Gabriel Alonso de Herrera and the Classical Tradition¹

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Introduction

While travelling through Fulda in 1417 as part of the Council of Constance Poggio Bracciolini (1380-1359) rediscovered Columella's (4-c.70 CE) De re rustica (On Agriculture). Columella's twelve books cover all aspects of agriculture along with his shorter treatise the De arboribus (On Trees). Columella wrote in Latin in the 60s CE near Rome but as we shall see his birthplace of Cádiz in Spain would become an important feature of his reception in Spain in the Renaissnace. The recovered manuscript was quickly taken back to Italy and copied. Initially it was Italian humanist philologists who showed the most interest in the work. However in this article I will show that less than one hundred years after its discovery it would become an integral part of the first vernacular textbook in renaissance Europe, Gabriel Alonso de Herrera's Obra de Agricultura (1513). A humanist in his own right Herrera moved beyond previous scholars of the text in his use of the De re rustica to provide a framework against which he could judge his own changing environment with fears of declining fertility at a time when Spain was in a state of flux after the discovery of the New World and the fall of Granada.² In particular the preface, book v and instances throughout the work where Herrera discusses conflicting information from classical authors will be examined, which sections show the importance of charting Herrera's interaction with Columella in understanding the development of agriculture, along with Spanish identity, in western Europe during the Renaissance.

Columella's influence on Herrera has been noted by some scholars of Herrera and Columella but what I will demonstrate is the fact that his humanist background, study of the classical tradition is not simply limited to direct quotation in the case of Columella but actually provides him with a framework for how he views the natural world and this is where Columella's most important influence lies. Columella's other influence on the text is often tempered by Herrera's ongoing work on Pliny the Elder (24 CE-79 CE) and other ancient writers. He used Pliny to correct Columella's text. I will show one consequence of Herrera's enduring interest in Columella as a Spaniard is his engagement with him in careful detail, holding him to a higher standard than the other writers he cites. Herrera was not producing a commentary on the De re rustica like his Italian contemporaries but a practical agriculture treatise. Recent studies of humanism have highlighted the importance of place in humanists' writing and, despite the global aspect stressed in definitions of the Republic of Letters, understanding the locality of where the writer was from and where they were writing is vital in understanding humanists' texts.3 Columella's influence is also prevalent in the care and treatment of animals, an author who stresses the importance of being personally connected to the farm, as opposed to having it managed from the city. He highlights the importance of how healthy animals are for a farm's success, ultimately linking it to the overall connection to the land and ties in with his interaction with the natural world. Herrera has garnered much interest among scholars but his interaction with the classical tradition has yet to be fully charted. More recent studies on Herrera have focused on the Moorish influence on Herrera (Ana Duarte Rodriguez 2014). The other aspect of his text that has gained the most interest is philology with Herrera's text used to understand the development of Castilian in the sixteenth-century and

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² For more information on agriculture in Spain at this time see Carreras (1970, xvii- xlvi).

³ For recent discussion of this see Anna-Luna Post (2023).

also being assessed for the influence of the Arabic lexicon on a Spanish writer.⁴ However it is vitally important to highlight the sources Herrera draws upon in his text. Herrera was part of a Europewide revival of Greek and Roman culture and was interacting with a lengthy tradition while also being ahead of his time. I argue Columella's text shapes Herrera's attitude to the natural world and his interaction with the text throughout the Obra speaks to Herrera's own evolving sense of identity in an Empire whose borders were rapidly expanding and that he does not only use Columella for knowledge of specific aspects of farming. In the midst of today's climate crisis aspects of his text seem remarkably modern showing that concern for the environment has roots that far predate the Industrial Revolution, even dating back to the Renaissance whose writers were in turn drawing on Roman ideals and concepts. A leading scholar in the reception of Columella is José-Ignacio García Armendáriz, who has published on the reception of Columella in Spain and has pointed out that Columella had a profound influence on the author but the main focus of his work is charting successive stages of Columella's entire reception in Spain (José-Ignacio García Armendáriz 1995, 99-106). Armendáriz highlights the theme of claiming Columella as a Spanish writer through the work of the Friars Rodríguez Mohedano who wrote an "Apologia" to Pliny (2014). However the beginnings of this can also be traced through Herrera, who claims the writer as Spanish as opposed to simply Roman.

