'alt o més, axí com les carabaces, e no fan a cobrir guayre, mas tan solament que los grans sien cuberts de terra mesclada ab fems. E volen-se reguar sovín, de .iii. en .iii. dies. E volen que lla hon són sembrats los grans que'ls hi toch lo sol tot lo dia o la major partida. E tresplanten-se en abril.¹⁴⁷ E volen se reguar de .iii. en .iii. jorns, exceptat quant¹⁴⁸ los melons e les albudeques e les cindries començen a madurar no·s volen regar¹⁴⁹ si donchs no vehia hom que mester ho haguessen. E pot-los hom sembrar en loch que no les cal tresplantar, si hom no·s vol. E si per ventura fahia fret, abrich-les hom axí com les carabaces.

La labor dels melons e cindries e de albergínies, de cogombres e de albudeques, ans que hom les semble, deu ésser remullada ab aygua .ii. o .iii. dies. Les albudeques, cogombres, melons, cindries e albergínies deuen ésser sembrades per tot febrer, e ha spay deles dites dues lavors ales altres dues .xx. o .xxx. jorns. Specialment, lo millor temps de sembrar albudeques o melons o cindries és entorn la festa de sancta Maria de març, en la manera que dit és.¹⁵⁰

144. abans de sent Johan... regades sovint] *P*, 61v.

145. Ha voler-les... semençes] *P*, 61v.

146. The manuscript witnesses seem to misrepresent the timing for sowing these warm-weather crops. The original probably read “sembra hom de mijant ffebrer e per tot lo mes de març”.

147. E tresplanten-se en abril] *V*, 95v.

148. quant] *V*, 95v.

149. començen a madurar no·s volen regar] *V*, 95v.

150. It is unclear in this passage which of the five crops are contrasted by the phrase “E ha spay entre les dites dues lavors ales altres dues” (i.e., there’s an interval between [the sowing of] the first two crops and the other two) because one of the five seems to be inexplicably omitted here, and even if we emend the passage to read “...a les altres tres” it remains unclear which sowings should precede the others. However, based on the final sentence, it is possible that the author is lumping together the sowing done for melon, watermelon and albudeques (a variety of insipid watermelon, *Citrullus lanatus* var. *citroides*) and another sowing, 20-30 days earlier, for eggplant and cucumbers. The aqueous nature shared by the three former favors this interpretation. The text seems to allow that, even with a twenty-day lag between the two plantings, all five crops may be sown in February, except that the former (the three melon types) prefer a later sowing in March. Agustí 1617 gives a separate chapter on growing melons all year that does not correspond to any other witness: “Secrets dels melons de tot lo any y de las albudecas. Albudecas y melons de tot lo any sembrareu com està dit ab los altres melons, per lo que són tots de una espècie y axí volen lo matex regiment, sinó que estos maduran un poch més en la mare en lo camp, y per ço los melons, quant veureu que seran grossos [y] grochs, los cullireu sens colpejar; las albudecas, quant veureu alguna grogor entre la gran verdor que té-y, los servareu ab palla de ordi o penjats al sostre fins los voldreu menjar” (30r).

[26] De sembrar juhivert

Si sembres lavor de juhivert en lo mes de març no spiguarà tro en lo segon any.¹⁵¹

[27] Favas

Favas comunament se planten o·s sembren a sant Miquel. Qui les vol primerenques planta-les hom en agost o en setembre, en la primera setmana.¹⁵²

151. Parsley, being a biennial, always flowers in the second year regardless of the month in which it is planted. The brevity of this chapter suggests that it was a later accretion. It is unique to our base text *B*, and seems out of place: following the pattern of treating together all vegetables grown for their aerial parts (as shown by Capuano 2015: 62), this chapter would be expected among the first eleven vegetables grown for their above ground parts. However, its placement here may represent an acknowledgement of the dual purpose of the parsley crop, which in the medieval period was grown for its root as well as its leaves. In this regard see *Libro de medecina llamado macer* (Valladolid 1527, f. 14v3-6) and Alonso de Herrera Herrera's *Obra de agricultura*: "Del perexil. (...) muchos lo siembran por amor de las rayzes y los tales o lo siembren ralo o lo traspongan quando chico" (1513: 118r).

152. Favas. Favas... setmana] *N*, 54v. The feast of St. Michael the Archangel (Michaelmas) is September 29. This chapter on fava beans occurs immediately following the two on lettuce in *N* (54v), and this proximity to the chapters on vegetables seems to buttress its place in the *Memòria*. However, *N* is the sole witness containing this chapter. Ordinarily, agricultural writings of the period treat fava beans and other legumes not as vegetable crops but together with grains as field crops, as demonstrated in a separate work in codex *V*, an untitled agricultural miscellany: "Tota sement que·s dega sembrar per tal que faça gra, axí com ordi, forment, avena, faves, siurons, pèsols, fesos y altres sements, se deuen sembrar en lluna crexent..." (Capuano 2009: 14). Ancient writers on agronomy extoll fava beans and other legumes for their virtue as a green manure in preparation for field crops, as in the *Opus agriculturae* of Palladius (§ 12.1), and in the *Tratado de agricultura* of Ibn Wafid: "El .ix.º capítulo es de senbrar el trigo e la çevada e las legumbres. Deven senbrar el trigo en la buena tierra e la çevada e el lino en la mediana e las havas e los garvanços en la tierra húmida e las legumbres tienplan la tierra..." (5v). In our corpus, the chapter "Secrets delas favas" in Agustí 1617 (83v) appears in his Chapter 22 "Dels secrets de la cultivacion dels grans, dels forments y llegums en terras cultivades" (77r), far removed from his treatment of vegetable gardens, and thus far from the sections where Martí Escayol (2008) first discovered the embedded *Memòria* material. Closer in time to several of our witnesses, "Capitulo XVIII. De las hauas" (16v) in Gabriel Alonso de Herrera's *Obra de agricultura* (1513) presents instructions on cultivating fava beans (along with lentils, peas, and other legumes) not in Book IV on vegetable gardens (fol. 99r) but rather in Book I, which treats, inter alia, "toda manera de pan y legumbres" (fol. 3v). It should likewise be recalled that like grains, fava beans and other legumes were ground into flour in the medieval period and this flour was used as both food and medicine, further aligning favas with field crops. Nevertheless, we find in this chapter on favas no features of style or language divergent from the style and language of the *Memòria*, so we have included it in the present edition. We do so under the assumption that alongside large-scale field sowings, fava beans and other legumes had a place in the homestead garden as well. However, our witnesses provide little evidence that the cultivation of any other legumes (such as beans and peas) were contained in the *Memòria*. Although chapters on beans and peas and other legumes appear in Agustí and in *P*, in both they find their place far removed from the *Memòria* material: in Agustí 1617 some fifty folios later under the heading "Dels grans que se fa pa" (83r) and in *P* in the section that precedes the *Memòria* material, titled (51v) "Del libre quart paladi". We interpret this placement as evidence that legumes were not a part of the original *Memòria*, with the possible exception of favas.

3 English Translation

[1] **I**n the name of God, Amen. This is an account of the cultivation customs, of planting and of sowing and other considerations to be applied to all vegetables, and this account has been taken from the best gardeners of Barcelona, especially from those who deal with irrigated gardens.

We begin first with cabbages, since we use them more than any other vegetable.

First, regarding cabbages for the winter, that is, that are consumed then, you should sow them from the middle of June to the middle of July in a waning moon right after it has been full, and in well-worked soil separated into beds and with the proper amount of manure, not too much; and water them often. They should be transplanted from the middle of August to the middle of September in a waning moon so they won't bolt or become leggy. The amount of manure should be moderate, much more when transplanting than when sowing. Water them as soon as they're planted and every three or four days thereafter. Later, once you see they're established, they should be watered twice a week. Don't set them too deeply or they won't do so well, but after three weeks hill around them with soil and manure. The reason why they should be planted in a waning moon is so that they won't bolt as soon as they would in the new moon, or get leggy or have long straggly stems. If some of your cabbage sets aren't as vigorous as the others transplant them first ahead of the others. A late planting will be ready by Easter. If your plants are leggy when it's time to set them out, transplant them with their stems on the side that the water comes from when irrigated, and they'll straighten up with the moisture. These cabbages are good for Lent and for the Christmas season.

[2] Easter cabbages

If you want cabbages that are ready by Easter sow them in August or toward the end of September through October and November if you like, but do so in a waning moon, and transplant them as soon as you see they're ready, also in the waning moon. Use well-rotted manure when setting out the plants and also when transplanting, as we said above regarding the previous planting, adding two double handfuls of manure to the roots of each one. Water at once. These cabbages should be planted thickly since there will be some that bolt, and these should be pulled up as soon as you see them start to form the stem.

[3] Summer cabbages

Summer cabbages that are ready by vintage time and by September should be sown from the middle of February to the middle of March in a waning moon, and transplant them when they're big enough also in the waning moon. They want lots of manure in the seedbed but even more when transplanting, as we said about the previous cabbage plantings. Water them the same way also, and they'll be ready by vintage time.

[4] Sicilian cabbage

To make Sicilian cabbage sets, plant the seed the week before or after St. John's Day in June, and be

sure they are watered regularly. When they're big enough transplant them and be sure they have full sun all day.

[5] Head cabbage

Head-forming cabbage should be sown exactly like other cabbages, but if you don't have any seed, I want to show you how you can produce it. First, hoe up a plot of soil big enough for the amount of head cabbage you want to plant and manure it well. On the feast of Saints Justa and Rufina, which is the 17th of July, plant turnip seeds in that plot, sowing them so thickly that the seedlings grow entangled with each other, and water them two or three times. But be sure when you sow the seed that the soil is just right. Don't thin them; and on the full moon of February scrape away all those turnips as with a sharp hoe, and sow cabbage seed of whatever type you want. Cover the seed with about a finger-width of soil and well rotted manure and water it thoroughly. After that, sprinkle them every other day with a watering can until they have sprouted. Thereafter, water them every two days. When they're big enough transplant them and they'll grow into head cabbages.

[6] Easter spring mix

Spring mix for Easter time, that is, spinach, young cabbage, chard, orache and other greens should be sown in the beginning of January, and there's no need to observe lunar phase. They need lots of manure and frequent watering. Transplanting is not recommended.

[7] Other types of spring mix

Another spring mix can be sown in the middle of March in the same way, with lots of manure and frequent watering, and there's no need to observe the lunar phase, nor should they be transplanted. Yet another mix, of purple amaranth and chard mixed with a few spinach seeds should be sown in the beginning of April. Manure it and water it. Transplanting is not recommended, and lunar phase doesn't matter. There is no further sowing of spinach after this until the middle of August.

[8] Spinach

Spinach is consumed during Advent. This planting is done in the middle of August in a waning moon with lots of manure. Water it occasionally when it looks like it's drying out. This crop can be harvested in winter and in Lent.

[9] Another spinach planting

Another spinach planting can be made from the middle of September to the middle of October in a waning moon. Water as necessary and use lots of manure with the sowing and they will be ready for the entire lenten season, whether it comes early or late.

[10] More on spinach

Some gardeners say that old seed is better than the current year's seed, and this is what they do: they put the seed into a basket, stitch it closed and then lower it on a rope into a well and leave it in the water for six or seven days. Then they undo the stitches and put the seed in another basket and sew it up and put it in the well again but this time just above the water level and they leave it there four or five days more and by then the seed has sprouted. They sow this seed with lots of manure and it emerges right away.

[11] Lettuce

Early lettuce is sown in the middle of August or September until the middle of October in a waning moon with lots of manure. Water as needed and transplant it during Advent with manure in a waning moon and water every eight or nine days to protect it from the frost.

[12] More on lettuce

Some lettuce plantings are made from November to the middle of December with transplanting in January. When sowing and transplanting, be sure to do so in waning moon because they are more flavorful that way. Add lots of manure and water as needed.

[13] Garlic

Garlic is planted in the middle of December in a waning moon in well worked fallow soil without manure. In irrigated locales, provide for watering once a week. If not planted in December, they can be planted in January in waning moon, but the early December planting is better because the cloudy conditions of May can't slow their growth since they're further along by then. Don't space them too far apart; rather, there should be no more than about a handbreadth or slightly less between each plant. If desired, it's good to plant a few spinach seeds in among the early garlic because they will do very well, and lettuce, which likewise will flourish. To keep garlic from sending up shoots in storage, those planted in a waning moon should be dug up in a waxing moon, and those planted in a waxing moon should be dug up in a waning moon. When you set them out plant just one garlic clove at a time, that is, each clove is planted separately.

[14] Scallions

If you want to make scallions, take an onion and cut away the roots and then remove a third of the upper part of the onion in a circle around where the leaves emerge and insert there three or four cloves of garlic, cover it with soil and you will have scallions. Another way to get scallions is by taking a clump of them and leave them under soil. Then in the month of May take each scallion away from the bunch and plant each one individually and each scallion will in turn produce a cluster.

[15] Leeks and Onions

Leeks and long onions sown in a waning moon from the beginning to the middle of March will escape frost damage. For an earlier harvest sow in January and February. To obtain their seed for a summer sowing, plant them in April, May or June; if for a winter sowing plant them in August,

September and October.

Onions should be sown rather thinly so they'll swell more and have better foliage. They need well-worked soil without too much manure, and they should be watered every other day, more often if needed. Leeks, on the other hand, do require a lot of manure. Some say that if you hoe a leek bed so it's good and level and thoroughly mixed with good, well-rotted manure, and then drench the bed with water and sow the onion seeds in that moisture they will do much better. Transplant both leeks and long onions from the middle of August to the middle of September in a waning moon.

Leeks prefer plenty of manure when transplanted, but long onions don't, although they do need well-worked soil. When transplanting leeks space them thickly so that there's no more than one finger's width between them, and they need watering every three days until they're established.

Onions should be transplanted from May until the middle of the month of June in a full moon, setting them below the surface of the soil with a lot of manure mixed in. They should not be transplanted as thickly, but they do prefer a somewhat thick planting. Once they're established they should be watered twice a week, and cultivate well around them the first few times.

There should be ample space between the leek rows; between each furrow be sure there's at least a full hand's breadth and they'll do well. If desired, you can plant cabbage and radishes among the leeks and they do very well. As you hoe around the leeks cover them with soil.

The seed of leeks and onions can be collected right where they're transplanted by leaving in the ground a row or two or as much as you think you may need. These will send up a scape; allow the seed to fully mature and store it well.

[16] Round onions for storage

Round onions for storing are sown in a waning moon in the middle of January for an early harvest, but can also be sown in February and March, in well-worked soil with plenty of manure mixed in. Water them frequently and transplant them when they're grown and you see that they're ready for transplanting. To protect them from the cold and frost take the measures described above.

As soon as you see that they are ready for transplanting, in April or in May – the earlier the better – transplant them in a waning moon, although Palladius says in a new moon. Plant them as shallowly as possible so they'll develop a good round bulb, covering only the head of the onion with soil. Don't add manure when transplanting, only when sowing as indicated above. Water them after transplanting every three days and hoe around them once a week. Be sure to water them only in clear weather; they suffer if they are irrigated when it's overcast and they won't turn out so nice or develop so well.

If you want to collect seed, choose the nicest and biggest onions and plant them in the middle of November and they'll go to seed. Let them mature, then store them until it's time for sowing. Onion seeds will not sprout for thirty days after they're planted; rather, they just lay in the soil for those thirty days.

[17] Round onions

Round onions, tender and ready for Easter time should be sown in August with radishes, and they make a good evening meal.

