

Dear reader,

I decided to add one of my presentations as "Further Material", because I think that this text contains some useful thoughts on spaces in history and therefore suits to the general interest of our workshop. I presented the paper already on march 21, 2014 in Cologne at a conference on "Imperial Circulation of State Knowledge (*savoirs d'État*). Europe and the Non-European World in the 18th and 19th Centuries".

I am looking forward for your remarks!

Best regards

Alexander van Wickeren

***Savoir d'État* of tobacco cultivation in the Napoleonic Empire: Comparing circulations from the perspectives of administrations in Alsace and Baden**

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I. Introduction

In this talk I seek to analyse the effects of the spatial organization of the Napoleonic Empire on the circulation of agricultural tobacco knowledge. Thus, I take up the research, most recently of Marcus Popplow, on the “Economic Enlightenment” around 1800.ⁱ In this time agricultural knowledge came to be seen more and more as a resource for administrations and the ‘wealth’ of possession and territories – it became essentially a *savoir d'État*.ⁱⁱ Within this context tobacco cultivation was an important object. In my PhD project I seek to investigate the transformations of actors, knowledge systems and spaces of circulations of tobacco knowledge between 1800 and 1870 with a focus on the southern Rhine border area. The project is generally concerned with the changing role of knowledge sectors like tobacco species and seed, fertilizer or drying technology. Today, I want to limit my scope to the spatial implications of knowledge circulations that have been debated in the recent research.

Historians and geographers have generally argued that knowledge did not spread freely or universally, but followed and was dependent on specific spatial frames or geographies of knowledge circulation.ⁱⁱⁱ Such spatial patterns of transfers and movements were strongly shaped by influences of trade networks, religious or confessional belonging, social formations such as the republic of letters as well as imperial territories and internal borders. By focusing on these last socio-spatial conditions, I want to argue that the Napoleonic Empire provided new territorial frames and internal borders in which actors from different regions circulated knowledge of tobacco cultivation.

Stuart Woolf for instance strongly emphasized the integrative element of the Napoleonic Empire and suggested a rather unbounded space of connection among savants.^{iv} Yet, I think that one needs to ask more carefully for the role of the new borders and territories in the Empire. Such were not limited to imagined national territories of ‘France’ or ‘Germany’, although such notions increased among German travelers after the dissolution of the Holy Roman Empire in 1806 as Bernhard Struck has convincingly shown.^v I wish to show that circulations of knowledge in the Napoleonic Empire were structured also by different non-national state territories that shaped the practices of actors in the Empire and provided alternatives to national notions of space. Secondly, for my understanding of geographies of knowledge circulations in the Napoleonic Empire it is crucial that these circulation patterns were not created from the imperial center. It was not just scientists or administrators from

Paris that exchanged knowledge with the imperial occupations. Pierre-Yves Lacour has shown in this respect how botanists like André Thouin were investigating the agriculture of the Rhineland in the 1790s.^{vi} Marie-Noëlle Bourguet has similarly analyzed the role of the new departmental statistics that helped Napoleon's Parisian administration to collect information about its new departments.^{vii} Though I am indebted by these works, it's my wish to take up Natalie Zemon Davis call to decenter my view on the connections within the Napoleonic Empire.^{viii} I am interested in the dynamics and practices of administrative actors from peripheral parts that had agency, despite being affected by the central administration's decisions. Therefore I apply a comparative view to investigate how actors from the administrations in the bordering Rhine regions made use of the new territorial spaces of the French Empire to establish circulations of knowledge. My investigations will start in the department Bas-Rhin, the northern part of the former province Alsace, and in the neighboring Grand-Duchy of Baden, which was created in 1803 as one of the biggest states of the Confederation of the Rhine.

In the following I aim to show that the geographies of circulations were different and were also perceived differently by the administration officials from these two regions. The first part of the presentation deals with relations established by the prefect of the department of Bas-Rhin. He undertook these inducements alongside tobacco experts from the new French departments in the Rhineland, and further experts of other parts of the Empire who were known for their interest in the Rhenish tobacco culture. The second part shifts the focus onto administration officials in the Grand-Duchy of Baden. Here I will argue that the administration was mainly interested in the tobacco expertise of the areas of the former Electoral Palatinate that had become part of the Grand-Duchy in the wake of the Napoleonic Imperial policy. The examples show, as I want to state, that the Napoleonic Empire produced different geographies of *savoir d'État* that were strongly, but, seen from the perspectives of different actors in the Empire, also differently shaped by the new territorial connections and borders of the Empire itself.

II. Bas-Rhin and the Rhineland

The creation of the state tobacco monopoly in the French departments in 1810/11 stimulated the establishment of knowledge circulations between the departments that produced tobacco for the monopoly. With the introduction of the monopoly the whole process of cultivation, manufacturing, trade and sale was officially controlled by the central administration. Furthermore, for French departments this meant that they had to produce high quality tobacco which satisfied the central state

officials who were sent in the departments. Such pressure from Paris initiated regional dynamics from departmental administrations to connect with different places located in the Napoleonic Empire. The administration of Bas-Rhin now linked itself systematically with expertise and experts of the Rhineland that were seen as necessary for the uplifting of the tobacco quality in Alsace. Though connections with the Rhineland departments flourished, we can simultaneously observe a semantic of concurrence in the writings of the administration.