Despite this interest a complete critical edition of Herrera's text is still lacking. Mariano Quirós García has highlighted the need for a new critical edition that encompasses the changes that Herrera carried out on subsequent editions of his text (Mariano Quirós García 2015, 119-120). Before any consideration of the text it is necessary to highlight these different editions. The Obra de Agricultura was published and republished six times during Herrera's own lifetime, 1513, 1520, 1524 (Alcalá de Henares), 1524 (Zaragoza), 1528, 1539. Three editions from Herrera's lifetime contain emendations and additions, 1524 (Alcalá de Henares), 1528, 1539, and he states in these last two editions of the text that he himself has emended the work (Mariano Quirós García 2020, 120-121). Examination of these different editions shows that Herrera draws extensively on Columella's text from the start but some of these ideas and concepts become more developed as Herrera continued to work on the text throughout his life. These changes also included not only technical information but also personal information with the final text that was printed in 1539 looking substantially different to the original text of 1513 (Mariano Quirós García 2020, 120-121). The text from 1620 onwards was printed with a number of other texts making it similar to a compendium. These additional texts included "Despertador, que trata de la gran fertilidad, riquezas, baratos, armas, y cauallos que España solia tener, y la causa de los daños, y falta, con el remedio suficiente" by Juan de Arrieta and "Svmario del libro intitvlado discvrsos del pan, y del vino del Niño Iesvs" by Diego de Salinas. The new edition also contained Gonzalez de las Casas's work on growing silk, "Arte nuevo para criar seda, desde que se reuiue vna semilla, hasta sacar otra, compuesto," Luiz Mendez de Torres' treatise on bee-keeping, "Tratado breve de la cultiuacion y cura de las colmenas, y assimesmo las ordenanças de los colmenares" and Gregorio de los Rios's work on gardening "Agricvltvra de Iardines, que trata de la manera que se han de criar, gouernar y conseruar las plantas, y todas las demas cosas que para esto se requieren, dando a cada vna su punto." (Herrera 1620; Ana Duarte Rodrigues 2014, 18). The original seminal edition of Herrera's text was published by Mariano Lagasca y Segura, Agricultura General de Gabriel Alonso de Herrera between 1818-19. A new edition of the Libro de Agricultura was produced in 1970 by José Urbano Martínez Carreras, Gabriel Alonso de Herrera Obra de Agricultura: Edición

⁴ For philological study of the *Obra de Agricultura* see Mariano Quirós García (2017, 2020, 2021, 2022) and for the influence of Arabic on Herrera see Patricia Giménez-Eguíbar (2020) and Patricia Giménez-Eguíbar and Fernando Tejedo Herrero (2023).

y Estudio Preliminar, which focuses on the 1513 edition on the text.⁵ While there is an appendix at the end that catalogues some of the differences between the 1513 edition and the 1528 and 1539 editions it is not all encompassing.⁶ Eloy Terrón, in an attempt to draw attention to the importance of later editions of the text, produced one based on the 1539 text in 1981. García points out this edition however was problematic as instead of basing the text on the 1539 printed edition he used a reprint from 1620 which in turn was a reprint of an edition from 1569 (2020, 120). This edition happened to have undergone substantial emendations and deletions by the editor Francisco del Canto who deleted all autobiographical references that had been inserted by Herrera leading subsequent scholars to treat the text with caution on the basis that he had added or omitted other sections also (Mariano Ouirós García 2020 122-3). Information that had been omitted include Herrera's mention of the fact that his mother had died which is highlighted in the 1528 edition, her name was Juana Gonzales and she was buried in his hometown.⁷ Herrera's text also claims his father, Lope Alonso de Herrera (fl.15th century), was a gardener/ farmer and there are references to what he has learned from his father throughout the Obra. An English translation of the text was produced by Juan Estevan Arellano and translated by Rosa López-Gastón but it does not cover all six books and mainly focuses on books one, two and six (2006). In the sixteenth century alone Herrera's text was republished eleven times and translated into Italian in 1557. Other countries in Europe would not produce something comparable until Charles Estienne's (1504-1564) Praedium Rusticum in France in 1554 and Olivier de Serres's (1539-1619) Théâtre d'Agriculture et mesnage des champs in 1600 and Agostino Gallo's (1499-1570) Giornate Dell' Agricoltura Et De Piaceri Della Villa in Italy in 1550. Herrera was a leading agronomist of his time and charting the development of his text is hugely important for understanding the evolution of agriculture in western Europe. Examination of the different editions of Herrera's Obra show that the amount of references to Columella remain mostly consistent but what has changed is the development of Columella's framework which we will see he continued to adapt throughout his life. To understand this framework it is first important to consider the humanist context in which Herrera was working.

