

# Chapter 2

## Plants and Places: Agricultural Knowledge and Plant Geography in Germany, 1750–1810

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### Introduction

Over the last 20 years, a rich body of literature has explored the ways in which natural history functioned as a science of resources in the eighteenth century. In this period, natural historical inquiry was intimately bound up with debates about national wealth and luxury, and also linked with the integration of novel or exotic products into European markets. Eighteenth-century natural history was a body of knowledge constituted within networks of global exchange.<sup>1</sup>

In the following chapter, I would like to continue to explore the connections between natural history and practical knowledge in the eighteenth century, but with a shift in emphasis. Most past work has focused on the quest for expensive or rare colonial plants and medicines; it has also devoted a great deal of attention to botanical gardens, the sites where such plants could be classified and grown.<sup>2</sup> I would like to consider plants that were grown in less rarified soil, in the fields, meadows, and forests of German-speaking Europe's countryside. In particular, I want to examine how elite interest in agricultural improvement fueled the development of a stronger geographical perspective among botanists in the decades around 1800.

In past work on the history of plant geography, scholars have described the decades between 1790 and 1820 as a key transition period. During these years, a handful of botanists began to analyze more systematically how patterns of plant distribution related to the varying physical conditions present in different places. European commercial and colonial expansion threw up many of the questions that early plant geographers sought to answer, but historians have also identified other intellectual traditions that purportedly infused geographical perspectives into botanical

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<sup>1</sup> See, e.g., Koerner (1999), Schiebinger and Swan (2005), Spary (1996), Spary (2003), Müller-Wille (1999), Müller-Wille (2003).

<sup>2</sup> For example, Spary (2000), Schiebinger (2004).

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research. Many of the central figures in this new, more geographical strain within botany were German, men like Carl Willdenow and Alexander von Humboldt. In tracing the roots of “Humboldtian” plant geography, scholars have pointed to several features within the German intellectual landscape that encouraged geographical thinking: eighteenth-century state statistics, Wernerian geology, the Kantian geographical tradition, and, last but not least, German Romanticism, whose holistic and aestheticized approach to the study of nature has been seen as particularly important to the thought of Humboldt.<sup>3</sup>

In each of these cases, historians have identified various external examples of geographical thinking, and then argued that these other forms of geographical analysis prompted similar developments within botany. It is certainly correct to think of eighteenth-century botany as part of a wider complex of disciplines devoted to mapping, understanding, and managing territory, a grouping to which fields like Wernerian geology and cameralist state statistics also belonged. There is also little doubt that practices and concepts travelled freely among these different fields. But eighteenth-century scholars and landowners interested in plants had their own particular motivations for reflecting on geographical variation, and it is these motivations that the following chapter explores. In the final third of the eighteenth century, one can find discussions about the complex interrelationships between plants and places in a variety of authors who were working at the intersection of botany with *Oekonomie*, the eighteenth-century field that dealt (among other things) with the study of agriculture.

While most treatments of eighteenth-century economic science have focused on global trade and the promotion of national wealth, the practical management of local agrarian landscapes was an equally important focus of this literature. Historians of agriculture have often argued that a real relationship between science and farming began only in the mid-nineteenth century.<sup>4</sup> According to the knowledge categories that prevailed in the German Enlightenment, however, there had long been a science—*Oekonomie*—whose aim was the improvement of agricultural productivity. This field had well-developed connections to natural history and natural philosophy, connections that were real, not merely rhetorical.<sup>5</sup> Practical, regional agricultural concerns formed an important part of the history of fields like plant geography, which in their Humboldtian form owed a clear debt to the literature on agricultural improvement.

Before moving on to address these claims directly, let me start by describing the science that eighteenth and early nineteenth-century Germans called *Oekonomie*. This category of knowledge was a very old one, dating back to antiquity. In the classical tradition, *Oekonomie* was the body of knowledge that dealt with the running of

<sup>3</sup> Browne (1983, pp. 32–57), Nicolson (1990), Nicolson (1987), Steigerwald (2000), Cooper (2007).

<sup>4</sup> Haushofer (1963), Klemm (1992), Uekoetter (2006), Uekötter (2010). A few authors have described this transition as a more gradual process; see, e.g., Abel (1967).