[18] Radishes

Radishes can be planted all year long but the best are those planted in March and in July. They don't need manure but the soil should be well worked and loose. Radishes planted in the month of July are the best of the whole year, but they need to be watered at times, as do those planted in March. Unless you're raising them to sell at market there's no need to reserve garden space just for radishes; they can simply be planted along the edges of the cabbage bed.

[19] Carrots

Carrots are sown in July in a waning moon during the third quarter in deeply worked, fallow soil. They don't need manuring but water them often. They don't take transplanting, and should not be planted too thickly so they have room to expand and thrive. They will be ready by Lent. They can also be sown in the spring, but fall carrots are better. If you want a nice, fat root, you should thin away frequently some of their leaves.

[20] Turnips

Turnips are sown in July in waning moon just like carrots, and more specifically in the beginning of the month of July, since they are always better planted early than late, and the same goes for all vegetables, not just turnips: early plantings are always better than late ones. As the old saying goes "Have your turnip sowing completed, by the feast of Saints Justa and Rufina". This feast day falls on the 17th of July.

Turnips prefer well-manured, recently tilled soil. Seed should be no older than three years, because older seed just produces cabbage. To avoid sowing too thickly, mix the seed with fine soil, but wherever they come up too thickly, be sure to thin. Don't sow until the soil has been sufficiently moistened, either by rains or by watering, because they turn out better that way, and avoid shady locations. Turnips do not do well in shade, unless the soil is fertile and of exceptional quality.

Some sow turnips in plots where garlic and onions have been harvested and they do very well and are quite tasty and plump and not gnarled. Carrots are planted or sown in the same way.

[21] Parsnips

Parsnips are sown in a waning moon in January, right after the full moon. They should be sown in cool soil mixed with well-rotted manure, and so they'll do better they should be well spaced. They can be sown any month of the year, although March parsnips, which are in the ground for the entire year, are the best and the most nutritious. If you take pieces of the parsnip root, cutting the bigger chunks into smaller pieces, and plant each piece at a depth of about two fingers' width, you'll get parsnips that way too. They prefer shady spots and cooler regions.

[22] Nutsedge (tiger nut)

Nutsedge should be sown in May and harvested in August. They should be watered whenever they need it. Also, they should be sown in good soil, for the better the soil of the seedbed, the better they'll turn out.

[23] Calabash

Calabash are sown from the middle of January till the middle of February in a waxing moon. Make a hill of manure a good half handspan high and place the seeds on top, covering them with a little soil mixed with manure, but only a finger width deep. They need a position of full sun all day long with protection from strong winds. If cold weather is expected when they're about to sprout, cover them with cloth or rush mats so they're not so exposed to the cold. Water them every three days; the more frequent the waterings, the sooner the fruit will set, and it's even better if the water has been warmed by the sun.

Pre-soak the calabash seeds in lukewarm water if you wish, so they'll emerge sooner, within four or five days, and pre-soaked seeds should be planted as indicated above. Before soaking the seed, be sure that it's good and dry; if it's not, dry it in the sun then soak it as above. As the saying goes, "Your calabash will be great, if sown by Saint Agatha's day". This feast day is February 5th. However, young calabash sets that you wish to transplant should be transplanted in the month of April in a waxing moon in full sun with plenty of manure and watered frequently. If cold or frost is expected, cover them with cloth or mats or use the protective measures we've mentioned. Plant them like this: make a hole two or three handspans wide, and one and a half handspans deep. Around the hole make a ridge of earth and then form a hill by shoveling in plenty of manure mixed with soil and then set in three young calabash plants. Do it this way so when irrigated the hole fills up with water from the trench around the hill but the water doesn't come in contact with the main stem, because this would harm the plant. Water every three days, in the afternoon when it's hot until well established. If very cold weather should come cover them.

[24] Early calabash

If you want early calabash before St. John's day in June, plant your seeds in good, well-rotted stable manure that has been sun dried and mixed with good, rich soil. Plant them on St. Valentine's day, which is the fourteenth of February, in an open sunny location and water them frequently. Once they've sprouted don't water them, but rather give them cow's milk, sheep or goat's milk, and you'll get very early calabash. If you want a slightly later harvest plant them in March, since March is the foremost month for sowing in general.

[25] Muskmelon, citron melon, watermelon, cucumber and eggplant

Cucumber, muskmelon, watermelon, citron melon and eggplant are sown from the middle of February and throughout this month in a waxing moon and with lots of manure a good half handspan high or more, as with calabash, and the seeds should be just barely covered with soil mixed with manure. They should be watered often, every three days. The spot where they're sown should get sun all day long, or most of the day. Transplant them in April and water them every three days, except for muskmelons, citron melons and watermelons, which shouldn't be watered at all once they start to mature, unless you can see that they need it. They can be direct sown so you don't need to transplant if desired. As with calabash, if the weather is cold cover them.

The seeds of muskmelons, watermelons, eggplant, cucumbers and citron melons should be soaked for two or three days in water and then sown. Citron melon, cucumber, muskmelon, watermelon and eggplant should be sown throughout the month of February. There is an interval of twenty or thirty days between these two sowings; in particular, the best time to sow citron melon,

muskmelon and watermelon is around the feast of St. Mary of March, following the instructions given.

[26] Parsley

If you plant parsley seed in the month of March, it won't flower until the following year.

[27] Fava beans

Fava beans are commonly planted or sown around Michaelmas. If you want an early harvest plant them in August, or in the first week of September.

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5 Appendix I: Synoptic Edition of the Seven Witnesses of the *Memòria de les maneres de les llaurons*

The following chart provides a parallel transcription of the seven texts that comprise the *Memòria* corpus. Each is transcribed diplomatically, except that all scribal suppressions are expanded and some punctuation is added.

For ease of comparison, each chapter heading, and each conceptual unit within each chapter, is contained in its own consecutively numbered horizontal row. It should be borne in mind, however, that the witnesses differ slightly from each other in the order in which the chapters are presented; see Capuano 2015: 60–61 for a table demonstrating this divergence.

Folio and page indications are given at the beginning of each chapter. Note that when a cell is not introduced by a folio indication, it is understood to be a continuation of the folio side last indicated in that column. Boldface is used for rubrics and headings, even when these are not set apart from the rest of the text in the witness. Note that to economize space, not all unique material is given its own cell.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
[fol. 211v3] [no rubric, but the text begins a new paragraph]	[fol. 95r9] De la ortalisa quant se deu sembrar	[fol. 11r] En nom de deu sia. Asso es mamorja deles maneres deles laurons, de plantar & de sembrar e de pensar que hom deu fer a tota ortalissa laqual memorja es presa dels mjors ortolans de barchinona specialment qui pensen de orts quis reguen.	[fol. 56v] Del libre quint Palladi. Lo qual trachta de sembrar e plantar moltes maneres de ortalices	[119v6] Libre quint o quinta part del libre en lo qual se tracta de sembrar e plantar cols e moltes natures de ortalices.	[54r] Memorial per lo exercici del conrear.	[fol. 23r] Secrets pera fer cols per lo hiuern, Pascua, y temps de Varemas.
1						
La simjente delas coles verdes de jnujerno	Lauor de cols verts de yuern	E primerament parlem de cols per so com mes ne usam que daltre. Cols quj son bones djuern	e primerament de cols de yuern	[5.1]¹⁵³De cols de Juern. Primerament de cols que son bones d'iuern	De Cols. Primerament les Cols que hom vol que sien bones per ljuern	Si voleu menjar Cols en lo hiuern,
2						

153. Paragraph numbers given for BCB 754 correspond to the numbering used in the 2014 edition of this text (Capuano 2014).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
3		ço es que hom les menja en aquell temps,		ço es que hom les menge en aquell temps,		
se siembran de mediant junjo fasta a mediant julio 4	se sembren de mijant Juny a mijant Joliol	sembra hom mijant juny ho entorn	los quals fan a sembrar migant juny	sembra les hom mijant juny	sembrar les mijant Juny e en Juliol	se sembran en lo luny
en luna vieja. 5		en luna vella,	en luna vella	en la luna vella	en luna vella	en Lluna vella, apres que haura fet lo ple,
6		e que agen bon goret, fet ab eras & ab molts fems no massa empero mas per comjnalesa, e fan a regar souen,	E quey aja e stia ben barbeytada cauada e femada la terra pero ab mesura lo femar, ni maça ni poch e fan a regar soujnt	e quey hage bon guaret feyt ab vores e ab fems covinentment, no massa. E fan a reguar sovin	e que hagen bon goret fet ab eres	fent-los bon goret, ab molt fems, ben podrits y reposats, hanse de regar souint,
E deuen se trasplantar de mediant agosto fasta a mediant setiembre 7	y deuen se tresplantar de mijant agost fins a mijant dehembre	& deu les hom tresplentar de migant agost tro migant setembre	he deuen se tresplantar de migant agost fins migant setembre	e deuen-se tresplantar de mijant agost a mijant setembre	fan a trasplantar de mijant Agost tro a mijant setembre	trasplantantlas à mig Agost, fins à mig Setembre,
con mucho estiercol. 8	ab molts fems					
En luna vieja 9	en lluna vella	en luna vella,	en luna que sia vella	en la luna vella	en luna vella e no spiguen ne son tan longues	
[see row 8] 10	[See row 8]	& volen molts fems al tresplentar mes que al sembrar.	e no volen masa fem be que en lo tresplantar ne volen molt mes que al sembrar	e no volen molts fems, e al tresplantar molt mes que al sembrar	e volen molts fems al trasplantar molt mes que no al sembrar.	
11						apres al cap detres setmanas collarles ab fems y terra.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
12						Lo tresplantar tambe ha de ser en Lluna vella, que en la noua posarian molt argull, y espigarian prest:
fazen a rregar 13	y fan a regar	E de[u] les hom regar	e regales	e reguen-se	E regales hom	se han de regar
de tres en tres dias. fasta tanto que ayan tomado. 14	de .iij. en .iij. dies fins que sien preses	de tres en tres dies tro que son preses,	dos vegades la sepmana entro que sien ben preses	de IIII en IIII tro son ben preses	tantost com son plantades e despuys de tres en quart dies. Despuys que sien preses	de [fol. 23v] tres en tres dias, fins sian agafades, y vnides ab la terra,
E despues segunt que avran menester. 15	y apres segons quen haura mester	e p[u]ys com hom veu que son preses se deuen regar dues uegades la setmana,		puy fan a reguar dues vegades la setmana	fan a regar dues voltes la setmana	[fol. 23v] y quant veureu ò hauran menester.
16		& no les deu hom massa pregant metre,	e nos deuen plantar maça fondes	e nos deuen metre massa pregon	No metreles maça pregon	
17		cor no sen fan ten be,	per que nos fan tan bones	car no sen fan tant be,	que no sen fan tan be	
18		e per ço les deu hom sembrar e plantar en luna vella, que no spiguen tantost com farien sis senbrauen es plantauen en luna noua & no poden metre tant argul de (...) en alt ho en lonch;	per aso se sembren en luna vella he sis tresplanten no espigan tantost com farien en luna noua nj ergullen tant en crexer en alt nis fan tant longues com serien	per ço se sembren en la luna vella. si tresplanten que no spiguen tantost como farien en la luna nova, ni argullen tant de crexer en alt, ni son tant longues com serien.	[see 9]	[see 12]

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
19		e si per ventura h(...) qui no fos bo a plantar ab les altres, plan(...) [fol. iv]	E si per ventura hi romania planter que no fos bo [fol. 57r] [tras?] plantar ab les altres plantales hom avant tota hora que san a plantar e seran bones a pasqua si seran tantost plantades	E si per ventura hi romania planter que no fos bo ab les altres, plantales hom avant tota hora que sia a plantar e seran bones a Pascha si seran tart plantades.		
E sy 20	y si		e si les dites cols	E si les dites cols	e si	[fol. 23v] Si quant trasplantareu les Cols
la planta es en tan grant quantitat 21	lo planter es molt gran		an la cama maça larga al plantar o que tinguen la quama torta	han la cama massa longa al plantar,	truen la cama larga	[fol. 23v] tenen la cama llarga,
deuelo hombre fazer yazer por el surco. Asy que tengan las fojas de aquella parte por do les viene el agua. 22	deu lo hom fer Jaure per lo solch axi que tinga les fulles daquella part hon los ve laygua.		fes [en?] manera que com vinga al plantar sien apuntalades	façeles hom que de aquella part hon deu venir l'aygua al regar tenga lull	feles Jaure que truguen lull dela part hon los vendra laygua.	[fol. 23v] las fareu jaure de aquella part de hont los ha de venir la aygua al regar,
23			e puy laygua les hadresara e agualara	car vinent l'aygua les dreçe		[fol. 23v] y las adresa.
Mas yo digo que mas vale que las rrayzes se bueluan cara el agua. 24	Mas yo dich que mes val quels giren les rahels a laygua					
E aquestas solas son buenas en quaresma e antes de nadal. 25	y aquestes son bones en quaresma y ans de nadal					

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Coles verdes que son buenas a pasqua 26	Cols verts que son bones a pasqua		De cols de pasqua. Si vols bones cols a pasqua	[5.2] De cols de pascha. Si vols cols bones al pascuor		[fol. 23v, in margin: Cols pera Pasqua] Si voleu fer Cols, que sian bones per Pasqua,
se deuen sembrar en octubre 27	se deuen sembrar en octubre		sembrades en la desexida dagost o en la exida de setembre fins per tot lo mes de octubre e de noembre	sembrades en lagost o en la desexida de setembre fins per tot lo mes de octubre e de noembre, quis vol		[fol. 23v] las sembrareu à la fi de Setembre ò per tot lo Octubre
en luna vieja. 28	en la lluna vella		empero en la luna vella	empero en la luna vella,		[fol. 23v] en Lluna vella à la quarta haura fet lo ple, ¹⁵⁴
E trasplantar en Noujembre 29	e tresplantar en nohembre		e tresplantades hom tantost que hom conex que son bones a trasplantar	e tresplant les hom tantost que hom conex que son bones a trasplantar		y les transplantareu [fol. 23v] quant conexereu seran prou grosses.
En luna vieja 30						[fol. 23v] Tambe en Lluna vella,
31			ab molt fem al plantar e tresplantar	ab fems al plantar e al tresplantar		
[see row 34] 32	[see row 34]			axi com havem dit en les altres.		[fol. 23v] lo demes fareu com esta dit, ab les altres,
33			E gita del fem en la rahel dela col dos mostes ha cascuna			