Herrera and Humanism

Herrera's family relationships and his personal connections place him in one of the most advanced humanist circles of his time (Consolación Baranda 1989, 97). Herrera's interaction with the classical tradition was only made possible by his humanist education. Herrera had two brothers, the first, Hernando Alonso de Herrera (1460-1527) was a Spanish university professor and a humanist (Mariano Lagasca y Segura 1818-19, 335). He also had connections to the leading Spanish humanist Antonio de Nebrija (1444-1522). Hernando originally was Professor of Grammar and Rhetoric at Alcalá de Henares which was a humanist university established by Cardinal Cisneros and Hernando would later become Professor of Grammar at the University of Salamanca (Ramón-Laca and Labajos 2017, 295). The other brother, Diego Alonso de Herrera, was also a university graduate and later became the organist at the university church of Alcalá de Henares (Alvar Gómez de Castro 1569, 39v). The Obra was written at the urging of the Spanish Cardinal and archbishop of Toledo Francisco Ximénez de Cisneros (1436-1517). Cisneros was a powerful and influential figure, twice regent of Spain, founder of the University of Alcalá (1508) and important patron of the arts. A letter dated from 1512 to his patron Cardinal Cisneros gives more insight into Herrera's writing process. Herrera wrote the Obra piecemeal, bringing each section to the printer separately once he had finished

⁵ Quotes from Herrera's 1513 edition will be from this edition unless otherwise specified.

⁶ Cf. Carreras (1970, xcix, 18, 374) and Herrera (1539, 5v).

⁷ She was born in San Salvador and was buried in Santa María in Talavera de la Reina (Herrera 2006, 13).

writing it, "Yo dexé allá lo que llebé, y me torné luego a proceder adelante."⁸ The letter is signed from Talavera which shows that at least part of the *Obra* was written in his hometown.⁹ Herrera wrote the text in Castilian, despite many humanist scholars writing in Latin at the time. His choice of the vernacular was a practical one, attempting to make his book more accessible for the people of Spain (Herrera 1970, 6; Ana Duarte Rodrigues 2017, 301). However it was also part of a broader trend of renaissance humanists writing in the vernacular, which was a European-wide trend.

As well as drawing upon his knowledge of Spanish agriculture as Herrera also travelled extensively through Italy and France. Information on Herrera's life is sparse, however we do know his brother Hernando Alonso de Herrera wrote *La disputa contra Aristóteles y sus seguidores*, which gives us more of an insight into his brother's life. He states that,

Gabriel de Herrera, después de aver peregrinado por estudiar assí en las partidas de Italia como de Francia, parió un especial libro de agricultura [...] le ovo desparzido por mano de todos en aldeas, villas y lugares a grand sabor de las gentes, recogiosse a los estudios liberales. (Asunción Sánchez Manzano 2004, 191)

While the timeline of his travels to other parts of Europe is not clear, Herrera was in Granada sometime after its reconquest which happened in 1492 and he learnt much from the Moors there with testament of Herrera's agricultural knowledge surviving. The first document is from 1503 and describes about work he had done for the Marques of Mondéjar, where Herrera is described as a man of much learning after working on the Marques' garden, "como dicho señor Alonso de Herrera es tan entendido en la agricultura y ha aprendido tanto de los moros en esto de mezclar unos árboles con otros, a él le encargué esta dirección." (Luis Ramón-Laca and Luciano Labajos 2017, 297-298). The Moors were considered excellent farmers for their use of irrigation and other farming practices. Herrera utilises knowledge he gained from the Moorish tradition throughout his text but is careful to also stress his Christian position. Acutely aware of who his patron is, he claims,

Dios que quitó ya en España esta división, por la mano de vuestra señoría que procuró la universal conversión de los Moros en Castilla; y con este mismo celode traer todas las ovejas al corral de Cristo se dispuso con mucho peligro a tomar milagrosamente la cibdad de Orán por donde se ha abierto la puerta a que el católico rey nuestro don Fernando en persona passe allende a conquistar los enemigos de la fe. (Herrera 1970, 111)

Despite his use of Moorish agricultural knowledge Herrera is careful to praise his patron and his forced conversion of the Moors, which had occurred after the fall of Granada, and his hand in the recent conquest of the Algerian city of Oran. It is important to point out that Herrera could not read Arabic at least when he began writing the *Obra*. This is stated in book three where in his search for people who could tell him more about agriculture in the area and Moorish knowledge he writes "porque nosotros no entendíamos aquel lenguaje" (Herrera 1970, 256). This same passage can help trace how Herrera was able to access such a wide variety of

⁸Carta de Gabriel Alonso de Herrera, capellán, dirigida a fray Francisco Jiménez de Cisneros, cardenal de España, referida a la entrega de una muestra de la recopilación de la obra de agricultura, encargada por el cardenal, Archivo Histórico Nacional, Madrid, Universidades, 748, N. 111. See also, Luis Ramón-Laca and Luciano Labajos (2017, 296).