<sup>5</sup> On connections between learned natural history and agricultural improvement, see Ambrosoli (1997), Koerner (1999).

a landed estate. Previous scholars have argued that this older tradition had died out by the middle of the eighteenth century, giving way to a new science of *Oekonomie* whose primary concern was the economy of the state rather than the household.<sup>6</sup> This transition, they have argued, was caused by the rise of cameralism, a new kind of state science introduced into German universities in the eighteenth century. Central European cameralists wanted to improve state administration and increase state revenues by better managing economic life, and they were particularly interested in getting the most out of a state's natural riches—its mines, forests, and agricultural land.<sup>7</sup>

In fact, the cameralist perspective added to, but did not replace, many older questions that had characterized *Oekonomie* in preceding centuries. While the expansion of cameralism certainly introduced new, more state-centered concerns into *Oekonomie*, the older, household-oriented version of the science also persisted into the nineteenth century. Mid-eighteenth-century authors like Christian Reichart and Johann Gottlieb von Eckhart still used *Oekonomie* in its older, narrower sense in the 1750s, as did writers like Friedrich von Rochow in the 1790s.<sup>8</sup> As late as the mid-1830s, Jena's influential *Allgemeine Literaturzeitung* reviewed books on *Oekonomie* under a joint heading with books on other aspects of household management (cookbooks, for example).<sup>9</sup> Throughout the eighteenth century, a primary concern of *Oekonomie* remained the running of individual estates.

Both of these orientations—towards the dynastic state on the one hand, and the rural estate on the other—meant that enlightened *Oekonomie* was very much a science that raised concrete questions about how plants related to specific places. What could be grown, where, and why? What explained the varied success of different crops in different locations, even within a given region? In this respect, eighteenth-century *Oekonomie* generated just the sorts of questions that nineteenth-century plant geography would try to answer.

## Science and Agriculture in the German Enlightenment

In writing the history of German agricultural science, scholars have often organized their narratives around supposed watersheds when the study of agriculture became more closely linked with the practices of natural science. A number of eighteenth- and early nineteenth-century authors have been heralded as early advocates of this shift, most prominently the Göttingen professor Johann Beckmann and the Berlin

<sup>6</sup> Richarz (1991), Tribe (1988). Marion Gray has recognized the continued importance of the household-level of analysis in his work. Gray (2000).

<sup>7</sup> On the aspirations and failures of cameralism, see Wakefield (2009), on cameralist economic thought, Tribe (1988).

<sup>8</sup> Reichart (1753), Eckhart (1754), Rochow (1794).

<sup>9</sup> For example, this grouping was used throughout the 1835 volume of the *Jenaische Allgemeine Literaturzeitung*.

professor Albrecht Thaer. There has been a consensus, however, that a truly robust link between science and agriculture first appeared only in the middle of the nineteenth century with the advent of modern agricultural chemistry. For many scholars, this conjuncture also represented the moment when scientific *expertise* as such became a serious force within German agriculture.<sup>10</sup>

Eighteenth-century elite Germans, however, already thought that they had a body of authoritative knowledge, albeit not a perfect one, that could guide the practice of agriculture.<sup>11</sup> Indeed, in the 1750s and 1760s, it was common to find people saying that so much had already been written on *Oekonomie* that it might seem pointless to publish more. The authors of economic treatises saw themselves as contributing to a well-established field with an ancient and venerable pedigree. The eighteenth-century science of *Oekonomie* differed, of course, from later nineteenth-century concepts of “agricultural science.” As I will discuss shortly, the former included a number of topics that were later siphoned off to other fields. *Oekonomie* was nonetheless a coherent and widely cultivated field, and one that was accorded significant cultural and epistemic authority.

Most eighteenth-century agricultural writers also thought that the field of *Oekonomie* had significant connections to natural history and natural philosophy. One can find a range of views on how exactly *Oekonomie* should rely on these other fields, but the claim that it ought to get *something* from them—that sentiment was widespread, and by no means the provenance of a few farsighted professors, as the previous secondary literature on German agricultural science would seem to suggest. It was, rather, part of the standard understandings of the field.<sup>12</sup>

*Oekonomie*, as mentioned above, had somewhat different boundaries than the nineteenth-century discipline known as agricultural science. It focused on core areas of agricultural production like the growing of field crops and animal husbandry, and also included things like fruit and vegetable gardening and sometimes even ornamental gardening (the latter had its own, separate literature, but got included in handbooks of *Oekonomie* as well). It frequently stretched to include rural crafts and manufacturing activities.<sup>13</sup> In the first half of the nineteenth century, in contrast, discussions of gardening would become more strongly disaggregated from discussions of agriculture proper, and a new science of *Technologie* would take all of manufacturing under its wing.