154. Agustí 1617 is the only witness that specifies the lunar quarter (immediately following the full moon). This is perhaps an elaboration of his own, since his horticultural theory prioritizes such precision, as demonstrated by the complex graphic “Taula pera conexer lo temps en lo qual se pot sembrar moltes maneres de llauor de herbas”. (16v-18r). Notably, however, Agustí 1626 omits the phrase specifying lunar quarter.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
fazen a rregar segunt que de suso avemos dicho 34	y fan a regar segons que damunt hauem dit		E axi fan a regar	E axj fan arregar		
E sy brotonaran fazen a descabes-çar. 35			e a tresplantar mes espeses que les altres per que de tals nja que spiguen les quals fan a regar primeres quant hom les veu espigar	mas aquestes fan a plantar spesses per ço com de tals nj ha que spiguen Les quals fan areguar primes [sic] com hom les veu spiguar		[fol. 23v] acceptat, que aquestes se volen transplantar mes espeses, per lo que ni ha algunes que espigan, les quals fan arrencar, quant veureu espigan, antes ques perdian.
Simjente de Coles verdes que son buenas en setiembre o en octubre se deuen sembrar en febrero o en março. E trasplantar en abril o en mayo en luna vieja. E seran buenas en vendimjas. 36	llaur de cols verts que son bones en setembre o en octubre se deuen sembrar en febrer o en març y tresplantar en abril o en maig en lluna vella y seran bones en vene-mes. ¹⁵⁵		De cols per lo estiu. En fer bones cols destiu se volen sembrar migant març en la luna vella e tresplantaes en luna vella e volen molt fem al sembrar e molt mes al tresplantar e fan a regar axj com dich amunt.	[fol. 120r] [5.3] De cols de Stiu. Cols destiu que son bones en veremes e al Setembre sembla les mijant març en la Luna vella e tresplanta les hom sempre que son bones de tresplantar en Luna vella e volen molt fems al sembrar Mas al tresplantar ne valen molt mes axi com es dit deles altres axj mateix del reguar	Cols per a veremes. Si vols cols perles venemes sembreles mijant ffebrer tro mijant Mars en la luna vella ab fems axicom dessus es dit. e transplantaes com seran sofficients en luna vella.	[fol. 23v, in margin: Cols per lo temps de varemas] Si voleu fer Cols que seran bones en temps de varemas, les sembrareu de mig Fabrer, fins à mig Mars, en Lluna vella, com esta dit de les altres, y las transplantareu quant conexereu seran bones pera transplantar, tambe ab Lluna vella ab fems, al sembrar y trasplantar, regantles com esta dalt dit de las altras. (...) ¹⁵⁶

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
37			[fol. 57v] De cols de Sicilia. Si vols plantar cols de Seçjlia sembrales ha .viii. dies abans o apres de sent Johan de juny. E tenjrlas a prop de regar. E tresplanta les quant seran hun poch crescudes. E fes quey fira lo sol tot lo dia.	[5.4] De Cols de Sicilia. Si vols fer planter de cols de Sicilia sembra les a .viii. dies ans o apres de Sant Johan de Juny e ti les a prop de reguar e com sien grans tresplanta les e guarda quey fira lo sol.		
38			De cols de capdell. ¹⁵⁷			
39	Spinax, blets y bledes		[fol. 58r] De arbolam de Pasqua. Erbolam de Pasqua se enten la ensalada ço es morritot, ruques, julivert e altres erbes quj son bones per fer ansalada quant encara espinachs, bledes e altres frasques	[5.5] De erbolam de pascha. Arbolam lo qual es bo al pascuor ço es spinachs colills bledes e almolls		[fol. 24r] Per fer arbolam de pastors. Arbolam de Pastors, y de Companya,

155. In Capuano (2015: 60 table) this passage from BMV 6437 “llauor de cols verts” (95r) was misconstrued as unique to this ms. In fact, it corresponds, as shown here, to the chapter on the September cabbage crop.

156. (...) is used in this column to indicate the intervention of material in Agustí’s compilation taken from sources other than the *Memòria*.

157. *P* is the only witness that gives this chapter: “De cols de capdell se volen nj pus nj mes sembrar com les altres cols pero hull te mostrar en qual manera no tenint de aquella sement en qual forma ne poras fer prodoyr. Primerament tu cauaras hun troç de terra tanta com deles dites cols volras plantar o sembrar e aquella faras molt be femar e quant vinga ala festa de Santa Justa e Rufina quj es ha .xvii. de juljol sembraras aquella terra de sement de naps molt espesa tam que los huns estigen mesclats ab los altres e regals dos o tres vegades empero guardar en lo sembrar que la terra estiga de saho e nols culles e com vendra en la luna plena de febrer com vna exada tallant escabesaras tots aquells naps e sembra sements de cols de qual se hulla natura e puy sia cuberta aquella sement de terra [e] fem ben podrit hun dit en groç e regales en coujnet e despuys hun dia pert [sic] altre ruxales ab algun vexell en aso bo fins atant que sien exides. [fol. 58r] E despuys donals aygua de dos en dos dies e quant seran granetes tresplanta les e seran cols copades e de capdell” (*Pf.* 57v-58r).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
siembra hombre en enero & en março E en abril [fol. 212r] en qual se quiera luna E non qujeren mucho estiercol si non agua E non se quieren trasplantar. 40	sembra hom en giner y en març y en abril en qual seuol lluna y no volen molts fems mas volen aygua y nos volen tresplantar		sembre hom a la entrada de jener e noy guarda hom luna que noy cal e volen molt fem e regar souent e no les cal tresplantar.	sembra hom en la entrada de Giner E noy guarda luna quj nos vol e volen molts fems e reguar souint e nos tresplanten		fareu en la entrada del mes de Ianer, en qualseuol Lluna, de gra de Espinachs, y de Colets tot mesclat, femantlas molt, y regar souint, sens trasplantarles.
Las espinacas solas quieren mucho estiercol. 41						
[see row 40] 42	[see row 40]		De erbolam encara. Sembra enquera hom erbolam migant març ab molt fem e no si guarda luna.	[5.6] Erbolam. Erbolam sembre hom per semblant mijant Març ab molts fems e no si guarda Luna njs tresplanten		Altre Arbolam podreu fer, y sembrar, a mig mes de Mars, sens guardar Lluna, ab molt fems, y regar souint.
[see row 40] 43	[see row 40]			[5.7] De erbolam. Erbolam ço es blets e bledes spinachs e alguns grans sembra hom ala entrada de Abril es fan afemar e arreguar e nols cal tresplantar nj guardar Luna		Tambe podreu fer altre Arbolam, prenent grans de Blets, y de Bledas, ab alguns grans de Espinachs, tot a la mescla, los sembrareu en la entrada del mes de Abril, los famareu y regareu com laltre, y nols trasplantareu, ni aguardareu Lluna.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
44			daquj auant fins ha migant agost no sembra hom espinachs bledes e blets verts	e daquiauant no sembra hom spinachs mijant Agost [sic]		
45			De spinachs Spinachs menja hom en lavent de Nadal.	[5.8] De spinachs.		[fol. 24r] Per fer espinachs que seran bons en lo Iuern y Quaresma. Si voleu fer Espinachs que seran bons en lo Iuern y Quaresma,
46			E haquets se volen sembrar en la vella luna de agost migant aquell mes ab molt fem. E fan a regar a vegades axj como [sic] conexas ho auran mester.	Spinachs sembre hom mijant Agost ab la Luna vella ab molts fems e fan areguar auagades com hom coneix que o han ops		los sembrareu en lo mes de Agost en Lluna vella, ab molt fems, y fan a regar quant veureu ho auran menester,
47				e aquests spinachs son bons de Juern [e] en quaresma		y axi seran bons de Iuern y Quaresma.
48	Spinacas se siembran de mediant setiembre fasta a mediant octubre. E avn fasta en noujembre en luna vieja con mucho estiercol & a menudo rregar son mucho buenas en la quaresma.	Spinax se sembren de mijant setembre fins a mijant octubre encara fins en nohembre en lluna vella ab molts fems y souint regar	[fol. 58v] De spinachs encara. Encara en altra manera se volen sembrar migant setembre en luna vella. E regals axj como han mester. E sembra los hom ab molt fem. E son bons en la quaresma	[5.9] De spinachs. Encara altres spinachs sembra hom mijant Setembre tro mijant Octubre en la Luna vella e reguals hom com ho han mester e sembrals hom ab molts fems e son bons de tota quaresma si es alta o baxa		Altres Espinachs podreu fer per la Quaresma, o sia alta, o baxa, si los sembrau a mig mes de Setembra, fins en mig de Octubre, en Lluna vella, ab molt fems, y regarlos com los altres,

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
			<p>De espinachs encara. Alguns hortolans diuen que la sement vella es millor que la del any. E fan ho en aquesta manera, que meten la sement en hun cabaç e puy cusen lo cabas. E puy ab huna corda a calenlo en hun pou dins laygua e lexenloy estar sis o set dies. E apres traenlo de aquell cabaç e metlo en altre e tornel a metre en lo pou per espay de .iij. o .iiij. jorns encara .v. e la hora la sement grilla. E llauors sembra la hom ab molt fem e ixen tantost.</p>	<p>[5.10] De spinachs Alguns ortolans diuen que la laur vella es millor que la del any mateix e fan axi meten la laur en huna senalla e cusen la e puy meten la en hun pou en laygua e lexen star vj. o vij. jorns en apres descusen la e meten la laur dins en la senalla puy tornen cosir la senalla e meten la en lo pou en guisa que no toch en laygua e stiguey .iiij. o v. jorns e lauors la laur es grillada e sembra la hom ab molts fems</p>		y se fan millors de sement vella. (...)

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<p>Lechugas tempranas se siembran en la luna vieja de mediant setiembre fasta mediado de octubre E fazen a rregar quando lo han menester E trasplantan se antes de nadal con estiercol. E fazen a rregar.</p> <p>50</p>	<p>Letugues primerenques se sembren en la lluna vella de mijant setembre fins mijant octubre y fan a tresplantar ans de nedal ab fems y fan a regar</p>		<p>De letugues Letugues primerenques sembra hom migant hagost o de setembre entro migant ochtubre en luna vella ab molt fem. E fan a regar axj com veuras auran mester. E tresplanta les en la auent de nadal ab molt fem en luna vella e regar les has de .viii. en nou dies per amor deles jelades.</p>	<p>[5.11] De Letugues. Les letugues primarenques sembra hom mijant Setembre tro mijant Octubre en la Luna vella ab molt fems e fan aregar com ops ho han e tresplanta les hom en lauent de Nadal ab fems en la luna [blank space] e regua les hom com ops o han</p>	<p>[54v] Lentugues [sic]. Letugues primerenques sembre hom mijant setembre tro a mijant Octubre en luna vella ab molts fems e fan a regar com veu hom que obs ho han e transplanta les hom en lauent en luna vella ab fems.</p>	<p>[fol. 24r] Secrets per fer lletugues de moltes maneres. Lletygves primarenques, y mes derrarenques, fareu si les sembrau de mig Setembra, fins en mig mes de Octubre en Lluna vella, ab molt fems, y regarles sempra ho auran menester, y trasplantarles en lo Aduent, en la Lluna vella, ab molt fems, regantlas com esta dit.</p>
<p>E semejante mente puede hombre sembrar en Noujembre o en deziembre.</p> <p>51</p>	<p>per semblant ne pot hom sembrar en nohembre y en dehembre</p>		<p>[fol. 59r] De lletugues enquera. Alguns sembren letuges en lo mes de noembre entro migant dehembre e tresplanta les en jener. Al sembrar e al collir per a tresplantar guarda hom la luna vella per que ne son pus saboroses. E met hi hom molt fem. E sien regades axj com ho auran mester.¹⁵⁸</p>	<p>[5.12] De letugues. Algunes letuges sembra hom de Noembre tro amijant deembre e tresplanta les hom de Giner al sembrar e al tresplantar en la Luna vella ab molt fems reguant quant ops o han</p>	<p>[54v] Letugues. Letugues per lestiu sembre hom en noembre tro a mijant deembre e trasplanta les [sic] hom en Janer ab molts fems. Regales hom com hom concix ho hagen ops.¹⁵⁹</p>	<p>Altres Lletugues mes derrarenques haureu, si las sembrau de Noembra, fins en mig Desembra, y les trasplantareu de Ianer, o de Fabrer, tot en Lluna vella, ab molt fems, y regar com esta dit. (...) ¹⁶⁰</p>

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Ajos se plantan en luna vieja. E en Noujembre menos de estiercol bien cauada la tierra 52	Alls se planten en lluna vella en nohembre sens fems en terra ben cauada		[fol. 59v] De plantar alls. [fol. 60r] Alls planta hom migant deembre en luna vella en terra ben cauada e ben barbeytada e menys de fem.	[5.13] De alls. Alls planta hom mijant deembre en la Luna vella en terra ben cauada e guaretada menys de fems	[54v] Ayls. Ayls planta hom mijant Noembre en luna vella e volen terra ben cauada e goretada sens fems.	[fol. 27v] De secrets dels alls. Alls se han de sembrar à mig Nouembra, en la Lluna vella, volen terra seca, no humida, ni molt grassa,
53			E fan a plantar en loch de regadiu en manera ques puguen regar de .viij. en viij. dies	e fan areguar en loch de reguiu de viij. en viij. jorns	fan a regar de .viij. en .viij. dies	

158. At this point *P* inserts two anomolous chapters attributed to Solomon: “De carabaçes. Diu salamo que si tu vols fer vna gran carabaça molt larga, pren dela sement deles carabaçes redones e en vna canasta que sia plena de fem podrit e alli planta aquella sement en lo mes de febrer. E quant seran exides que seran de .iiij. o .v. fulles tresplantaras a cascuna a sa part ab molt fem e regales souent. E quant hi aura dos o tres carabaçes axj com lo puny colljrles has totes sino aquella quit parra molt bella e tu volras jaqujr per fèrla molt largua. E puyes fes hun gran clot en terra e met la carabaça damunt algun faix de sarments e que tinga lo cul la volta del clot fet en terra e puyes cobre la carabaça de frasques e barumballa per manera que lo sol nj fret noli faça mal e lexa la estar axj que si lo clot es fons vna cana se farà longa la carabaça. Mas guarda enlo clot noy entre aygua mas rega la planta dela carabaça. E aço es prouat moltes vegades. Mas nota que en totes les plantes o planta noy aja altra carabaça sino aquella. De fer menta. Encara posa lo sauç Salamo que quj vol fer menta, o erba de senta marja, la qual menta com hes manifest a tot lo mon no fa may semença, e no podent aver dela sua semença o natura, mostra açj Salamo en qual manera se pot fèr. Diu que si es presa vna corda despart e com vjngua enlo mes de maig o de juny sia huntada aquella de mel e posala en lloch hon hi puguen venjr mosques a mengar aquella mel, e com veus aquella es la condicjo della mosca que alla hon ve a menjar alli caga moltes voltes e com aquella corda sia ben plena deles caguadures deles mosques sotarrarlas [sic] de jus terra e regar las e en continent a poch dies auras molta erba de santa marja o menta ques nomena en hulguar. E es sertament cosa prouada” (*P*f. 59r-59v).

159. Immediately following this second chapter on lettuce (54v), *N* includes a chapter on fava beans not found in any other witness: “Faues. Ffaues comunament se planten os sembren a Sant Miquel. Quj les vol primerenques plantales hom en Agost o en setembre en la prjmera setmana”. All the chapters that follow these brief instructions on fava cultivation treat non-horticultural topics (grafting, planting trees, etc.).