⁹ Carta de Gabriel Alonso de Herrera, capellán, dirigida a fray Francisco Jiménez de Cisneros, Archivo Histórico Nacional, Madrid, Universidades, 748, N. 111 and , Luis Ramón-Laca and Luciano Labajos (2017, 296).

material for the *Obra*. He used his brother to source material for him, "Mas el señor bachiller Diego Hernández de Herrera, mi hermano, sabiendo cuánto yo la he pesquisado, me envió otra, que traslado algo diferente de la que yo digo, mas muy poco" (Herrera 1970, 256). Gabriel used his brother's position to obtain a variety of source material for him that he was finding difficult to access, giving us more information about how he was able to use so many different texts. However Herrera is careful to situate his work in the classical tradition from the outset drawing on Greek and Roman sources throughout the text while also recommending them in his introduction, claiming he is not the inventor of agriculture and it is into a long tradition that he is inserting his text "No entienda ninguno que digo ser yo el primer inventor de esta arte de Agricultura, pues della vivieron nuestros antepassados y vivimos nosotros, y della, en griego y en latín, hay muy singulares libros escritos" (Herrera, 1970, 6). Herrera makes use of Moorish agricultural knowledge but he is clear in how he wants his text to be viewed and how he himself envisions his text as drawing on Roman and Greek authors such as Columella.

Herrera and Columella: Prolific Praise

Columella's influence on his work cannot be understated as Herrera cites Columella a total of five hundred and seventeen times throughout the *Obra* (Thomas Glick, Steven J. Livesey and Faith Wallis 2006, 13). The 1528 and 1539 editions show the most revision, especially in his use of Columella and are therefore especially important in not only showing developments in the reception of Columella in the Renaissance but also in understanding Herrera's text and how it evolved. Columella is not the most cited author by Herrera but examination of the entire text shows his influence predominates in certain areas such as attitudes to the environment, management of land and also the care and treatment of animals.

It is also possible to ascertain which edition Herrera was using. Columella's shorter *De arboribus* treatise had been incorrected inserted as book three of the *De re rustica*. The first editor of the text Georgius Merula (1430-1494) was aware something strange was happening between book three and six but still published the text as the thirteen books of Columella's *De re rustica* instead of twelve (José María Maestre Maestre 1997, 270-271). The *De arboribus* was not taken out and printed at the end of the text until 1514, after the first printing of Herrera's text. Herrera continues to reference the thirteen books of Columella in subsequent editions of the text, that have been revised, showing that he continued to use an early edition of Columella's text throughout his life.¹⁰

We can also ascertain Herrera's first use of Columella by looking at the structure of the Obra. Book one of the Obra de Agricultura deals with knowledge of the land, what characteristics make a suitable farm, moving onto grain and how best to grow the various types of grain. Book two deals with vineyards and various aspects of viticulture. Book three deals with trees, their differences and attributes. Book four deals with fruit trees, how best to lay out orchards and some description of other fruits and vegetables. Book five focuses on animals, how to care for them and their offspring while also covering apiculture. Book six deals with calendar of events, when the best time is to carry out each duty on the farm and also the various phases of the moon and various signs that the farmer should know. Herrera' work is very different from other classical works such as Cato's (234-149 BCE) eclectic mix of agricultural precepts, Varro's (116-27 BCE) dialogue, Virgil's (70 BCE-19 BCE) georgic poem, Pliny the Elder's encyclopedia and Palladius's (281-281 CE) agricultural calendar. Stefan Schlelein in " 'Wissenschaft' zwischen Vorbild, Feld und Federkiel. Der Libro de Agricultura des Gabriel Alonso de Herrera" has also highlighted the similarities between the two texts. He claims that Herrera draws on both Pietro de' Crescenzi (c.1233-c.1320) Opus ruralium commodorum and Columella's De re rustica for the structure of his work with the overall book closer to Crescenzi

¹⁰ Cf. (Gabriel Alonso de Herrera, 1528, 46r) and (Gabriel Alonso de Herrera 1539, 42r)

(Stefan Schlelein 2014, 18-22). However Columella's influence comes to the fore in select sections. These include the prologue and book five which covers the care and treatment of animals. Even before examining what Herrera writes it is clear that Columella has had an influence on the author in the structure of the work.