In addition to having a broader purview than its nineteenth-century analog, *Oekonomie* also had a broader audience. It dealt with topics like fertilizing practices or the growing of rye that were primarily of interest to people who owned or worked large plots of rural land, but it also encompassed discussions of fruit and vegetable gardening that were relevant to wealthy urban burghers. The authors of texts on *Oekonomie*, and, from what we can reconstruct, their audiences, drew from both of these groups. Affluent urban citizens who owned garden plots at their town’s edges,

<sup>10</sup> See note 4, as well as Finlay (1991a), Finlay (1991b), Rossiter (1975), Borscheid (1976).

<sup>11</sup> Popplow (2010).

<sup>12</sup> See, e.g., Reichart (1758), Flurl (1799), Reuss (1777).

<sup>13</sup> See e.g., Reichart (1753), Eckhart (1754), Münchhausen (1773).

pastors who grew fruit trees in their church yards, or Prussian noblemen planting large amounts of grain for the international market—all of these could find something to interest them in *Oekonomie*.<sup>14</sup>

Eighteenth-century *Oekonomie*, in other words, was a body of knowledge that dealt with a variety of interventions into rural (and sometimes also urban) landscapes. Its practitioners did not just concern themselves with bounded spaces like fields. They wrote extensively about how wooded areas ought to be managed on an estate, and how fruit trees should be planted in orchards or along the sides of roads. They suggested garden designs and pondered the improvement of pastures and meadows.

These varied sites of plant cultivation provided the backdrop for *Oekonomie*'s intersections with the science of botany. To give one telling example, in the early years of the nineteenth century, the Prussian noblewoman Helene Charlotte von Friedland had the botanist Carl Willdenow produce a flora of her estate, and this flora included both the wild and the cultivated plants on her land: the fruits, vegetables, and flowers in her gardens, the crops in her fields, the grasses (both seeded and wild) that grew in her meadows and pastures, and the trees that grew in her woods. Willdenow's *Flora* recorded the wild and the sown, including carefully tended garden plants alongside weeds as part of one composite description.<sup>15</sup>

Historians of plants geography have often mentioned in passing that figures like Humboldt and Willdenow frequently discussed cultivated plants in their writings and showed a keen interest in agriculture. In what follows, I would like to look more closely at the connections, both intellectual and social, between eighteenth-century botany and *Oekonomie*, with an eye to illustrating how issues central to plant geography emerged at the interstices of these two fields. First, however, I would like to look at why questions about how plants fit with particular places came to seem so pressing to a wide audience of Central European elites.

## ***Oekonomie* and the Geography of Plants**

By the 1790s, when Alexander von Humboldt or Carl Willdenow wrote their earliest reflections on plant geography, German-speaking Europe had a wider field of authors interested in broadly similar questions. Over the course of the second half of the eighteenth century, several intertwined developments had made the issue of how plants fit with particular places one that was on many people's minds. Historians of botany have already explored how global botanical exploration helped to spark these kinds of interests, but there was also an active intra-European trade in domesticated plants (some from the Old World, some from the New) that prompted

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<sup>14</sup> The leading review journal for this field reviewed works in all of these areas, see Beckmann (1770–1806).

<sup>15</sup> Willdenow (1815). Willdenow's original preface from the 1803 first edition was reprinted in this later version.

similar kinds of discussions. On the one hand, this interest in new crops and garden plants was part of the development of a more market-oriented, commercial agriculture in the second half of the eighteenth century. Many German landlords, particularly in Brandenburg-Prussia, were pushing to get more revenue out of their estates, and experimenting with new crops and techniques to this end.<sup>16</sup> On the other hand, an interest in new fruits and vegetables was also part of the growth of consumer society in the German lands. By the later eighteenth century, for example, many villages around cities like Frankfurt am Main had switched to producing fruits and vegetables for sale at nearby urban markets, where a clientele eager for culinary novelty would offer a good price for their wares.<sup>17</sup> Many urban elites also owned leisure gardens by the end of the eighteenth century, and grew flowers, fruits, and vegetables on their own plots.<sup>18</sup>