160. After the first two paragraphs on lettuce (24r), Agustí 1617 cites extensively other authors on the same crop and its medicinal uses (24v), then four other chapters follow, none of which correspond to any of the *Memòria* texts known so far: one on “Secrets pera fer las bledas blancas y grossas” (25r) taken from sources named in the margin as Sossio, Mizaldo, and Esteua; one on “Secret per fer que lo iulivert fassa las fullas molt amples...” (25r) citing other sources; one on “Secrets pera fer naxer molts esparchs...” (25v), citing still other sources, and one on “De sembrar lo canem y lo lli” (25v), which cites no source. Agustí 1626 has three chapters (on borrajas ‘borage’, oruca ‘arugula’ and cardos ‘artichoke’) in place of these last two. The *Memòria* material then resumes, with the chapter on leeks in Agustí 1617 (25v, see below) and on onions in Agustí 1626 (p. 86).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
E pueden se trasplantar en enero o plantar. Empero los tempranos han ventaja que se fazen mas bellos & no temen tanto la Niebla de mayo como los otros. 54	y podense tresplantar en giner o plantar empero los primerenchs se fan pus bells		e si nols plantaues en decembre plantals en jener en luna vella, mas mes valen los primers per que la lluna de maig molt los pot noure e per aço val molt que sien ja crescuts	E si nols planta hom de dehembre planteles hom de Giner en la Luna vella mas mes valen los primarenchs de dehembre per ço com la Luna de maig nols pot noure per ço com son ya crescuts	e si son plantats prjmerenchs valen mes e no temen la neula de Maig.	sinols plantau de Nouembra los podreu plantar de Ianer, pero valen molt mes los primarenchs: perque la neula, que fa de Maig, nols pot danyar, per ser ya grans,
55			e si entre ells vols plantar o sembrar alguns grans despinachs fancj molt bells. Axj mateix algunes lletugues, e fan si molt belles.	E quis vol be pot sembrar entre los alls primarenchs alguns grans de spinachs e fan se fort bells e de letugues e fan se belles		Ab los primarenchs de Nouembra, podeu sembrar gra de Espinachs, ò de Lletugas, que si fan molt be entre ells. (...)
56			e si vols que los alls no grjllen fes que sien plantats en luna vella e arencalos en luna noua e si son plantats en luna noua arencalos en luna vella	Si vols quels alls no grilen fes que si los alls son plantats en Luna vella arranquals en Luna noua e si son plantats en Luna noua arranquals en Luna vella		
57			E nota que com los plantaras volen esser solament hun gra dall e de gra en gra axj fan a plantar ¹⁶¹			

161. Here *P* inserts (f. 60r-60v): “E si per ventura voljes fer de huna cabeza dalls que vjngues axj groça com lo puny o pus gros pendras lo gra del all e foradarlas ab huna estaqua que sia molt prima pero que lo forat nolj pas e puys dins aquell forat metras [fol. 60v] hun gra de senapi e puys planta ton all e faras molt gros. Pero nota que sempre la sua sabor tira al senapi pero es molt bella cossa”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
58			<p>De plantar scalunyes. Si vols fer escalunyes pendras una seba e talla l'j molt be les rahels e apres despulla la en manera que la terça part ne vaga en aquella despulla pero que la seba començ agrillar e despulla la tant fins que lo grill te romanga redo e puy pren grans dalls e fiquals en aquell grill en tant que n'j metes tres o quatre e cubr'j los de terra e ax'j auras escalunyes.</p>	<p>[5.14] Si vols fer scalunyes hages vna ceba e tall les rahils e apres leuen la terra part dela ceba enues lo grill en rodo e fical'j grans de alls .iij. o .iiij. e cobren de terra e hauras scalunyes</p>		
58			<p>E puy com ne tingues una mata ne tendras moltes, ço es, que tingues soterrada aquella planta de jus terra e com vinga en lo mes de maig traules e departexles de cap en cap e puy planta cascun cap per si e de cascun cap auras una planta. Cosa provada.</p>	<p>Jtem en apres altre manera pren deles scalunyes vna mota e lexa les de uall terra e en lo mes de Maig trau les dela mota fen de cascuna scalunya sa part e planta cascuna per si e fer sa de cascuna scalunya huna mota</p>		
59						

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Rauanos planta hombre todo el Añyo. mas en espeçial quieren que los planten en março & en julio. E quieren tierra bien labrada menos de estiercol.	Rauens planta hom tot lany en especial valen mes aquells ques planten en març y de Joliol y volen terra ben llaurada sens fems			[5.18] De Rauens. Rauens se poden plantar per tot lany mas mes valen aquells qui son plantats en lo mes de març e no volen fems mas volen terra ben cauada e be toua Rauens plantats en lo mes de Juliol valen mes e son millors del any Los vns e los altres se volen reguar aueguades Rauens no deu hom per ells triar terra com baste a hom qui nols vol vendre que en los camps de les cols ne fasa hom plantar	[54v] Rauens bons. Rauens podets plantar tot lany en special en lo mes de mars mas mes valen aquells que son plantats en lo mes de Juliol. No volen fems mas terra ben cauada. E deuen regar a vegades. E es cert quels millors rauens de tot lany son aquells quis planten en Juliol. Per rauens no cal triar terra car basten per acasa qui non vol vendre quen mete hom enels crestes dels solchs de les cols.	[fol. 27r] Secrets dels ravens. Sembrar poreu tot lo any Rauens, pero son millors los que sembrareu de Juliol, apres los de Mars, no volen fems, sino terra ben cauada, se han de sembrar en Lluna vella, y qui nols vol pera vendre, basta sembrarne als solchs de las Cols, Porros, y dels Espinachs. (...)
60						
Puerros & çebolla porrera siembra hombre en luna vieja de mediante março fasta a mediant mayo	Porros y çeba porrera se senbra a mijant març		De plantar e sembrar porros. La sement dels porros e de sebes senbra hom a l'entrant de març en luna vella fins al migant del dit mes e no se poden cremar per lo fret.	[5.15] Porros e cebes e porrella senbra hom en l'entrant de març en la luna vella tro mijant març		[fol. 25v] Secrets de las raelas de las herbas de Ortalisas. Cap. V. Secrets dels Porros y del temps que se han de sembrar y plantar. [fol. 26r] Los Porros se han de sembrar en lo mes de Mars
61						

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Empero la çebolla faze a sembrar rralota 62	Empero la çeba fa a sembrar clareta		Empero la seba se vol sembrar clareta	La ceba fa a sembrar clareta		
63			per que faça mes groça [fol. 61r] e bella e fa molt bella mata	per ço que meta mjllor mata		
en buena era con estiercol conuenjente mente & non mucho. E faze rregar dos dias enla semana o tres. 64	en bon guaret ab fems couinentment y fa a regar .ij. dies en la setmana		e vol bona terra e de bona gujssa lo fem. E fan a regar de dos en dos dies	e volen bon guoret e no massa fems e fan a reguar de .ij. en .ij. djes la setmana		[fol. 25v] en terra ben cauada, y ab fems, no desmasiats en Lluna vella, ¹⁶²
65			e mes si mester ho auran. ¹⁶³	o mes si ops o han.		
empero los pueros quieren mucho estiercol 66	empero los porros volen molts fems					
E fazen a trasplantar los puerros Asy como la çebolla porrera de mediante Agosto fasta mediante setiembre en luna vieja. 67	y fan a tresplantar los porros axi com la çeba porrera de mijant agost fins mijant setembre en lluna vella		E puys fan a tresplantar en maig o en juny en luna vella	E fan a tresplantar mijant Agost en la Luna vella.		

162. Here Agustí 1617 inserts (f. 25v) “y tambe de mes primarenchs en lo mes de Ianer y Febrer: per hauer llauor de ells per tenirne en lo estiu, se plantaran en lo Abril, Maig, ó Iuny: per tenirne en lo hiuern se plantaran en lo Agost, Setembre y Octubre. (...)”

163 Here *P* inserts (61r): “E dien alguns que hom deu cauar la lleuada e ben plana e sembrada de bon fem ben podrit, e despuys sia homplit aquella leuada de aygua e ab aquella aygua sembra la llauor dela seba e vendran molt millor”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
E los puerros al trasplantar quieren mucho estiercol 68	y los porros al tresplantar volen molts fems		mas si vols bons porros tresplantalos en maig e alagost quant los volras tresplantar seran bells e groços apres met hi hom molt fem	Los porros volen fems al tresplantar		
69				Mas ala [space left blank] no cal fems mas vol terra be cauada		
E que sean espesos. 70	y que sien espessos			com tresplanta hom los porros volen que hom los planta spessos		
71			e fes per manera que de hun porro a laltre aja dos o tres dits	que no hage de hun al altre mes de hun djt		
E que ayan agua de tres en tres dias. fasta tanto que sean presos. 72	y que hagen aygua de iij. en iij. [dies] [fol. 95v] fins que sien preses		e sien regats hun dia pert [sic] altre fins a tres regadures.	e volen aygua de .iij. en iij. djes tro sien presos.		
Las cebollas 73	les cebes		La seba deus tresplantar en maig fins mjgant lo mes de juny en luna plena e apres la met dejus terra ab molt fem mesclat ab la terra	La ceba		
non qujeren mucho estiercol synon que sean rralas mas quelos puerros 74	no volen molts fems que sien clares mes quels porros			nos vol tresplantar tan spes mas be vol que hom la plant spes coujnement		

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
75				mas puyson preses		
E agua dos vezes en la semana. 76	y aygua dos vegades la setmana		e regales de dos en dos dies.	volen se reguar ij. vegades la setmana		
77			Les primeres vegades se volen entrecuar molt			
78				E fan a plantar present [<i>sic</i>] los porros		
E los surcos delos puerros sean bien anchos. 79	y los solchs dels porros sien ben amples		e tresplantaes que aja hun bon forch o una ma de una al altra e seran belles ¹⁶⁴	e de hun solch a altre hage dos palms		
E pueden sembrar por medio delos rrauanos. 80	E poden sembrar per mig dells rauens			E quis vol pot plantar cols e rauens e fan se molt be entre los porros		
81				E los porros fan a entracuar [fol. 121r] e cullir ab terra axi com los porros ¹⁶⁵		
Cebolla rredonda de saluar se deue sembrar en luna vieja mediante enero en buenas eras bien caudas & con estiercol. 82	Ceba redona de saluar se deu sembrar en lluna vella mijant giner en bon guaret ab fems			[5.16] De cebes rodones de Saluar. Ceba rodona de saluar sembra hom mijant Giner en Luna Vella e en guaret ben fet ab molts fems		[fol. 26r] Secrets de la ceba rodona per salvar. La Ceba rodona per saluar se sembra en lo mes de Ianer en Lluna vella

164. Here *P* inserts (61r): “yo he vist que com son axj com la gruyxessa de hun bou les descalsen de la terra e fan sen molt groses e es prouat. E si vols que no grillen axj prest com les enforcaras per volerles saluar leuals ab un gaujnet totes les barbes, ço es, les rahels. [fol. 61v] E puyson met hun ferro en lo foch e com sera molt e ben vermell crema alla hon an estat les barbes e puyson met les a saluar e aço val molt que no grillen axj prest”.

165. Here *B* inserts (121r): “E la lauor dels porros e deles cebes pot hom axi tenir que la hon tresplantaes leix hom hun solch o dos ayntants com hom se vulla los quals spiguen e leix hom assahonar la lauor e que hom la stoig be”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
83						per ser primarenca, y sen sembra de Febrer, y de Mars, en bona terra, y ben femada, y es molt bo destrempar ab aygua ab vna Samal fempta de Coloms, ó de Gallina, y femarne la terra,
E rregar muchas vezes 84	fa a regar souint			e regals hom souin		vol regarse souint,
85						y per guardarla de fret, y gelades, fareu los remeys que tenim dits,
86				e tresplanta la hom com es creguda		
E deue se trasplantar en abril E en mayo en luna vieja. 87	y deuse tresplantar en abril en maig enla lluna vella			E decontinent que hom veu que es bona a tresplantar en Abril o en maig mas com pus primarencha se plantara ço es en Maig mes val fa a tresplantar enla luna vella		y quant veureu sera bona à tras- [fol. 26v] plantar, que sera en lo mes de Abril, ò de Maig, que quant mes primarenca es, mes val, ¹⁶⁶
Empero el palladio dize que en luna que sea nueua faze a trasplantar menos de estiercol. 88	Empero lo palladi diu que en lluna vella que sia noua [sic] fa a tresplantar sens fems					

166. Here Agustí 1617 inserts (26v): “y quant la transplantareu tallarlos totas las raelas perque ne fassen de nouas, y regareulas, sinols lleuau las raelas, quant las haureu plantades, dexareu de regarlas deu, ò dotze dias, y en estos dias las raelas sels moriran, y apres regaules y posaran raelas nouas, y se faran molt millors”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
E non quiere estar fonda. sinon que solament sea cubierta. E faze a regar de tres en tres dias 89	y nos vol metre fondo sino que solament sia cubert y fa a regar de .iiij. en .iiij. dies			e mesa com pus som pot hom per ço com millor ceba met e bastalj que solament sia cubierta de terra la caboça No vol fems al tresplantar mas vol ne al sembrar axi com damunt hauem dit e fa areguar pus es tresplantada de .iiij. en .iiij. dies		y fan a plantar molt somas que basta la cabeça sia cubierta de terra, y al transplantar, no volen molt fems, fan a regar souint,
E que el tiempo sea claro. E qujere se entrecuar de ocho en ocho dias. 90	y vol se entrecuar de .viiij. en .viiij. dies			e de entrecuar hun dja la setmana Guardar se deu hom com la regua que la hora sia clara		y a recauar vn dia la setmana, y quant las regareu, que sia en dia, y hora clara,
91				car fort li nou com se regua ab leig temps e no sen fa tant bella nj tant be.		que sis regan en hora escura, nos fan tant bellas.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
<p>Quj quiere aver simjente de cebollas. tome de las mas bellas cebollas que pueda fallar E plante las mediado Noujembre. E en su [fol. 213r] tiempo fara simjente. La qual simjente despues que es sembrada dura a sallir .xxx. dias.</p> <p>92</p>	<p>Qui vol hauer llauor de cebes prenga deles pus belles que puga trobar y plante les mijant nohembre enson temps fara llauor la qual apres que es sembrada tarda a exir .xxx. dies</p>			<p>Qui vol hauer dela lauor planta deles cebes grosses deles pus belles que trops mijant noembre e faran lauor e leix les hom assahonar e stoig les hom tro al temps que les deu hom sembrar e no hix pus es sembrada tro a xxx djes ans sta dins terra los djts xxx djes</p>		<p>[fol. 26v] Per tenir bona llauor quant seran asahonades, pendreu de las mes grossas las que voldreu, y las plantareu en lo mes de Nohembre, estaran à exir vint ò trenta dias¹⁶⁷</p>
<p>cebolla rredonda para pastor siembra hombre en agosto en luna vieja. E trasplantase en octubre o en Noujembre.</p> <p>93</p>				<p>[5.17] Ceba redona aquella que hom menge tendra sembra hom en Agost ab rauens e son bones asopar</p>		

167. Here Agustí 1617 inserts (f. 26v) “y granaran, y quant sia asahonat lo estrujareu que sera per lo Ianer. [fol. 26v] Si voleu que las Cebas se seruen, y que nos grillen nis podrescan, fins en lo mes de Maig, ò de luny, procurau cullirles lo mes de Iuliol, ò de Agost, ò de Setembre quant estigan en saho, dia axut, y Lluna vella, que nos colpejan, despres les posareu en lo Sol, à axugar, que nos banyen, y les posareu dins de vna bota desfonsada de vn cap à sostres, posant à cada sostre cals viua, com si era sal, desta manera se saluaran com tinch dit”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Calabaças se siembran de mediado enero. fasta mediado febrero en luna nueua con mucho estiercol. medio palmo en alto. 94	Carabaçes se sembren de mijant giner fins mijant febrer en lluna noua ab molts fems mig palm enalt			[5.23] De Carabaces. Carabaces sembra hom mjant Giner tro a mijant ffebrer ço es que planta hom lo gra en la Luna noua e met hi hom molt fems be mig palm de alt		[fol. 29r] Secrets de les carabaces, y Cogombres Les Carabaces haucu de sembrar en lo mes de Febrer apres la Lluna haura fet lo ple, ¹⁶⁸ en bona terra posant y molt fems, fent de quant en quant vns clots de fondo de vn bon palm, omplintlos de fems ab poca terra,
E de suso del estiercol pone hombre los granos. 95	y sobre los fems posa hom los grans			e sobre los fems mit los grans		despres posareu los grans, ço es, sinch ò sis per lo entorn del clot
E cubre los hombre con tierra mezclada con estiercol 96	y cobrels ab terra mesclada ab fems			ecobrels hom ab vna poqua de terra mesclada ab los fems		cobrintlos de fems, y terra mesclada, que sols estigan cuberts vn traues de dit,
97						[fol. 29r] y abans de sembrar los fareu estar en remull tres ò quatre dias ab aygua tibia,

168. The “luna noua” prescribed by the other witnesses in this row is not the new moon in the modern sense, but rather, a waxing moon. If we accept that apres is here functioning as the preposition ‘after’ (and not the conjunction ‘near’), then, inexplicably, Agustí’s phrase “apres la Lluna haura fet lo ple” denotes just the opposite of the other witnesses, i.e., a waning gibbous moon, following after (“apres”) the moon has reached its full phase. This contradiction is even clearer when this passage is compared with a similar phrase in the chapter on winter cabbages “se sembran en lo luny en Lluna vella, apres que haura fet lo ple” (Agustí 1617: 23r), where there is no contradiction between *lluna vella* ‘waning moon’ and the phrase “apres que haura fet lo ple” (see row 5).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
en lugar do toque bien el sol [see also 109] 98	en lloch hon toque be lo sol [see also 109]			e han ops loch hon toch lo sol tots dies e noy pusque toquar gran vent		y mirau que en lo lloch ahont los sembrareu, y toc be lo Sol tot lo dia, y que noy pas molt de vent,
99				E si fahie gran fret com deuen exir cobrj les hom ab draps o ab stores enguisa quel fret noy mogue		[see 114]
& rregar muchas vezes. 100	y fan a regar souint			e fan areguar de iij. en .iij. Jorns e com pus souin les regue hom pus tost se fan E si laygua era calenta del sol hi valrja mes		regantles de tres en tres dias,
101						y com anirant crexent anulos cauant la terra per lo entorn, y se fan millor:
[see 108] 102	[see 108]					les que voldreu transplantar las transplantareu en lo mes de Abril, tambe en la Lluna noua al segon quart ab molt fems, y les regareu axi matex,
103						y si fa fret, ò gelades les cubrireu ab draps, ò estores, ò ab los remeys tenim dits (...)