Herrera's prologue follows themes from Columella's own opening preface while also defending his use of classical authors. He explains that his contemporaries believe ancient agricultural authorities are no longer relevant often living in a climate and conditions that are different to their own and then gives his own counterargument. In this section Herrera also cites Columella's own view on the regeneration and fertility of the world claiming,

¿Por qué no serán tales las reglas y preceptos de los agricultores en la labor de la tierra, cuyo ser y calidad nunca se muda? Mas, según dice Columella, y nosotros vemos, Dios la hizo perpetuamente fecunda y le dio vigor de perpetua juventud, que ni por mucho fructificar se canse, ni por ser muy antigua pierda su fuerza. No me espantan murmuraciones de otros, que dicen que más sabe cualquier rústico labrador en las cosas del campo, que superion Columella, Plinio, Catón, Paladio, y aquel doctíssimo Marco Terencio Varrón, a quien en saber Sant Augustín sobre todos los romanos da corona. De creer es que supieron los romanos labrar el campo tan bien como nuestros españoles, y aún pienso yo que algo mejor, porque más se preciaban dello. (Herrera 1970, 6)

Columella is his authority here and he picks up the opening theme from the *De re rustica* and puts forward the concept that the earth is eternally fertile, age has no effect and fruitfulness will not diminish through tiredness, confronting ecological concerns of his time. Columella states,

Saepenumero civitatis nostrae principes audio culpantes modo agrorum infecunditatem, modo caeli per multa iam tempora noxiam frugibus intemperiem [...] quod existiment ubertate nimia prioris aevi defatigatum et effetum solum nequire pristina benignitate praebere mortalibus alimenta. (Columella 1941, 2)

Columella however follows up this statement with a denial, claiming that such a belief is in fact far from the truth, "Quas ego causas [...] procul a veritate abesse certum habeo" and that the root cause in the decline of farming can be found in neglect of the area by the Roman people, that after being revered and respected in ancient times the discipline has now been delegated to the worst of slaves (Columella 1941, 2, 5).

This idea that the world was in a state of decline can at least be traced back to Lucretius (c.99-c.55 BCE), who popularised the belief that the world was in a state of decay in the *De Rerum Natura* (*On the Nature of Things*) with the poem also putting forward early ideas of atomism and cosmology. A philosopher belonging to the Greek Epicurean school of philosophy, his poem on natural philosophy garnered much attention during the Renaissance, after being popular and endorsed by the two most famous literary figures of ancient Rome in prose and verse Cicero (106 BCE- 43 BCE) and Virgil. This text was discovered by Poggio Bracciolini on the same trip in 1417 when he discovered the Columella manuscript. While this is the concept that Columella is reacting against in his opening preface Herrera does not mention Lucretius by name but his text demonstrates direct influence from Columella in his discussion of the environmental concerns of his own age.¹¹

Lucretius states, "iamque adeo fracta est aetas, effetaque tellus vix animalia parva creat, quae cuncta creavit saecla deditque ferarum ingentia corpora partu" and the section finishes

¹¹ For more information on Lucretius see Alison Brown (2010) and Ada Palmer (2014).

with "omnia paulatim tabescere et ire ad scopulum, spatio aetatis defessa vetusto" (Lucretius 1924, 184-7). Columella felt it necessary to address this idea at the very beginning of his twelve books, before he discussed any other aspect of agriculture he needed to let his contemporaries know that if they were to follow what he suggests it would not be in vein. Herrera's interaction with these ideas about the world's ability to regenerate seem to anticipate later debates which would come to full fruition in the millenarist and improvement literature of the seventeenth-century which is an area that would be worthy of future investigation.

Columella's influence on Herrera's prologue was not limited to the 1513 edition either. He continued to adapt his message and tailor it to his contemporaries in subsequent editions.¹² This adaptation included increased reliance on Columella's opening preface. He states in the 1539 edition,

Pues los victoriosos reyes y capitanes triunfadores por sus mismas manos labraban la tierra, y se tenían en ello por tan honrados [...] Claro es y muy notorio que no hay quien tan bien haga cosa alguna como el que se precia y honrra della. Mas como agora ande tratada de obreros alquiladizos que no curan de mas de su jornal, o de criados sin cuidado, o de viles esclavos enemigos de su señor, lo uno en ser la tierra no bien obrada, y lo otro paresce que en vez que siendo nuestra madre es tenida en tan poco, que de corrida nos niega la mayor parte de nuestro mantenimiento, no lo hacían los antiguos romanos y escelentísimos labradores (Herrera 1539, 2v, Herrera 1970, 371)