The publishing networks of *Oekonomie* provided one important forum in which the benefits and perils of new crops or garden plants were vetted. Clover, for example, was one of the most widely discussed agricultural plants of the eighteenth century, and numerous pamphlets, books, and articles were composed singing its praises.<sup>19</sup> Clover's most famous German advocate, Johann Christian Schubart, received a title for his efforts on the plant's behalf. Joseph II raised him into the imperial nobility with the moniker Edler von Kleefeld [literally translated, "noble of the clover field"]. As we now know, clover is a legume that fixes nitrogen to the soil. Though this mechanism was not understood in the eighteenth century, clover was already widely celebrated for its ability to restore fertility to tired land. Its advocates argued that it allowed the farmer to skip the fallow year without exhausting the soil, providing useful fodder for animals in the meantime.<sup>20</sup> Other food and fodder crops—from turnips and potatoes to new kinds of grasses—were also exhaustively discussed in print.

Within this practical literature, the fit between soil, moisture level, region, and plant was a common topic of discussion. Johann Gottlieb Gleditsch warned his readers that fodder crops had to be appropriately matched to the climate [*Klima*] of a place to succeed.<sup>21</sup> Johann Friedrich Mayer advised landowners who wanted to reseed their meadows that grasses grown in dry, heavy soil would be much tastier and more nutritious (to cattle, that is) than those grown in lighter soils.<sup>22</sup> Johann Christian Schubart's career as a clover enthusiast began after he realized that the species of clover then being grown in his region was a poor fit for the area; only after finding a better-suited plant did his endeavors succeed. One always had to

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<sup>16</sup> See, e.g., Wunder (1996), Hagen (2002). On the broader European context, see Ambrosoli (1997), pp. 337–398.

<sup>17</sup> Schuricht (2011).

<sup>18</sup> Dülmen (1999).

<sup>19</sup> To name just two examples, Schimper (1780), Schimper (1792).

<sup>20</sup> Rockstroh (1841).

<sup>21</sup> Gleditsch (1782).

<sup>22</sup> Mayer (1792, p. 281).

take the specificities of a place into account when deciding how a plant was likely to behave.<sup>23</sup>

This lesson was learned locally many times in the eighteenth century, as land-owners and gardeners experimented with Ray grass, turnips, potatoes, lucerne, and many other domesticated plants. Indeed, enlightened learned societies often devoted considerable effort to testing whether or not novel plants would work in their particular region. The Economic Society of Bern, for example, repeated agricultural experiments undertaken elsewhere to see if they would work in the region around Bern.<sup>24</sup> Furthermore, people who tried out plants in a new place were seen as creating new knowledge worthy of commemoration. The Zedler lexicon, mid-eighteenth-century Germany's most important encyclopedia, argued in its article on experiment that the first person who proved that a crop would grow in a specific area ought to be credited with a new discovery.<sup>25</sup> Much in the same way that a botanist who found a new species deserved recognition, the discovery that something could be grown (or grown better) in a given area was also an important contribution to the storehouse of general knowledge. Christian Reichart, for example, was celebrated in Erfurt and elsewhere for perfecting the cultivation of watercress in his region; he was also known for being the first person in Central Europe to coax cauliflower into seed.<sup>26</sup>

Driven by this widespread interest in new crops and gardening plants, the German seed trade expanded in the second half of the eighteenth century, and the mechanics of buying and selling seeds also raised questions about the complex relationships between plants and places. Alongside a widespread interest in introducing novel food plants came an accompanying concern with knowing whether or not the seeds you were buying (sometimes from another region or nation) would actually flourish in your area.<sup>27</sup>

Over the course of the eighteenth century, German gardeners started growing a much wider range of fruits and vegetables than they had in preceding centuries. A number of edible plants that would have been rare novelties in the early eighteenth century had become widespread by the end of the century.<sup>28</sup> The most famous case, of course, was the potato, but there were many other examples as well. The previously mentioned cauliflower, for example, went from being an exotic novelty to a much more common food, one that deserved multiple recipes in cookbooks like Christian Heinrich Steinbeck's *Neues bürgerliches Kochbuch*.<sup>29</sup> From the careers of people like the seed merchant Christian Reichart, one can reconstruct the growing customer base of nobles and urban elites interested in trying out new plants. Reichart authored one of the most successful eighteenth-century handbooks on *Oekonomie*,

<sup>23</sup> Rockstroh (1841, pp. 59–68).