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Empero es nescesario que los granos sean bien secos. E despues 104	Empero es mester quels grans sien ben sechs, y apres			Los grans deles carabaces		
fazen a rremojar en agua caliente .iiij ^o . o .v ^o . dias 105	fan a remullar en aygua calenta .iiij. o .v. dies			fan aremullar ab ayg[u]a tebea qujs vol e seran pus tost exides de .iiij. o v. djes E com seran remullades plant les hom en la manera desus dite		[see 97]
[see 104] 106	[see 104]			Ops es quels grans deles Carabaces ans que sien mesos aremullar sien ben sechs		
107				e sino eren ben sechs... ¹⁶⁹		
E deuen se trasplantar en el mes de abril en luna Nueva 108	e deuense tresplantar en lo mes de abril en lluna noua			Empero les carabasses nouelles fan atresplantar en lo mes de Abril en la Luna noua ¹⁷⁰		[see 102]
en lugar do toque el sol con mucho estiercol. E fazen a rregar muchas vezes 109	e hon toque be lo sol ab molts fems y fan a regar souint					

169. Here *B* inserts (121r): “e sino eren ben sechs sequels al sol e puys remullals axi com demunt es djt. Eximpe per sancta Agatha sembra ta carabaça si vols que be te fasa la qual festa es a .x. djes de ffebrer”.

170. Here *B* inserts (121r): “E planta les hom axj fa hom hun clot que hage be dos o tres palms o mes dample e de pregon hun palm e mig e fa li hom entorn lo clot orle de terra e puys en mig loch posa hom molt fems mesclat ab terra e fa li hom vn mont alt en mig del clot e plantey hom tres planters de carabaces e aço fa hom per ço que lo clot ample hom daygua al reguar de la mota de mig per tal que aygua no toch al vll dela carabaça car menys ne valrja e regueles hom de .iiij. en .iiij. djes de sesta ab calor tro que sien ben preses”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
110				E si per ventura fahia gran fret cobre les hom		
111			[fol. 61v] De carabaçes primerenques. Si vols hauer carabaçes primerenques abans de sent Johan de Juny ajes bon fem destable que sia ben podrit he solegat com pose en lo capitol del fem e mesclat en bona terra graça alli sien sembrades les carabases lo jorn de sent Valentj quj és a .xiiij. de febrer. E sien plantades en loch de sol per mesura. e sien regades soujnt. e auras carabaçes primerenques. Ha volerles hun poch pus tardanes se volen sembrar en lo mes de març com aquell mes sia la mare de les semençes	[5.24] De Carabaces primarenques. Si vols hauer carabaces primarenques sembrales segons que en lo Capitol desus es dit e com seran exides no les regues ab aygua mas regua les ab leyt de vaques o de ouelles o de cabres e hauras carabaces molt primarenques.		[fol. 29r] Si voleu les Carabaçes y Cogombres que sian primarencas, posareu en testos dolents, ò cofins, terra molt bona passada ab vn garbell, y mesclareu ab ella fems que sia grasseta, que casi se puga pastar, y abans del temps acostumat, y sembrareu dels grans de les Carabaçes, y Cogombres: quant sera axit lo sol, y fara lo dia bo, ò voldra ploure, traureu los testos, ò cofins defora, y quant lo Sol se pondra los tornareu á posar dins casa, ò en cubert, fent aço continuament, y regantles quant ho hauran menester. Quant empero seran passades las geladas y frets perfetament,

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
						<p>(cont.)</p> <p>pendreu los cofins, y tests, y los posareu debax de terra ben cultiuada y grassa, de tal manera que la terra vinga yqual, y raza ab los tests, y tindreu los demes cuydado que se acostuma ab ellas, y los lleuareu los caps dels [fol. 29v] brots, de aquesta manera vos donaran prest fruyt. (...)¹⁷¹</p>

III

171. Agustí 1626 mirrors the Catalan version here. In both texts, two paragraphs follow without marginal attributions, so these may be original to Agustí and not to the *Memòria*, especially considering that they do not appear at the outset of the chapter, where he usually presents *Memòria* material. The first paragraph is on how to create designs on the surface of calabash and cucumbers as they grow, a practice that can be found in Ibn Wafid (Millás Vallicrosa 1943: 321) and the second is on forcing a calabash to grow inside a tube-shaped reed, resulting in an extraordinarily long specimen. Other paragraphs attributed to Mizaldo and Quintiliano in Agustí 1617 close out the chapter in both texts.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Cogombros Melones Albudeques Alberginjes siembra hombre en luna nueua de febrero o de março con mucho estiercol. Asy como Calaba- ças. E quieren estar poco cubiertas. fazen a rregar de tres en tres dias.	Cogombros Melons Albudeques Albarginjes Sembra hom en luna noua de febrer o de març ab molts de fems axi com les carabaças y volen esser poch cuberts fan a regar de .iij. en .iij. dies			[5.25] De melons albudeques cindrjes cogombres & alberginjes. Cogombres melons cindrjes albudeques e alberginjes sembra hom mijant ffebrer e per tot lo dit mes ab luna noua e ab molts fems be [fol. 122r] mig palm dalt o mes axi com les carabaces e no fan a cobrir guayre mas tansolament quelos grans sien cuberts de terra mesclada ab fems E volen se reguar souin de iij. en iij. dies	[54r] Melons. Cogombres. albudeques e alberginjes. Primo los Melons albudeques mijant Mars e los cogombres alberginjes mijant ffebrer o per tot lo mes en luna noua totes e totes axi mateix com les carabasses e no fan a cobrir massa mas trant [sic] solament quels grans sien cuberts de terra mesclada ab fems e deuen se regar de tres en tres dies	[fol. 29v] Secrets de Melons. Los Melons se han de sembrar en lo mes de Mars en Lluna vella com los Carabasses, y ab la matexa terra y diligencia que tenim dit de les Carabaças,
112						pero han se de sembrar en llur lloch: perque nos volen trasplantar, sino ab la matexa terra,
113						
E que esten en lugar do toque bien el sol. E tras-plantan se en abril con mu-cho estiercol.	y quels toque be lo sol y tresplantense en abril ab molts fems			E volen que lla hon son sembrats los grans quels hi toch lo sol tot lo dia o la maior partida e volen se regar de .iij. en .iij. Jorns	e sien plantats en loch hon lo sol toch tot lo dia o la maior partida e deuen se regar axicom dit es	se han de fer en part en la qual lo Sol los toque tot lo dia. Volen se regar sempre sia menester,
114						

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Empero quando los cogom-bros & melones comjençan a madurar. non se quieren rregar. E puede los hombre trasplantar [<i>sic</i>] en lugar do no los cale trasplantar 115	empero quant los cogombros y melons començen a madurar nos volen regar e podense sembrar en lloch hon nols cal tresplantar			Exceptat los melons e les albudeques e les cindrjes Si donchs no vehia hom que mester ho haguessen E pot los hom sembrar en loch que no les cal tresplantar si hom nos vol	exceptat los melons e les albudeques si donchs no veyen que mester ho haguessen e pot los hom sembrar en loch que noles cal transplantar sinos vol hom.	acceptat quant volen madurar: per que sian bons los Melons, non haueu de dexar sino à cada mata dos ò tres,
116				E si per ventura fahia fret abrich les hom axi com les carabaces	E si faya fret pot les hom cobrir segons que dit es	
117				La lauor dels melons e cindrjes e de alberginjes de cogombres e de albudeques ans que hom les sembre deu esser remullada ab aygua ij. o .iiij. djes	totes aquestes lauors ans que hom les sembre deuen esser remullades dos o tres dies abans.	y abans de sembrar haueu de posar los grans en ramull ab algun licor dos ò tres dias, apres sembrarlos. (...)
118				Les albudeques cogombres melons cindrjes e alberginjes deuen esser sembrades per tot ffebrer		
119				e ha spay... ¹⁷²		

172. *B* adds (f. 122r): “e ha spay deles djtes dues lauors ales altres dues .xx. o .xxx. jorns specialment lo millor temps de sembrar albudeques o melons o cindrjes es entorn la ffeſta de ſancta marja de Març en la manera que dit es”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
Espinacas [<i>sic</i>] faze a ssembrar en julio en la luna vieja en tierra fonda cauada menos de estiercol E que se rieguen muchas vezes & no conviene a trasplantar 120	[fól. 95v23] Pastanagues fan a sembrar en Joliol en lluna vella enterra fondo cauada sens fems mas volen ques reguen souint y noles cal tresplantar			[5.19] De Pastanagues. Pastanagues sembra hom en Juliol en Luna vella en terra ben cauada pregon e ben guaretada no volen fems mas volen se reguar souin e nos tresplanten		[fól. 27v] Secret de Pastenagas. [fól. 28r] Les Pastenagues se sembran en lo mes de Juliol en la Lluna vella, apres que ha fet lo ple en lo matex quart, vol la terra ben fangada, y ben femada, ¹⁷³
Los nabos se siembran en julio en la luna vieja. 121	Los naps se sembren en juliol en lluna vella		[fól. 61v] De sembrar naps. Si vols sembrar naps sembrarlos has .viii. dies abans de senta Justa e Rufina quij es a .xvij. de juljol o .viiiij. dies apres, que diu lo exemple del antich: a santa Justa e Rufina planta pastanages e napina, quij son dits naps, empero guarda que sia bona terra barbeytada, femada e cauada fondo, e auras bons naps.	[5.20] De Naps. Naps sembra hom en Juliol en Luna vella axi com les pastanagues e sie ala entrada del mes de Juliol per ço com mes val que sien prjmarechs que tardans e aço se enten de tota ortalixa que mes val que sia primarencha que tardana E diu leximplj a sancta iusta e Rufina sembra la tua nabina la qual festa es .vij. dies ala desexida de Juliol		[fól. 28r] Los Naps se han de sembrar en lo mes de Juliol en la Lluna vella, en lo quart ha fet lo ple, y seran primarenchs: perque tota la ortalisa primarenca val mes que la tardana, diu lo prouerbi, que lo bon Nap, per Sanct Iaume ha de ser nat. Tambe ne podeu fer la Lluna abans y apres. ¹⁷⁴

173. Here Agustí 1617 inserts (f. 27v): “y nos volen sembrar molt espeses: perque se pugan fer ben grossas y belles, y estas seran bones en la Quaresma, tambe ne podeu sembrar en la Primavera, pero son millors las de la tardor, si voleu que la rael sia bella y grossa, conue que los aneu lleuant las fulles per aclarirles (...)”.

174. Here Agustí 1617 continues (f. 28r): “Lo Nap vol la terra ben fangada, y nouament moguda, y la llauor no ha de ser de mes de tres anys, que si es mes vella no produex sino Cols, Axi quant los sembrareu, procurareu de sembrarlos ab terra prima, mesclada ab lo gra: perque nos sembrian [*sic*] massa espeços. Si à cas, son massa espessos, los aueru de aclarir: Per sembrarlos, haueu de esperar que la terra sia estada regada primer, ò del cel, ò manualment: perque seran millors, y no los sembreu en lloch dehombra: perque la hombra los es molt contraria, sino es que la terra sia bona y fertil”.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>A</i> (Annapolis) MS Gwara	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11	Miquel Agustí 1617
122			Alguns... ¹⁷⁵			
			[fol. 62r] De plantar chereujes. Quj vol plantar chereujes planteles en luna crexent que sia girada de .viij. dies en lo mes de jener, o de febrer e la lauor sia a mjga cama, e que aja en la terra bona saho e per auant en març regar les has mas volen terra arenossa e molt femada ¹⁷⁶	[fol. 121v] [5.21] De xereujes. Xereuies se sembren en la Luna vella de Giner e deuen se sembrar en terra freda quels fems sien be podrits e deuen se sembrar clares per ço que millor se façen Jtem si tu has dels grans deles xarouies que son rahils de les xerouies e si es massa gros parteix lo en algunes parts e cascuna part mjt la deual terra sol que tinga dos dits de terra desus e hauras deles xereuies e volen se fer en loch fret e que nols do massa lo sol		[fol. 28r] Secret de Xaravilles. Sembrarev en lo mes de Mars en la Lluna vella, apres ha fet lo ple, les Xaravilles volen la terra que sia molt ben cauada, y femada, tambe ne podreu sembrar tots los mesos del any, empero las del mes de Mars son las millors, y de mes virtut, y estan tot lo any en la terra.
123						
124				[5.22] De xufes. ¹⁷⁷		
				[5.26] De sembrar Iuhiuert ¹⁷⁸		
125						

175. Here *P* inserts (f. 61v) “Alguns los sembren en la terra hon han arenquats alls e sebes que si fan molt bons e ben saborosos e groços e [fol. 62r] no són corquats. Axj mateix se planten os sembren les pastanagues”.

176. Here *P* inserts this anomalous chapter (f. 62r): “De donar color e sabor. Si vols donar color e sabor a qual se hulla fruyt pendras vna barrina e foradaras larbre en quatre parts en tant que la barrinadura li toque al cor. E puy aquells forats sien omplits de safra destemprat ab oli comu e maçis e girofle molt e puy sien tapats ab lenyam de fraig e tot arbre quj prodoyra fruyt quey sia aço aura sabor marauellosa”.

177. Here (f. 121v) *B* inserts a chapter on nutsedge: “Xufes fan asembrar en maig deuen se collir en Agost deuen esser reguades en la hora quen hagen mester Jtem volen esser sembrades en bona terra car com en mjllor terra seran sembrades mjllors seran”.