Once again Herrera draws on Columella who in his own preface places the blame for unsuccessful farming firmly on his contemporaries, no longer taking an interest in the land or showing it the respect and care that their ancestors showed it, with the result of diminishing returns of their (or their slaves) farming efforts. Herrera added this section to the final edition he worked on before his death showing that his relationship to Columella was constantly changing and adapting and, in the case of his prologue, the influence of Columella's own preface became much more marked and prevalent. In Herrera's original edition's prologue he does not place the blame for the current state of agriculture on his contemporaries. It is a point of view that he comes to share with Columella in the twenty-six years between the first edition of his text and the final edition he edited, in response to what he could see around him.¹³ He used Columella's concept of renewal as a conceptual framework against which he could view his own changing time. This section of Columella his later edition references states, "Nec post haec reor violentia caeli nobis ista, sed nostro potius accidere vitio, qui rem rusticam pessimo cuique servorum velut carnifici noxae dedimus, quam maiorum nostrorum optimus quisque et optime tractaverat" (Columella 1941, 5). Herrera also further expands on this section mentioning that when a Roman admired someone they often stated that he was a good farmer. He mentions Quinctius Cincinnatus (c. 5th BCE), the farmer who gave up his plough to save Rome after an invasion and upon the defeat of the enemy he promptly gave up the power he had been entrusted with after only holding office for 16 days to once again work the land. In mentioning him Herrera once again follows the theme of Columella's preface which reminds the reader that farming was held in high regard and Cincinnatus was someone to emulate.¹⁴ He gradually came to share Columella's opinion on farmers which is reflected in his increase in references to him in his prologue. The preface of Columella's De re rustica was vitally important in shaping Herrera's attitude to the natural world. Its themes are remarkably modern in stressing the importance of connection to the land, understanding what it needs to ensure

¹² For more information on Herrera's view of his contemporaries see José Fradejas Lebrero (1984).

¹³ For further discussion on this addition to the 1539 text and the influence of Columella on other sections of de Herrera's prologue which have not been covered see José-Ignacio García Armendáriz (1995, 99-106).

¹⁴ Cf. Gabriel Alonso de Herrera (1539, 1v-2r) and Columella (1941, 2-20)

continuing fertility and being present on the farm. Other aspects of Herrera's work have attracted more attention but Herrera's use of Columella is integral in comprehending his overarching attitude to the natural world.

Herrera: Acclaim and Distain

Nevertheless we should not assume that Herrera's use of Columella is all positive. Although Herrera's interaction with Columella can be defined by emulation and admiration in terms of the prologue this treatment is not consistent with Herrera's use throughout the text. He also corrects Columella and this is seen in his discussion of how best to yoke an ox,

Cuanto a los bueyes, dice Columella que es mejor uñir los pescuezos que no a la cabeza o a los cuernos, porque con mayor fuerza rompen la tierra, porque con todo el cuerpo traen el arado; mas esto en Italia o Francia, que son los bueyes pequeños y tienen los cuernos menudos y flacos, tiene más lugar de hacerse así que en Castilla, onde hay bueyes bien grandes y que cualquier cargo pueden bien traer con la fuerza de la cabeza y cuernos. Y Plinio dice que los bueyes para arar an de ser uñidos muy fuertemente y muy apretados, porque lleven las cabezas altas, lo cual no por fuerza sería si al cuello los uñessen. (Herrera 1970, 18)

This is an important passage as not only does it demonstrate a development in Herrera's treatment of Columella but it also shows Herrera's treatment of Pliny in the context of the reception of Columella. Here, Herrera does not follow Columella's advice that oxen should be yoked by the neck and not the head which he states in book two of the *De re rustica* as it is painful for the animal, "resupinis capitibus excruciantur" (Columella 1941, 122). Herrera instead has chosen to follow Pliny's recommendation who states that oxen are to be yoked as tightly as possible so that they hold their heads up high and Herrera states, in following Pliny that this would not be possible unless they were yoked by the head.¹⁵

Furthermore, Herrera elaborates on this section in his 1528 and 1539 editions where he states, "Marauillo me yo del que diga tal cosa/ pues fue español: y sabia que los bueyes de España por ser muy grandes tienen grande fuerza en las cabezas: y pueden traer muy bien los arados" (Herrera 1539, 5v; 1528, 5v). He directly criticises Columella, claiming that as he was Spanish he should have known better. He is going a step further than his 1513 edition which contains a tentative disagreement with the ancient authority using another authority, i.e. Pliny, to correct Columella but his later revisions show his growing confidence as an agricultural writer with the success of his own work.