<sup>24</sup> Gerber-Visser (2010).

<sup>25</sup> [1746] "Versuch-Kunst," *Grosses vollständiges Universal-Lexicon*, p. 2176.

<sup>26</sup> Czekalla and Prass (2011).

<sup>27</sup> For an example of seed merchants' advertisements, see [1794] "Kauf-und Handels-Sachen."

<sup>28</sup> Schuricht (2011).

<sup>29</sup> Steinbeck (1826).

and much of his six-volume work can be read as advice to his customers. He reported on the conditions under which certain kinds of seeds would flourish, and advised his readers on the circumstances under which a plant's failure to grow was the fault of the purchaser, not the seed merchant.<sup>30</sup> In other publications of the period, one can see a similar fusion between *Oekonomie* and the commercial trade in plants. The Flora of the Friedland estates, for example, placed a special mark beside plants (mostly newly introduced kinds of trees) that were available for sale.<sup>31</sup>

Europeans' exploitation and exploration of the New World is by now a familiar feature of the history of early modern science.<sup>32</sup> Running parallel to the dramatic and better-studied colonial exchanges of this period, however, was a lively intra-European exchange in food and fodder crops. Many of the plants of interest to eighteenth-century improvers were not from the far corners of the globe; they were imported from another part of Europe. Europeans saw a steady stream of new plants coming in from Asia, the Pacific, and the Americas, many of them rare and exotic foreigners that stayed predominantly in the nurturing confines of carefully tended botanical gardens. But there was also intense interest in more humble kinds of plants: new grasses to reseed meadows, or new vegetables to plant in the kitchen garden.

As these less glamorous fruit varietals, vegetables, legumes, and grains moved around Europe, they sparked discussions of why certain plants flourished in certain locations but not in others. These questions were of obvious practical importance. If a landowner or gardener knew what could successfully be grown in a given place, he could avoid wasting money experimenting with crops that were doomed to fail. By the 1780s and 1790s, a large practical literature dealt with the exigencies of farming, fruit tending, and gardening. Countless eighteenth-century pamphlets and handbooks wrestled with specific, practical questions about what kinds of plants would grow where.<sup>33</sup> More generalized reflections on this topic, however, appeared primarily in works with the explicit aim of forging a closer relationship between botany and *Oekonomie*.

## Botany and *Oekonomie*

In 1784, Berlin's Society of Nature-Researching Friends announced a prize competition, soliciting an answer to the following question:

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<sup>30</sup> Reichart's correspondence unfortunately does not survive, but he published letters from landowners in his handbook, and often presented his comments as being for the benefit of affluent garden owners. See Reichart (1758).

<sup>31</sup> Willdenow (1815).

<sup>32</sup> See, e.g., Schiebinger and Swan (2005), Drayton (2008), Delbourgo and Dew (2008).

<sup>33</sup> Friedrich Weber began compiling this literature into a bibliography early in the nineteenth century. Weber (1803–1842).

What kind of economic knowledge about plants taken from botany [*Gewächskunde*] as a whole is actually the kind of knowledge that will put us in a position to accurately identify the natural state, fertility and flaws of land in forests, fields, meadows and so on when we are assessing the worth of parcels of land?

A physician from Montpellier, Pierre Joseph Amoreux, submitted the winning answer, and the society published his essay in German translation in its 1785 proceedings.<sup>34</sup>

The society's prize question addressed an issue of obvious practical importance to contemporary agriculture. What could botany do to help landowners figure out the best uses for their land? How could it guide their decisions about what new plants to try out in their fields, forests, gardens, and meadows? In his winning essay, Amoreux discussed a number of ways in which botany was useful to *Oekonomie*. He boasted, for example, that the discovery of plant gender had allowed gardeners to figure out why certain trees had been infertile when a female plant was grown in isolation from the male of its species. The central argument of Amoreux's essay, however, dealt with plant geography, what Amoreux (in German translation) called the "*Erdkunde der Pflanzen*."