178. Here *B* inserts a chapter on parsley: “Si sembres lauor de juhiuert en lo mes de Març no spiguara tro en lo segon any”. The chapter on parsley in Miquel Agustí 1617 “Secret per fer que lo iulivert fassa las fullas molt amples, y crespades, y se fassa molt alt que causara admiracio” (25r) is taken from authors unrelated to the Memòria tradition (Florentino, Porta, Esteua).

In the following table we present the chapters relating to non-horticultural topics that the copyists of *M*, *V*, and *N*¹⁷⁹ included in their compilations. In these three witnesses the non-horticultural material is presented in close proximity to the *Memòria* chapters on vegetable crops, appearing in *N* immediately following them. Witnesses *M*, *V*, and *N* have for this reason served as our guide in determining which non-horticultural material may have been traditionally associated with the *Memòria*, and consequently text from *P* and *B* is included only when it corresponds to these three witnesses (*M*, *V*, and *N*). This procedure is further justified by the fact that the compilers of *P* and *B* present non-horticultural material in clearly separate and explicitly delineated sections, as if for them the separate cohesion of the horticultural chapters were an obvious fact.¹⁸⁰

The purpose of this table is to allow the reader to observe the textual correspondences – some close, others rather distant – on topics such as viticulture, arboriculture and cereal and legume cultivation as they parallel each other across the five witnesses. It should be carefully noted, however, that there is no uniform order of presentation of these chapters in our corpus, except that *M* and *V*, as usual, follow each other. In the manuscripts *P* and *B* these chapters and passages are scattered about in various sections of a separate work on agriculture, the *Libre de plantar vinyes e arbres* (Luna-Batlle 2011). Therefore, the folio indications given below serve to highlight the discrepancies among the witnesses regarding the order of the chapters treated. It is hoped that as new versions of the *Memòria* are discovered, this table will contribute toward determining the relationship between the *Memòria* tradition and the non-horticultural material that often accompanies it. At present, the preponderance of evidence available suggests that the non-horticultural material derives from other sources (see Introduction) and that the *Memòria de les maneres de les llaurons* constitutes a treatise that, at its genesis, treated exclusively horticultural concerns.



179. It will be recalled that *A* (MS Gwara) has yet to be published and so is omitted from the table. Miquel Agustí 1617 is likewise omitted, since its treatment of non-horticultural material appears in every respect to be independent of that found in *M*, *V*, *P*, *B* and *N*. Two chapters from *P* on beans and peas (fesols, pesols) are likewise excluded (see note 152).

180. In *P* these sections bear headings such as “Del libre terç paladi” (42v) and “Del libre quart paladi” (51v); in *B*, even more explicitly, “Libre quart o quarta part en lo qual és tractat del cultivament de la terra e sembrar forment, ordi e altre blats grossos e menuts, e legums segons se segueix” (Luna-Batlle 2011: 51).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branç III A11
126			[fol. 110v] [1.8] De podar vinya. Podar deu hom les vinyes en dos mesos del any ço es en lo mes de dehembre e en lo mes de Janer mas mes val en lo mes de dehembre per ço com los ceps podats de dehembre fan los rahims pus grossos e les sarments [fol. 111r] broten abans e abans maduren Jtem que en lo gra no haura sino hun pinyol o dos La podaho del mes de Janer fa molts rahims mas fals menors e ab molts pinyols	[fol. 56r] Del podar deles sarments. Del podar deles sarments te dich. si tu podes la sarment trob tost tu hauras moltes sarments e si les podes tard tu hauras fruyt e apres bones venemes. poda pus estretament e apres auols pus largament. En Cathalunya poden les vjnyes de deembre de de Janer. Si poden de deembre seran los rayms pus grossos e abans maduren e lo gra no haura cor e sino .j. pinyol o dos. e si podes de Janer hauras mes rayms mas seran menuts e ab mes pinyols o grans.
127			[fol. 111r] Tot podar se deu fer en la luna vella E deu se hom gordar que no pot hom en Lo Jorn que es plena Car lo ple dela Luna no val ales plantes si hom les tocha ans los nou Mas pessat aquell dia es bo lo podar tota hora e com pus prop es dela plena val mes lo podar	E tota via se poden en luna vella mas no massa vella, mas passada la luna plena al terç o quart jorn. Mas no podets james en lo dia que sera plena mas passat aquell die es bo de podar tota hora.
128			Empero les vinyes velles deuen esser podades a cap de dos o de tres anys en la Luna noua per renouellar empero tota hora haia la Luna mes de .vij. Jorns	Empero les vjnyes velles deuen esser podades a cap de dos o tres anys en la luna noua per renouellar e que haia la luna mes de .vij. jorns.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branco III A11
[fol. 213v] Todo arbol que tenga foja continuadamente se deue trasplantar en luna nueua. Todo arbol que no tenga la foja se puede trasplantar en luna vieja. ¹⁸¹ 131	[fol. 95v35] Tot arbre que tinga la fulla continuament se deu tresplantar en lluna noua.			[fol. 54v] Tot arbre que vulles empeltar o plantar fe ho en la luna crexent ¹⁸²
[fol. 214r] Antes que los arboles se arranquen se deuen aseñalar en manera que al trasplantar esten por aquellas señales mesmas que estauan 132	[fol. 96r] Ans quels arbres se arranquen se deuen senyalar en manera que al tresplantar stigen per aquelles senyes mateixes ques stauan	[fol. 34v] E nota tu coltificador de la terra ¹⁸³ que quant volras plantar hun arbre de hun loch en altre que tingas esment la part deus leuant que com lo plantaras lo tornes en aquella mateixa manera.		[fol. 54v] e guarda quela part que tenja vers lo sol ixent tenga aximateix quant lauras transplantat en lo loch hon lo transplantaras
133				[fol. 54v] e dela decena fins ala xv luna es millor e fa mes fruyt.
[fol. 214r] E queles sean fechas grandes cauas & fondas con mucho estiercol. E que sean rregados muchas vezes. 134	[fol. 96r] y quels sien fetes grans claueres y fondes ab molts fems y que sien tenguts molt aprop de regar			
[fol. 214r, in the margin, by a second hand, the note “ enxerjr ”] 135		[fol. 42v] Terç. Del libre terç Paladi. Lo qual trachta de empeltar arbres, vinyes, pares, hortalices.		[54v] De empeltar tot arbre quj leua fruyt
[fol. 214r] Enel enxerir deue hombre guardar dos cosas 136	[fol. 96r] En lo empeltar deu hom guardar dues coses	[fol. 42v] Quant hom vol empeltar dos coses se deu guardar:	[fol. 114v] [3.1.1] Com vol empeltar dues coses deu hom guordar	[54v] Al empeltar deu hom guardar dues coses

181. The agricultural miscellany of BNM10211 (beginning at fol. 211r) and BMSM 6437 (beginning at 94v) has two chapters giving an expanded version of these two sentences; see Capuano 2009.

182. This section precedes the paragraph that begins “Al empeltar deu hom guardar dues coses...” on the same folio, 54v.

183. This section appears in a chapter dealing with the propagation of fig trees, and comes under the heading “Del libre segon paladj” beginning on the previous folio side (34r).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branco III A11
[fol. 214r] La vna que el Arbol que deue ser enxerido sea en sabea. E la otra que los enxertados non sean brotados njn ayan algun borro abierto sy non que sean aparejados de brotar con que non ayan los cabos gruesos 137	[fol. 96r] la huna quel arbre que deu esser empeltat sia en sabea l'altra que els exercos no sien brotats ne hagen algun borro cubert mas que sia aparellat de brotar ab que no haia los caps grossos	[fol. 42v] que larbre qui vol empeltar estiga de saho; la segona que el exercos no aja brotat nj aja huberts los borrons mas que sen aparell que mes val [fol. 43r] que no aja lo cap gros ne inflat.	[fol. 114v] la primera que el arbre que hom vol empeltar que sia en sabea la segona que el exercos que hom vol metre que no sia bro(c)[t]at nj hage vbert lo borro mas que mes val que no hage lo cap gros ne jnflat	[fol. 54v] la prima que el arbre sia en sabea. Segona que el exercos que hom vol metre que no sia brotat ne hage lo borro ma com saparella de brotar ab que empero no haia lo cap gros ne jnflat
[fol. 214r] E aquesto se faze comun mente en febrero. 138	[fol. 96r] y aço se fa comunament en febrer.	[fol. 43r] E aço se deu fer magorment en febrer fins a la festa de Sant Maçia la qual es .v. dies a la desaxida ¹⁸⁴ de febrer.	[fol. 114v] e aço deuets fer maiorment en lo mes de febrer tro ala festa de sanct Macia la qual es a .v. dies dela desaxida de febrer	[fol. 54v] e aço deu fer en lo mes de ffebrer en torn la festa de sant Matia que es a .xxiiii. de ffebrer.
139		[fol. 43r] E haquesta fa algunes vegades cuytar o tardar segons que cuyten es tarden deborar los arbres e segons los linatges axi com son ametles e çirers de tals nia e en la entrada de febrer e aso segons se cuyten es tarden.	[fol. 114v] e aço fa avagades acuytar e auagades atardar segons los arbres que cuyten a brotar os tarden e segons lo linatge del arbre axi com amellers que fan empeltar en Giner e cire[r]s que fan empeltar en la entrada de febrer de tals nj ha E aço es segons que cuyten os tardan	[fol. 54v] E aço fa auagades a cuytar o atardar segons que els arbres se cuyten a brotar o tarden
140		[fol. 43r, continued] Mas veritat es que la major part dels arbres qui no tenen fulla axj com son peres e prunes e magranes fan ampeltar en torn la festa de Sant Maçia.	[fol. 114v, continued] Mas ver es que la maior força dels arbres que no tenen fulla axi com pereres sarmenyeres e daltres arbres magraners fan empeltar entorn la festa de sanct macia	[fol. 54v] E es veritat que la maior partida dels arbres que no tenen fulla, axicom [fol. 55r] peres, sarmenyeres, prunes e altres semblants fan a empeltar entorn la festa de sant Marcia.
141				[fol. 55r] En cirer pots empeltar preseguer alberger poma pressech e pruner e nepler e altre cirer. Serments fan empeltar dela dita festa de sant Marcia

184. I.e., five days before the end of February.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11
FFigueras a sant iohan de Junjo	Figueres a sent Johan de Juny.	[fol. 43v] De empeltar figueres. Figueres fan ha empeltar en torn la festa de sant Johan de Juny. E son .iiij. maneres de empeltar. La primera es entre la scorça e lo fust e la segona es enlo tronch fes [<i>sic</i>] mas sia lexat lo cor a vna banda he lo exerç o la gulla sia longa. La terçera es escudet, com lescut o la gulla sia lonch e gran pero dejus la escorça dela figuera. E empeltar figueres e holiueres sempre se deu fer en jener empero los empelts o exerç que hom vol empeltar deuen eser de hun any so es a saber que sien nats en lany pasat e sien ben speços de borrons e que hom los prenga de sol ixent he en aquella mateixa ensenya lo torna. Axj matex sen pot empeltar en la entrada de març fins al dia de sant berbeu ¹⁸⁵ o sant bernabeu. E si mets empelt de fruyt vell met lo en fruyt vell e lo nou en nou e tota hora en lluna vella. Axj matex les pots empeltar de sant barnabeu entro a .viiiij. dies passat sent johan e guarda quel scudet no sia foradat		[fol. 55r, continued] De empeltar figueres. Ffigueres fan empeltar entorn dela festa de sant Johan de juny .viiij. o .xv. dies. E son tres maneres dempeltar la vna manera es en tronch entre lo fust e la escorsa. E laltre en tronch fes per lo mig. Mas deu hom lexar tot lo cor dela vna part. E aquestes dues maneres se empelten ab exerchs lonchs. La terça manera de escorça ab vll e ab borro que hom met dins la scorxa del arbre per manera quel vll e lo borro que hom met no estiguen cuberts dela escorxa mas com es ben ligat cobre hom lull o borro ab un parell de fulles de figuera e apres .viiij. dies leuales ne hom e lo borro met son cap e son vll.

145

185. What appears to be the same scribal hand has inserted *-na-* above this name, thus correcting it to “bernabeu”, as written immediately thereafter. The feast of St. Barnabas is June 11.

		(<i>cont.</i>) nj toquat de pedra e viura. Encara se pot empeltar figuera en la entrada de abril pero de agulla [fol. 44r] entre lo tronch e la escorça a vn palm e mig de terra pero que tem molt lo vent.		
145				
[fol. 214r, continued] Los enxiertos deuen ser bien espesos de borrons. E que sean del Año pasado	[fol. 96r, continued] Los exercos deuen ser ben espesos de borrons y que sien del any passat	[fol. 43r] Los exerç que hom vol empeltar deuen esser de hun any pasat, e que sien ben spesos de borons,	[fol. 114v] [3.1.2] Los exerços que deu hom empaltar deuen esser de hun any passat e que sien be spessos ab borrons	[fol. 55r, continued] Empero lo [sic] exerts que hom deu metre deuen esser de vn any, ço es que deuen esser nats en lany passat e sien be espesos de borrons
146				
		[fol. 43r, continued] e que sien sforcats,	[fol. 114v, continued] e que sien sforçats	[fol. 55r, continued] e sien forrats [sic]
147				
[fol. 214r, continued] E que guarden enta sol ixiente E al enxerir deuen estar por semblante forma.	[fol. 96r, continued] y que stiguen vers lo sol ixent y al empeltar deuen star per semblant forma	[fol. 43r, continued] e que hom los prenga de part del sol ixent en lo mes de febrer. Deu hom empeltar en lo tronch o en la scorça. Mas per que en lo principi daquest libre e parlat tant d'empeltar remet alla. ¹⁸⁶	[fol. 114v, continued] e que hom los prenga deus lo sol ixent en lo mes de febrer deu hom empaltar en lo tronch o en la scorsa	[fol. 55r, continued] e quels prenga hom vers sol ixent.
148				
[fol. 214r, continued] E la fenedura que hombre faze enel arbol que enxiere deue guardar al sol ixiente & al sol ponjente.	[fol. 96r, continued] y la fenedura que fa hom en larbre que empelta deu guardar a sol ixent y a sol ponent			
149				
		[fol. 50r] De collir fruyta per saluar. La fruyta que hom vol per saluar axj com magranes, pomes, peres, etcetera, deuen esser colides en luna vella per que sens dupte nengu sen saluen mjllor.	[fol. 117v] 3.37 De cullir fruyta per saluar. Tota fruyta que hom vulla per saluar axi com magranes pomes peres e altres fruytes semblants deuen esser cullides en la luna vella	[fol. 55r] De tota fruyta per a saluar. Tota fruyta per saluar axicom son rayms, magranes, pomes, peres, e altres fruytes per conseruar en casa deuen esser cullides en luna vella
150				

186. See Martí Escayol 2012: 108, footnote 77.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branç III A11
151		[fol. 50r, continued] E deu les hom colir que no sien mullades ne façes que sien m[a]-ça madures que elles se'n adoben molt be, maxime com estan entre palla hun temps e puy sien penjades de dues en dues en loch hon toque e pase ayre.	[fol. 117v, continued] e deu les hom cullir que no sien massa madures.	[fol. 55r, continued] e que sens colpeiar sien conseruades en un porxo vbert ala tramuntana. ¹⁸⁷
[fol. 213v8] Qui quiere plantar vna mujada de tierra de vjña espessa ha menester .v. mil .dcxxv. majuelos ¹⁸⁸ 152	[fol. 95v] Qui vol plantar huna mujada de vinya espessa ha mester mayols .v. mil .dc. .xxv.			