Armendáriz picks up this theme in his work on the reception of Columella in Spain where he shows the development of the identification of Columella as a Spanish author writing under the Roman Empire rather than simply a Roman writer, which stems from a desire to separate Spanish writers and to claim them as something distinct in opposition to their Italian counterparts, which is a specific aspect of his reception in Spain (José-Ignacio García Armendáriz 2014, 143). Examination of the entire work shows that references to Columella are often accompanied by references to Pliny the Elder and, while the latter is not always used to correct Columella, Herrera is careful to corroborate Columella's statements when possible and in the case of conflicting testimony he chooses the later encyclopedic writer.¹⁶ He holds Columella to a higher standard than other classical authors who were not Spanish.

This is also not an isolated example. Herrera also disagrees with Columella when it comes to the effect chickpeas have on the soil. Herrera uses an array of authors as support when

¹⁵ Cf. Pliny the Elder, *Historia Naturalis* (1950. 301)

¹⁶ Cf. Gabriel Alonso de Herrera (1513, 9r, 13r, 90v, 91v)

stercorari lupino, faba, vicia, ervilia, lenti, cicercula, piso [...] in faba ceterisque leguminibus, quibus terra gliscere videtur, verisimile est accidere, ut nisi protinus sublata messe eorum proscinditur, nihil iis segetibus, quae deinceps in eo loco seminari debent, profuturum sit. Ac de iis quoque leguminibus, quae velluntur, Tremelius obesse ait maxime solo virus ciceris et lini, alterum quia sit salsae, alterum quia sit fervidae naturae (Columella 1941, 192-3)

Columella goes on to acknowledge the draining properties that flax can have on the soil but claims that it is a result of the way it is harvested. Legumes can be of benefit to the soil only if they are not pulled out and the soil broken up immediately after they are harvested.¹⁷ Legumes have nitrogen fixing properties in their roots, a chemical frequently depleted by many plants. However one of the ways to get the benefits of this is to cut the stems and let the roots decompose in the soil. Columella goes on to state that the best way to cure any soil fertility issues is to manure the ground and he then begins his discussion of the best types of manure. Herrera acknowledges the benefits of legumes but disagrees with Columella about chickpeas stating,

Bien conoscidos son los garbanzos en toda parte con los cuales la tierra mucho se daña, porque lo uno son salados y con la sal esterelizan y desmedran la tierra, lo otro porque se arrincan y en las raícas llevan pegado lo mejor de la tierra, según Plinio y el Cresentino; y todos los agricultores concuerdan en esto; aunque Columella es de opinión contraria, que dice que en las legumbres los garbanzos dañan menos la tierra, paresce cierto que habla algo contra de verdad, y allende de esso tiene por contrarios a Plinio, Paladio, al Teofrasto y Crecentino. (Herrera 1970, 35)

Columella does highlight that Tremelius states that chickpeas have salty properties but is aware the effect on the earth is dependent on the way they are harvested. Herrera sides against what Columella states and overlooks his concession that they can be said to have salty properties and follows the advice of other classical authors. Herrera's preference for the later writer is also shown in his discussion on types of seed. He states,

Hay contienda entre Plinio y Columella, porque Columella dice en el libro y capítulo que arriba dixe que la simiente trismesina no es simiente o manera la diferenciada propria e apartada, y Plinio escribe que se engaña Columella, y aún es verdad que se engaña, porque haber trismesino y ser simiente por sí. (Herrera 1970, 24)

Columella is not the only author Herrera disagrees with but Herrera's criticism is much more lenient in regard to these other writers. In his section on the management of chickens Herrera also disagrees with Crescenzi stating,

Crecentino dice que por el estío es buen empollar, no sé si es ansí en su tierra de la Lombardía donde él vivió y escribió. Mas acá vemos lo contrario en España y aun creo que no quiso decir tal cosa, porque él se contradice adelante en el libro duodécimo en la partida de hebrero. (Herrera 1970, 300)

¹⁷ See Columella (1941, 193-5)

Crescenzi was a famous agricultural writer from the Middle Ages and Herrera uses him extensively. However his criticism of Crescenzi is much more tempered. There are also instances where Herrera disagrees with Aristotle (384-322 BCE) stating, "Aristótel diga que aunque el perro rabioso muerda a los hombres no rabiarán, aunque rabien todas las otras animalías que mordiere, bien se ve el contrario por experiencia, que bien habemos visto rabiar personas mordidas de canes dañados y aun morir dello" (Herrera 1970, 287). Aristotle was the most influential philosophical author of the Middle Ages but Herrera disagrees with him when he has direct experience to the contrary. Herrera's treatment of Columella throughout the text is not consistent. His praise for the Roman Spanish agronomist is contrasted with his sharp rebukes in subsequent sections which shows that his interaction with Columella was constantly evolving and shaped by what he expects him to have known since he was from Spain.