The most important contribution botany could make to *Oekonomie*, he argued, was to provide knowledge about the original conditions in which a plant had grown, and then to help *Oekonomen* understand the complex conditions that prevailed in the place that a plant was to be introduced. Amoreux emphasized that someone dealing with this conundrum needed to take multiple factors into consideration. They needed to consider not just the comparative temperatures of the two places in question but also features like elevation and soil type. Indeed, one needed to be very particular in one's observations. Every plot of land was subject to a variety of physical influences that needed to be kept in view.<sup>35</sup> He advised that one quick way to get a sense of what could be grown on a given plot of land was to observe the wild plants that grew nearby, and then continued:

This distinguishing feature is naturally a good one, but it needs to be based on observations that the country resident [*Landmann*] has occasion to make in every region and even in every area, every corner of the earth: in meadows, fields, in woods, and so on. For these different positions and situations all make up many different climates [*Klimate*].<sup>36</sup>

The *Klima* of a given piece of land determined which plants would grow there, and in this context *Klima* was a very specific term that referred to all the influences that might prevail in a precise location.<sup>37</sup>

The Society of Nature-Researching Friends' question, and Amoreux's answer, belonged to a wider European discussion about how natural history could aid the cause of agricultural improvement. In the German states, one can find a number of handbooks addressing this conjoined set of interests, works like Georg Suchow's

<sup>34</sup> Amoreux (1785). The text of the original prize question is reproduced in the table of contents of the 1785 *Schriften* of the society.

<sup>35</sup> Amoreux (1785, pp. 19–51).

<sup>36</sup> Amoreux (1785, p. 53, quoted on p. 54).

<sup>37</sup> For the broader history of this term, see the introduction to Fleming (2011) and Glacken (1967).

1777 *Ökonomische Botanik* or Heinrich Christoph Moser's 1796 *Deutschlands Oekonomische Flora*.<sup>38</sup> Eighteenth-century educated Germans usually spoke of botany and *Oekonomie* as distinct sciences with distinct practitioners, despite the fact that there were many people whose interests stretched across both fields. For example, Johann Beckmann, probably the most important academic figure in *Oekonomie* in the second half of the eighteenth century, had a correspondence network that included learned naturalists but also a large number of landowners.<sup>39</sup>

Beckmann, as a university professor of cameralism, had a strong institutional investment in asserting natural history and natural philosophy's relevance to practical economic life.<sup>40</sup> There were also other settings in which defending the utility of natural history took on particular strategic importance. Heinrich Christoph Moser, author of one of the textbooks mentioned above, was a professor at a forestry academy, while Georg Suchow was on the faculty of the cameralist academy in Kaiserslautern. In other words, both of these men worked at educational institutions where students received an education that joined together natural history, natural philosophy and the practical sciences.<sup>41</sup>

The practical sciences were typically seen as low-ranking subjects in learned contexts like the universities, but in German society as a whole, *Oekonomie* had considerable clout. Successful authors like Otto von Munchhausen and Friedrich von Rochow were noblemen with political connections and significant social and material resources, and they borrowed from their more learned contemporaries while still possessing great confidence in the powers of their own judgment.<sup>42</sup> For learned naturalists, attempting to explain plants' varying success in different locales provided a good way to generate interest in natural history among a socially and politically influential clientele.

Like Amoreux, other authors on economic botany thought that an understanding of geographic variation was one of the most important services that natural history could provide to agriculture. In 1791, Heinrich Christoph Moser published *Ueber Feld- und Gartenprodukte, mit Rücksicht auf das Klima in Deutschland* [On Field and Garden Products, with Attention to the Climate in Germany], and this book, as one might expect from the title, included an extended discussion of *Klima*, or climate. Moser started his discussion of climate by differentiating geographers' use of the term from its meaning in *Oekonomie*. "The geographer pays attention only to the length of the longest day, while the *Oekonom*," he wrote, "pays attention to plants."<sup>43</sup> In *Oekonomie*, the defining features of a given climate were the plants

<sup>38</sup> Suchow (1777) and Moser (1796).

<sup>39</sup> Much of his correspondence was reprinted in the *Beyträge* he published through the 1770s. See, e.g., Beckmann (1779).

<sup>40</sup> On the importance of the natural sciences to cameralism's public image, see Wakefield (2009).

<sup>41</sup> Lowood (1991).

<sup>42</sup> On Rochow, see Tosch (2010). In the sixth volume of his *Hausvater*, Münchhausen claimed that his decades of experience running his estate had prepared him to create an entirely new natural philosophy; he presented himself as a new Aristotle. Münchhausen (1773).

<sup>43</sup> Moser (1791, p. 148).



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