187. Here *N* inserts several chapters, some with rubrics and some without (f. 55r-55v): “Plantar vjnyes. Les vjnyes sien plantades en los lochs frets deuers mig Jorn. e en lo [sic] lochs calents vers tremuntana. Plantes de sarments. A plantar sarments valen mes e duren mes e leuen molt lo oduals, guarros, greo. atzenjms [*unclear reading*], monestrell, mas aquest no dura tant. Monestrell val mes que tots e leua be. rosega es bo. Les veçes engrexen la terra e maten les males herbes. les faues engrexen la terra mas no maten les males herbes. aximateix los lobins. Los pinyols de pressech se deuen plantar de ffebrer. Si vols saluar rayms cull los en luna vella e penials en la despensa o en la casa hon pascen e saluarsan. [fol. 55v] Contra arnes sin ha en cofrens haies flor de romanj e metets lo en la caixa e nonj entraran ans hi morran sin hi ha. Aquesta es la bona manera e verdadera de empeltar arbres e ceps. Si vols empeltar oljuera en garrofer podets ho fer en lo mes de abril o en Maig en luna noua que sia passada quinta e sia empeltat a palutxo o cadireta o escudet e tota vegada per lescorxa. Figuera pots empeltar de Maig entre dues terres en luna vella o passat lo .viij.e e deu se fendre per lo mig del fust a palutxo e despuys sia cuberta de terra tro al cap del palutxo. Mas mes val empeltar la figuera sisfa mijant Maig fins a sant Johan de Juny en luna vella o noua passat lo .viij.e e que faça a palutxo o a cadireta o scudet tota vegada per lescorxa. Albrequoquer o ameller o cirer se volen empeltar de Janer en luna vella o noua passat lo .viij.e e deu se fendre lo fust per lo mig. e podets empeltar en prunera albrecoquer alberger e presseguer. Perera sermenyera perseguer alberger pomapressech. codonyer nespler e semblants arbrers se deuen empeltar a sant Macia en luna vella o noua passat lo .viij.e e sia fes larbre per lo mig a paltuxo e tallar laxerçs egual que noy haia fills e que vinga just vna escorça ab laltra. E si lo temps se cuytaue de brotar feu ho pus prest de sant Macia .viij. o deu dies que es a .xxiiij. de ffebrer. En auellaner podets empeltar a sant Macia perseguer e alberger o pomapressech o dell mateix en luna dessus dita e sia empeltat per lescorça a palutxo e sia laxerç en saba e sino es en saba fenets lo e de Janer hi podets empeltar albrecoquer. Magraner se deu empeltar en lo mes de Juny com sera en flor hoy haia magranes que sien exides de flor a palutxo o cadireta per la scorça en luna vella o noua passat lo .viij.e Cep de tria o de vjnya pots empeltar en lo mes de Mars en luna vella de .x. en .xij. o en luna noua e sia fes per lo mig E silo cep ploraue feu l j vn tayll pus baix quel excerç e no sen peccara nengu. En lo mes de ffebrer pots empeltar noguer en arbosses e en pruner o de sa natura mateixa de noguer”.

188. Ferrer Saiol inserts a comment to the same effect in his translation of the *Opus agriculturae* of Palladius §3.9.9, found in BMSM 6437 fols. 33v-34r: “en huna mujada de terra de barcelona entren cinch milia sisçentes y xxv sarments. En huna mugada de terra ha sisçents y xxv. destrers ço es .xxv. destrers per cascun cayre”. In BNE 10211 the corresponding passage is on fols. 64v-65r: “En vna mujada de Barcelona de tierra entran Vo mijll & DCXXV sarmjentos. En vna mujada de tierra ay DCXXV destrers, es a saber XXVo destrers por cada cayre” (Capuano 1990: 70). The same passage is repeated later in the same two codices, as cited here.

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branc III A11
153	[fol. 95v26] Pinyons Castanyes garrofes Datils Amenles se deuen sembrar en giner en lluna noua que haia viij o x dies y nos deuen molt cobrir de terra mas que sia ben guaretada y fondo cauada.	[fol 38r] De sembrar pins. Guardar deu hom quelos pins no sien tresplantats per que no viurien, mas sien presos pinyons trets dela pinya sense metre al foch sino trets en manera que sien sançes. Empero alguns sembren los pinyons de setembre quant hom sembra lo forment. E axi matex se sembren, o dich planten casta[n]yers per que sien del any, segons pus larch ne parlat enlo capitol .xx. e per ço sabreuga açj. ¹⁸⁹	[fol. 113v] [2.14] De sembrar arbres. Quij vol hauer pins e datil e castanya e amellers e noguers e guarroffes e carrasques e oliueres e lorers sembra qualche fruyt que vulles dels demunt dits en lo mes de Janer o de ffebrer com La Luna hage .x. djes que sia girada tro en .xv. e guardat com las plantaras que no les metes pus pregon de dos djts en traues e posa la hon seran plantats vna verga per senyal [2.15] De pins Guardar deu hom que los pins no sien tresplantats per tal com no viuen. Jten deu hom metre .iiij. o .v. pinyols com hom los planta e no sien mesos los pinyols al foch mas sien trenchades en altre manera empero alguns sembren los pins en lo mes de setembre com hom sembra lo forment o lordj Jtem deles castanyes sien ne meses dues que sian del any mateix com pus fresques les pusques hauer	

189. "sabreuga açj" (s'abreuga açi) 'it is abbreviated here'. Reference is to the "Capitol de castanyes o de lur multiplicaçio" in another text of the same codex (*P*), 9r-9v (Martí Escayol 2012: 78).

<i>M</i> (Madrid) BNE 10211	<i>V</i> (Valencia) BMSM 6437	<i>P</i> (Paris) BnF esp. 291	<i>B</i> (Barcelona) BCB 754	<i>N</i> (Naples) Branco III A11
		[fol. 41r] De plantar arbres. Totes plantes de arbres o de vinyes se deuen fer en la luna crexent quant a .x. dies que es girada entro ala luna plena, e aço de cada luna e los arbres e las vinyas viuran e caregaran mjllor. Empero quj planta arbres deu fer que los arenque de dauall terra e de magra e dexuta e que la meta en bona terra e fan se mjllor que altres. Empero acceptat la figuera que vol luna vella	[fol. 114v] [2.24] De plantar arbres. Totes plantes de arbres se façen en luna crexent com ha .x. djes que es girada entro en la luna plena de cada luna els arbres e les vinyes viuran e carregaran Empero qui planta arbres deu fer quels meta en bona terra e fer se han millors que altres arbres.	[fol. 55v] De plantar arbres [fol. 56r] Si vols plantar arbres de qual naturas vulle plantats los en lo mes doctubre o de noembre e sia la luna vella o noua passat lo quint. E non ho preets si los arbres son encara en rama car non ne peccara negu. Empero en aço no son enteses tarongers ne ljmoners nj poncemers quj fan a plantar en Març en luna noua passat lo quint, ne en aço no son enteses oljuers garrofer ne lorer ne murtrer quj fan a plantar en luna noua passat lo .viij. ^e en lo mes doctubre o de noembre. Tots arbres que hom vol plantar seuol que hom los git dessus la terra sens calcigar nj pujar hi damunt, mas en continent regats los fort e ab la terra toua laygua met la terra per les rael e de tot lany nols cal dar aygua. ¹⁹⁰

154

190. Here *N* continues (f. 56r): “Si vols plantar branques de figuera fets ho en lo mes de Mars en luna vella o noua. e si fer se pot la branca haia de lonch .v. o .vj. palms e sia plantada ab tots los branchons e cuberta de terra la maior branca e pus longa que no hisque mes dun palm de sobre terra e leuara tantost fruyt com la figuera que sera plantada ab les rael pero sia regada tantost. Diu se que en prunera vjn empelt de perera e de pomer e de nesples”. This passage is followed by the chapter on pruning cited above (“del podar delos sarments”; see rows 126-128), and the folio side (56r) closes with the rubric “De empelta a escudet”. Folio 56v contains this final chapter on shield grafting: “Iempeltar de escudet se fa en aquesta manera. Si es de arbre que no perda fulla, axi com ljmoner, poncemer, naronger, e taronger es mester que lany passat que dels brots tendres hom haia trencades les spines, e al temps ques deu empeltar en laltre any ya es clos lo forat resta e pren hom lescudet, e abans que hom lo trague della hon es hom deu apparellar lo loch hon ha estar e apres traure lescudet e metrell dintre e ligar lo damunt e deual ab vn espart e strenyer lo en manera que lo escudet no prenga mutacio per lestrenyer sino no vjura. Aximateix que com empeltareu lo sol nol toch, e que cuujdes [sic] laureu tret delaun loch ja sia en altre per ço no prengue del ayre, e apres ligar ljnua fulla damunt per raho daygua o aximateix de sol e aquests nos deuen empeltar fins quelos tarongers broten e han quatre dits de lonch e tots temps en luna crexent”.

6 Appendix II: Comparison of a sample *Memòria* chapter with corresponding chapters in six representative medieval treatises on agriculture

In an effort to demonstrate the notable independence of the *Memòria* from the diverse Latin and Arabic agronomic traditions that predominate in the medieval period, we have gathered into this appendix the chapters on lettuce cultivation presented in six of the major representative Classical and Arabic agricultural writings. A careful comparison of all these texts will show that the simple and unpretentious *Memòria* treatment of this crop, despite the concern it seems to share with Ibn al-Awwam for the correct timing of successive lettuce plantings, shows no convincing evidence of derivation from this or any of the other texts. Although space does not allow for an exhaustive comparison with the full gamut of medieval agricultural texts, it should be borne in mind that many of those not included here borrow heavily from these. For example, the chapter “De lactuce cultura” of the *Speculum naturale* of Vincent of Beauvais (Book XI, chapter 77) is indebted primarily to Pliny and Palladius, while the chapter “De la lechuga” in the translation by Vicente de Burgos (Book XVII, chapter 93) of the *De proprietatibus rerum* of Bartholomaeus Anglicus quotes St. Isidore and concerns itself primarily with the medicinal qualities of the plant (f. 229r).



<i>Memòria</i>	Palladius	Ibn Wafid (attributed)	Albertus Magnus <i>De vegetabilibus</i>	Pliny <i>Historia naturalis</i> XIX:39	Pietro de Crescenzi	Ibn al-Awwam
<p>[fol. 120v] De letugues. Les letugues primarenques sembra hom mijant hagost o de setembre tro mijant octubre en la luna vella ab molt fems e fan a regar com ops ho han. E tresplanta-les hom en l'Avent de Nadal ab fems en la luna vella, e regua-les hom de .viii. en nou dies per amor de les jelades. [12] De letugues encara. Algunes letuges sembra hom de noembre tro a mijant decembre e tresplanta-les hom de giner. Al sembrar e al tresplantar guarda hom la luna vella perquè ne són pus saboroses. E met-hi hom molt fems, reguant quant ops o han.</p>	<p>Enel mes de enero siembra hombre simjente de lechugas, porque se puedan trasplantar enel mes de febrero. E aquellas que hombre qujere [fol. 50r] traspasar, o trasplantar en abril deuen se sembrar enel mes de febrero, ya se sea que en todo el año las puede hombre sembrar, sy la tierra es bien estercolada & rregada muchas vezes. Quando hombre las plantara, deuen se tajar & egualar las rrayzes, et deuen se vntar con estiercol que sea bien claro. E avn aquellas que ya son plantadas deue hombre entrecauar & descubrir las rrayzes, E en aquellas ponga hombre estiercol cerca delas rrayzes. E ellas aman tierra bien cauada & fondo E que sea humjda & grasa & bien estercolada. E avn deues saber que las yeruas que se fazen cerca delas lechugas, deue hombre arrancar con las manos. & non</p>	<p>[fol. 100r] De sembrar les lletugues. Capítol segon és de sembrar les letugues. qui vol fer les fulles de les letugues redones e amples bé les rahels groçes cerch loch on don lo sol e femer-lo hi sembre-hi les letugues e reguen-les per lo matí e puyes quant seran nades lexen-les entorn e femer-les ab fem de bou e reguen-les encontinent que seran nades e fes que sobre l'ull de cascuna sia mès hun poch de fems primis. E si tallen los caps de les fulles dos dies abans que les menjen seran ne millors e pus saboroses. E si unten o freguen la llavor ab hun troç de ponsem abans que la sembren serà la holor deles letugues tal com del ponsem. (Martí Escayol 2012:157)</p>	<p>Lactuca est herba lata habens foli, et est nota. Et est frigida et humida: et humiditas sua est quasi media inter caules et atriplices et blitas, et non est in ea absersio, neque stypticitas, neque solutio, eo quod non est salsa, sed quasi insipiditatem habet commixtam cum parva dulcedine. Et sanguis generatus ex ea melior est eo, qui generatur ex aliis oleribus. Et quae non est abluta, melior est, quia omnibus oleribus frigidis ablutio addit inflationem, et est velocis digestionis, et quando datur inter bibendum, prohibet aegritudines ebrietatis. (Meyer 1867:527-8)</p>	<p>Scruntur lactucae anno toto laetis & riguis, stercoratisque, binis mensibus inter semen, plantamque, & maturitatem. Legitimum tamen, a bruma semen jacere, plantam Favonio transferre: aut semen Favonio, plantam aequinoctio verno. Albae maxime hiemem tolerant. Humore omnia hortensia gaudent, & stercore praecipue lactucae, & magis intubi. Seri etiam radices illitas fimo interest, & repleti ablaqueata humo. Quidam & aliter amplitudinem augent: recisis, cum ad semipedem exereverint, fimoque suillo recenti illitis. Candorem verno putant contingere iis dumtaxat quae sint seminis albi, si arena de litore a primo incremento congeratur in medias, atque increscentia folia contra ipsas religentur. (Harduinus 1723:2, 175)</p>	<p>De Lactuca. Lactuca seri & transplantari potest fere toto tempore anni in terra pingui bene subacta per se mixtim [sic] cum alijs herbis, & quae sata fuerit in autumnno, utiliter plantatur mense decembri, circa areas aliarum herbarum quae tunc seruntur. Ipsa enim non timet gelu, sed roboratur ex eo, & erit bona post hyemem cum alijs herbis, quosque semen producet. Sed quae de natura paruarum non transplantantur. Quae uero sunt ex magnis quae Romanae dicuntur, quae habent alba semina transplantari debent, ut crescant & dulcedinem habeant, multum iuuantur irrigatione tempore siccitatis. Lactuca frigida est & humida temperate. Alij dicunt quod est calida & humida temperate, & ideo est melior caeteris herbis, & temperatissima respectu aliarum herbarum,</p>	<p>[...] Siémbrense en octubre, y son las tempranas; y tambien en todo noviembre, enero y febrero, y son de las hortalizas que vienen en tiempo de primavera; las quales quando son sobrecogidas del calor del ayre, se descubre en ellas cierta calidad amarga, que impide su digestion. Segun la Agricultura Nabatheas, las lechugas son plantas cuyo tallo y hoja son comestibles [...] [El Autor del libro citado] [sic] dice, que se siembran en septiembre, y se trasplantan en fines de octubre y en todo noviembre y que no se crien buenas y robustas como no se trasplanten; que han menester continuo estiercolo, empleando estiércoles que tengan mezcla de excremento humano repodrido juntamente con ciertas plantas, que expresamos tratando de la composicion de los estiércoles.</p>