Herrera's book v deals with the care and treatment of animals and it is here that Columella's influence once again comes to the fore. When describing how to treat oxen he states.

Para la tose dice Columella que si es nueva que es bueno darles brebajos de agua callente, hechos con harina de cebada o grama; dársela a comer con harina de habas o de lentejas molidas hechas y darle brebajo della con agua callente, y si beber no lo quisiere, echárselo assí callente con un cuerno, si es tose vieja es bueno darles brebajos con agua de hisopillo, y harina de lentejas que haya cocido el hisopo en aquella agua, y aun darles a comer puerros o darles harina de yeros en brebajos vuelta allí harina de cebada. (Herrera 1970, 343)

This section follows Columella closely who states in the De re rustica,

Recens tussis optime salivato farinae hordeaceae discutitur. Interdum magis prosunt gramina concisa, et his admixta fresa faba. Lentis quoque valvulis exemptae et minute molitae miscentur aquae calidae sextarii duo, factaque sorbitio per cornu infunditur. Veterem tussim sanant duae librae hyssopi macerati sextariis aquae tribus. Nam id medicamentum teritur, et cum lentis minute, ut dixi, molitae sextariis quattuor more salivati datur, ac postea aqua hyssopi per cornu infunditur. Porri enim succus cum oleo, vel ipsa fibra cum hordeacea farina contrita remedium est. Eiusdem radices diligenter lotae, et cum farre triticeo pinsitae ieiunoque datae vetustissimam tussim discutiunt. (Columella 1954, 154-156)

Columella was a farmer himself and throughout his work he not only stresses the importance of being present on the farm but also donates a substantial portion of the text to the care and treatment of animals as he knew that their welfare was vital for the success of any farm. This is an outlook that Herrera shares. In an age before industrialisation a successful farm was dependent on animals such as oxen and both Herrera and Columella consistently stress the care of these farm animals in their respective books on the topic.

Conclusion

I have argued Herrera's interaction with Columella text is fourfold. Firstly, he moves beyond what previous humanists were doing with Columella's text, he was not only looking at the text for minute pieces of information regarding different aspects of agriculture but engages with larger over-arching ideas and concepts about the regeneration of the world. Frameworks and theories that would not see their full fruition until the seventeenth-century. Secondly Columella's influence on Herrera can be traced through certain sections such as the prologue and book five in particular which Herrera continued to revise throughout his life. Thirdly

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Herrera identifies Columella as Spanish which is connected to the fourth aspect of his reception which is the fact that Herrera holds Columella to a higher standard than other classical agricultural writers. This means that Herrera is not afraid of criticizing the ancient agronomist which sections he also continued to revise in subsequent editions.

Herrera's importance as a writer has been recognised in the areas of philology and the transmission of Moorish knowledge but his use of Columella has been previously under analysed. Herrera was writing at a time when the new world had to encounter the old one. When ancient authorities had to be understood before they could surpass what was written by them. Herrera was writing when Spain was in a state of flux after the fall of Granada and the discovery of the New World but it was also before the influx of new botanical material to Europe from the Americas. Herrera has been recognised as an important writer in the development of Castilian in more recent years. However there is still yet to be a critical edition of his work with the changes he carried out throughout his life and the above sections discussed from these different editions highlights once again the need for a comprehensive critical edition. Herrera's use of Moorish knowledge marks his text as unusual and it has also garnered attention more recently but it is really the classical tradition Herrera lays claim to. He is careful to situate his text within this tradition from the start and at a time when Spanish identity was being redefined Herrera's use of Columella gives insight into what 'Spanish' meant to him. He identifies with Columella's view of the farm and how it should be managed but is harsh in his criticism when he deems Columella to have made a mistake. For Herrera Columella is not simply part of the Roman pantheon of writers but he is also Spanish and so therefore part of a long agricultural tradition. Herrera's interaction with the classical tradition is not simply emulation or correction and these parameters changed as he edited his text over the years. After the prologue Columella's influence once again becomes prevalent in the care and treatment of animals. Both authors often recommend they be treated with compassion, stressing the need for a personal connection to the farm. They knew animals were vital to any success and should be treated accordingly. Herrera's use of the classical tradition has been noted but examination of his use of Columella shows that it can in no way be defined in simple terms. Herrera's text was hugely influential but is not only important for the development of agriculture but in charting attitudes to the environment in the Renaissance. Herrera's work was the first of its kind, the beginning of a tradition that subsequent generations and countries would scramble to surpass. However, an important first step in comprehending this text and its tradition is understanding Herrera's constantly evolving relationship to Columella's De re rustica.

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