<i>Memòria</i>	<p>Palladius</p> <p>deue hombre arrancar con las manos. & non con açadon. La lechuga se faze mas ancha sy hombre las planta rralas. E quando començara fazer espiga, o meter ojo, la vegada le deue hombre cortar el ojo & meter desuso algunt terron, o algunt tiesto. E faze se mas ancha. Las lechugas se faran anchas & blancas sy muchas vezes les echa hombre de suso en medio del ojo arena de rrio, o de mar. E despues que hombre ha vistas las fojas quelas fagas estar ligadas todas ayuntadas. E sy la lechuga se endureçe ante que non deue, sy qujer por via que sea en la tierra, sy quier por el tiempo, sy qujer por la simjente, tu arrancaras la planta dela lechuga, E tornaras la a plantar otra vegada. & rregar la has muchas vezes. & tornara tierna. E avn deues saber quela lechuga rretiene la sabor de diuersas yeruas todo en semble, por tal manera deue</p>	<p>Ibn Wafid (attributed)</p>	<p>Albertus Magnus <i>De vegetabilibus</i></p>	<p>Pliny <i>Historia naturalis</i> XIX:39</p>	<p>Pietro de Crescenzi</p> <p>sanguinem generat & lac, & urinam prouocat & choleram extinguit, sanguinis ebullitionem refrigerat, & somnum inducit. Item ualet contra calida apostemata, ... [other medicinal uses follow] (Crescenzi 1538:331-332)</p>	<p>Ibn al-Awwam</p> <p>La primera especie de lechugas de que se hace mencion son las comestibles, comunes en todas regiones, las cuales son de tres especies; unas de grande y grueso pie, de larga ancha y gruesa hoja, y cuyo tallo se levanta de la tierra como un codo poco mas o menos [...] Quando las lechugas comienzan a tener leche (que es en la primavera quando ha templado el tiempo) son menos provechosas, pues debilitan el cuerpo del que las come. [...] Por lo demas, Abu Abdalah Ebn el Fasél y otros son de opinion, que conviene a las lechugas la tierra gruesa y el agua dulce, y que fuera de ellas ninguna otra le conviene: que si se siembran en tierra áspera y fuerte se ponen en ella parduzcas; y por quantos se resquebraja con la falta del agua, no prevalecen en ella a no ser por medio de riegos copiosos:</p>
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<i>Memòria</i>	<p>Palladius</p> <p>hombre que tu auras del estiercol delas cabras, E suptilmente con vna lezna, o aguja tu las foradaras & sacaras lo que es en medio, E despues meteras dentro cada vna delas pellas dela cabra de todas aquestas simjentes, es a saber simjente de lechuga, [fol. 50v] de mestuerço, de Comjnos, de Oruga, & de Alfalfa, E despues meteras las pellas dela cabra de dentro de estiercol en tierra que sea bien labrada. & nonlas metas fondo & cubre las, E algunas vezes fazen vn poco a rregar, o rrujar E como comeras de la lechuga, quando la avras trasplantada segunt que de suso es dicho, rretendra la sabor de todas las otras simjentes. (Capuano 1990:54)</p>	<p>Ibn Wafid (attributed)</p>	<p>Albertus Magnus <i>De vegetabilibus</i></p>	<p>Pliny <i>Historia naturalis</i> XIX:39</p>	<p>Pietro de Crescenzi</p>	<p>que para trasplantaciones se siembran en tres tiempos, tempranas, medias y tardias: que las primeras se siembran por septiembre en tablares labrados y estercolados, en sitios que miren a perfecto oriente de un sol dominante, revolviendo blandamente su simiente con la tierra para que quede con ella incorporada, introduciéndoles el agua en la misma forma, acudiéndoles con ella una o dos veces hasta que nacen, y regándolas dos veces en la semana quando estan medianamente crecidas: que hallándose en competente disposicion, se trasplanten por noviembre en tablares hechos en sitios donde las bañe el sol en el dia, no dominados de los vientos, y que se hayan labrado y estercolado con mucha copia de estiércol desmenuzado, y de excremento humano (el qual es mejor para ellas y con el que grandemente</p>
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<i>Memòria</i>	Palladius	Ibn Wafid (attributed)	Albertus Magnus <i>De vegetabilibus</i>	Pliny <i>Historia naturalis</i> XIX:39	Pietro de Crescenzi	Ibn al-Awwam prevalecen), colocando en ellos sus plantas en filas a un palmo o poco mas de distancia una de otra a lo largo... (Banqueri 1802:2, 145-148)
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7 Index and glossary of terms related to horticulture

The following list consists of terms related to horticulture found in the *Memòria*. The headwords are presented in the forms in which they appear in the text, followed by the modern singular masculine form in parentheses (when absent from the text) for nouns and adjectives, and in the case of verbs, the modern infinitive form (when absent). The English gloss that follows relates only to the specific horticultural context in which each word occurs, and in many cases represents a specialized meaning for the term. The number in parentheses at the end of each entry refers to the form's location in the text (chapter or footnote), but for a few high-frequency items in the list no location is given since they are found throughout the text.

abrich (abrigar) – Protect, shelter; protection (25)

aclarir – To thin (19, 20)

albergínies (albergínia) – Eggplant (*Solanum melongena*) (25)

albudeques (albudeca) – Citron melon (*Citrullus lanatus* var. *citroides*) (25)

alls (all) – Garlic (*Allium sativum*) (13, 20)

almolls (armolls) – Orache, *Atriplex hortensis* (6).

arbolam – Mesclun, i.e., mix of salad greens planted together in the same bed (6)

arenquats (arrancat < arrancar) – Pulled up, harvested (20)

argullen (ergullar) – To develop or increase excessively, become leafy (1)

arranchar, arranquar, arrencar (arrancar) – To pull up, uproot (2, 13)

assahonar (assaonar) – To season, to mature, to ripen (15, 16)

astoig (estojar) – Store (15)

avent – Advent (8, 11)

axugar – To dry (n. 116)

axut – Dry (n. 116)

barbes (barba) – Roots of bulb-forming plants, especially of onions and leeks (n. 108)

- bledes (bleda)** – Swiss chard, *Beta vulgaris* var. *cicla* (6)
- blet** – Purple amaranth, *Amaranthus blitum*. See *almolls* (7)
- bota** – Barrel (n. 116)
- bou** – A blunt, thick wooden tool or member (n. 108)
- caboça** – Bulb (16)
- cals viua (calç viva)** – Lime (n. 116)
- cama** – Main stem of young plant (1)
- cap** – End, extremity (n. 116)
- carabaça, carabaces, carabasses (carabassa)** – Calabash (*Lagenaria siceraria*) (23)
- ceba** – Onion (15). – **porrera** Long onion; variety of onion with an elongated bulb (15); See note 93. – **rodona** Bulb-forming onion (16)
- cel** – Sky (20)
- cindries (síndria)** – Watermelon (*Citrullus lanatus*) (25)
- clar, clara, clares, clareta** – 1. Thinly, thinly spaced (13, 15) 2. Clear; mild weather (16)
- clot** – Hole (23)
- cogombres (cogombre)** – Cucumber (*Cucumis sativa*) (25)
- col** – Cabbage [in general]; – **de sicília** Unidentified variety of cabbage (4); – **de capdell** Head cabbage (5)
- colill** – Cabbage sprout (6)
- collar** – To join or press together (1)
- collir** – To harvest (21)
- colpejar** – To bruise (n. 150)
- copades (copat)** – Having its leaves tightly closed around each other (5)
- corquats (corcat)** – Gnarled (20)
- culles (cullir)** – To pick, uproot; harvest (5)
- cremar** – To injure, damage (15).
- crestes (cresta)** – High part of the furrow (18)
- cusen (cosir)** – To sew (10)
- descusen (descosir)** – Unsew, remove stitches (10)
- desexida** – Final day, or days, end [of month] (2, 20)
- desfonsada (desfonat < desfonar)** – With the bottom removed (n. 116)
- destrempar** – To dissolve (n. 109)
- dit** – The width of a finger (15)
- draps (drap)** – Cloth (23)

- dreçe (dreçar)** – To straighten (1)
- entracavar, entrecavar** – To hoe around [crops] (15, 16)
- entrant** – Beginning, opening days of (15)
- era** – Garden bed (1)
- erbolam** – Mesclun, i.e., mix of salad greens planted together in the same bed (6, 7)
- escabesar** – To take the tops off (5)
- espeços, espesa, espessos, espeses (espès)** – Thick, thickly (5, 19, 20)
- estiu** – Summer (15)
- estores (estora)** – Mat (23)
- exada (aixada)** – Hoe (5)
- exempli** – Proverb, saying (20, 23)
- exides (exit < eixir)** – Emerged, sprouted (5, 23, 24)
- exir (eixir)** – To emerge, sprout (23)
- fangada (fangat < fangar)** – Dug up, cultivated (20)
- faves (fava)** – Broadbeans, fava beans (*Vicia faba*) (27)
- femar** – To manure, to enrich with manure (n. 109)
- fem, fempta, fems** – Manure
- fesols (fesol)** – Bean (*Phaseolus vulgaris*) (n. 152)
- fica (ficar, aficar)** – To stick in, insert (14)
- fira (ferir)** – To strike (4)
- forch** – The distance between the thumb and index finger when both are fully extended (15)
- frasques (frasca)** – Greens, tender branches, sprigs (6)
- fulles (fulla)** – Leaves (19)
- gelades (gelada)** – Frost (16, 23)
- gita (gitar)** – Throw (2)
- graça (grassa)** – Rich, fertile (24)
- gra, grans** – 1. Seed (20, 23) 2. Small piece (21) 3. Clove (of garlic) (14)
- granetes (granet)** – Somewhat big (5)
- grill** – Sprout; especially, the stalk and leaves of a member of the onion family when they first emerge from the bulb (14, n. 91)
- grilen, grillada, grillen (grillar)** – To sprout (10, 13, n. 108)
- groç** – Thickness (5)
- groç, groça, groços, grossa, grosses** – Large (5, 15, 16, 19, n. 89)
- guaret, guoret** – Cultivation, working of the soil; terrain that has been hoed or tilled (1, 15, 16)

- guaretada (guaretar)** – To cultivate, hoe (19)
- hombra (ombra)** – Shade (20)
- homplit (omplir)** – Filled (15)
- hagost (agost)** – August (11)
- hix (eixir)** – To emerge, to sprout (16)
- hort** – Area in cultivation (n. 110)
- ivern (hivern)** – Winter (1, 8, 15)
- ixen (eixir)** – To emerge, to sprout (10)
- jelades (gelada)** – Frost (11)
- jorn** – Day (24, 25)
- juhivert (julivert)** – Parsley, *Petroselinum sativum* (26)
- lavor (llavor)** – Seed (10, 16)
- laurons (llauró)** – Labor (title)
- leig (lleig)** – Unpleasant (16)
- leix, lexen (lleixar)** – Let, allow (15)
- levada, llevada** – Raised garden bed (15, n. 98)
- leyt (llet)** – Milk (24)
- llavor** – Seed (15, 20)
- llevant, llevau (llevar)** – To remove (19)
- luna (lluna)** – Moon; – **nova** – waxing moon; – **vella** waning moon
- mà** – Handbreadth (15)
- mare** – Mother (24) *mare de les semençes* ‘principal sowing time’
- mata** – Stalks and leaves of a plant (15)
- melon** – Melon (*Cucumis melo*) (25)
- mesos (mès < metre)** – Placed, put (23)
- moguda (mogut < moure)** – Moved, turned, cultivated (20)
- mogue (moure)** – To move, move in on (23)
- mostes (mosta)** – Amount contained in both hands cupped together (2)
- mota** – 1. Clump or ball of earth to which cling the roots of a plant to be transplanted (“Pilot de terra agafada a les arrels d’un vegetal que es transplanta” *DCVB*) (14). 2. Clump of plants growing in close proximity to each other (14) 3. Mound of soil (14, 23)
- nabina** – Turnip seed (20)
- Nadal** – Christmastime (8, 11)
- nap** – Turnip (*Brassica rapa*) (5, 20)

- neula** – Haze, fog (13)
- nou (noura, noure)** – Injure, damage (13, 16)
- novelles (novell)** – Young, new, immature (23)
- omple (omplir)** – Fill (23)
- orle (orla)** – Border (23)
- ort (hort)** – Area in cultivation (Title)
- ortaliça (hortalissa)** – Vegetable (Title, 20)
- ortolan (hortolà)** – Gardener (Title, 10)
- palm (pam)** – Handspan (23)
- Pascha, Paschor, Pascuor (Pasqua)** – Easter (1, 2, 6)
- pastanagues (pastenaga)** – Carrot (*Daucus carota*) (19)
- pensar** – To care for, tend (Title)
- plana (pla)** – Level, flat (15)
- planter** – Set, transplant, i.e., seedling or plant to be transplanted (1, 4, 23)
- ple** – Full moon (1, 19, 21)
- podrit** – Rotted (15)
- pou** – Well (10)
- pregon** – Deep, deeply (1, 19, 23)
- preses, presos (pres < prendre)** – Established (1, 15, 23)
- prima** – [See terra] (20)
- primarenchs, primarenques (primerenc)** – Early-season, that is harvestable early (11, 13, 15, 16, 20, 24, 27)
- Quaresma** – Lent (1, 9, 8)
- quart** – Quarter of moon's phase (19)
- rael, rahel** – Root (2, 19)
- ràven (rave)** – Radish (*Raphanus sativus*) (18)
- rech (regar, reguar)** – To water, to irrigate.
- regada** – Watered (20)
- regar, reguar, rregar** – To water.
- reguiu** – Irrigation (13)
- remullals (remulla's) remullades (remullar)** – To soak (23, 25)
- romania (romanir, romandre)** – To remain, to be left over (1)
- ruxa (arruixar)** – Sprinkle (5)
- salvar** – To store (16)

- samal (semal)**– Recipient for transporting manure on horseback (n. 109)
- scalunyes (ascalunya)** – Member of the onion family, perhaps chives (*Allium schoenoprasum*) (14); See note 91
- seba, sebes (ceba)** – Onions (15, 20)
- semençes** – Sowings (24)
- sement** – Seed (5)
- senalla** – Basket (10)
- sesta** – Nones, early afternoon (23)
- solch (solc)** – Row, furrow (15)
- solegat (solegar)** – Dried in the sun (24)
- som** – Shallow (16)
- sopar** – To have supper (16)
- sostre** – Layer (n. 116)
- spay** – Interval, space (25)
- spès, spesses, spessos** – Thick, thickly (15).
- spiguar, spiguen (spigar)** – To bolt; to send up flowering stem (1, 2, 15, 26)
- stoig (estojar)** – Store (16)
- stores (estora)** – Mat (23)
- tallar** – Cut away (n. 112)
- tardana, tardanes, tardans (tardà)** – Late-maturing (20, 24)
- tardor** – Autumn (19)
- tèbea (teb)** – Lukewarm (23)
- tendra (tendre)** – Raw (17)
- tenir** – To preserve (15)
- terra prima** – Loose, granular soil (20)
- toquar (tocar)** – To touch (23)
- tova (tou)** – Loose, well-worked (18)
- través** – Width (23)
- triar** – To reserve, to set apart (18)
- troç (tros)** – Piece, plot (5)
- ull** – Top of the main stem or shoot (apical meristem) of a plant (1, 23)
- vaques (vaca)**– Cows (24)
- vendre** – To sell (18)
- venemes, veremes (verema)** – Vintage time (3)

vexell (vaixell) – Container (5)

vores (vora) – Borders (n. 45)

xerevics, xerovics, xarovics (xirivia) – Parsnip (*Pastinaca sativa*) (21)

xufes (xufla) – Yellow nutsedge, tiger nuts (*Cyperus esculentus*) (22)