In September 1811 André de Lezay-Marnesia, prefect of the Bas-Rhin department since 1810, published a 30 page brochure that depicted ‘his’ department as involved in competition with other tobacco cultivating departments within the “Empire”: “[N]one of the departments of the Empire”, as the prefect claimed, would have had better “soil” than “Alsace” for growing tobacco^{.ix} By calling the department “Alsace” and not “Bas-Rhin”, as the official usage would suggest, we can see a certain attachment to the former province. Marie-Noëlle Bourguet has shown that this was a common characteristic of Napoleon’s prefects, although the central French government wished their officials to be neutral and detached from regional interests.^x However, the “Empire” that Lezay-Marnesia referred to stopped at the Rhine and did not include those areas that were generally determined by the imperial policy of Napoleon. It was this notion of an “Empire” that was strongly shaped by the system of the tobacco monopoly that established concurrence between the departments and forced them at the same time to recognize each other. Though, the prefect saw these departments not just as competitors, but as places Alsace could learn from: according to the prefect, “Holland” and the “former Belgium” as well as towns like Amersfort, Warwick, Lille and Kleve produced the best “French tobacco”, because they would apply better cultivation processes than the tobacco farmers of his own department.^{xi} For the prefect of Bas-Rhin the incorporation of the Rhineland opened up not just a new space of economic concurrence, but a space for possible knowledge exchange.

The prefect’s strong interest in the tobacco cultures of the Rhineland even becomes evident when we focus on his communication with institutions in the capital Paris. Shortly after the introduction of the monopoly Lezay-Marnesia directed several demands for new tobacco seeds to the central tobacco administration in Paris. There is evidence that in the end of 1811 the Parisian monopoly administration sent several kinds of tobacco seeds from Maryland to Strasbourg. This proves that there were global strands of circulation that linked Alsace via Paris with North American tobacco cultures.^{xii} However, the interest in tobacco seeds from the new French departments in the Rhineland shaped Lezay-Marnesia’s communication with Paris more significantly. Nevertheless, the Parisian institutions

had problems to supply the prefect: in March 1812 the central administration excused that the species from Holland and Flanders the prefect had asked for a month earlier, were currently not available.^{xiii}

Such incapacities of the Parisian tobacco administration finally motivated the prefect to connect his department directly with the tobacco areas in the Rhineland; the borderland Alsace started to establish relations with other borderlands of Imperial France. Hence, the period between 1811 and 1812 saw several letters addressed to French administrators in the occupied regions in Kleve, Cologne (representing the arrondissement Nijmegen), Brugges and Amsterdam (representing cities such as Amersfort).^{xiv} All these places had formally become French departments in the 1790s, integrated into the Napoleonic tobacco monopoly in 1810/11 and were now supervised by French tobacco officials. In Kleve, a city in the northern part of the Roer department, officials had established an agricultural research station that was particularly concerned with the improvement of tobacco cultivation and produced its tobacco knowledge in cooperation with local farmers.^{xv} One of the outcomes of this research was a “Manuel du Cultivateur de Tabac, à l'usage des arrondissements de Clèves et de Cologne, Département de la Roer” published in 1812. This book essentially was the product of cooperation with Rhenish tobacco farmers as the latter even claimed in the book: “We, the important farmers [Haupt-Tabakpflanzer] of the district [Bezirk] of Kleve, have verified the annual book [the ‘Manual’] and we demand that it will be printed and distributed to all those farmers of the district that dedicate their selves to the cultivation of tobacco.”^{xvi} Such comments highlight the inter-active nature of knowledge production in the Rhineland and the important role as verifiers that local farmers played for the French tobacco administrators.

Nonetheless, the transfer of such ‘hybrid’ tobacco knowledge to the department Bas-Rhin was based on hierarchies that mostly excluded local farmers and agronomists from the Rhineland. Lezay-Marnesia, the prefect of Bas-Rhin, directed his correspondence nearly exclusively to French administrators like Gruet, the “controleur principale de clèves”, who sent the manual and some packets of seeds to Strasbourg.^{xvii} French officials like Gruet generally occupied higher administration positions in the Rhineland and it was due to this hierarchy that Lezay-Marnesia did not come much into contact with locals.^{xviii} Yet, the circulation of seeds and knowledge between Alsace and the Rhineland was based not only on structures of hierarchy, but also on cooperation with Rhenish farmers, especially during the process of knowledge production.

While tobacco knowledge and tobacco seeds were transferred from the new Rhineland departments to Strasbourg, we can also find experts of tobacco cultivation that were circulating through

the Rhineland departments of the Empire and cooperated with the Alsatian administration. In June 1812 Johann Nepomuk Schwerz from Koblenz - who became one of the most famous agricultural scientists of the beginning of the 19th century - signed a ‚contract of labor‘ that brought him into his new position as “Inspecteur de la culture du tabac” in the Department Bas-Rhin.^{xix} This contract described two regular tasks that Schwerz was supposed to perform: At first, the administration wanted him to circulate through the department to guide and advise the process of tobacco cultivation as well as the storage of tobacco in the state magazines. Secondly, he was called to concentrate his attention especially on the botanical gardens that the prefect had established for the research of tobacco.

It was not by coincidence that exactly Schwerz became “Inspecteur de la culture du tabac” in Bas-Rhin, but a result of his studies on the tobacco cultivation in the Napoleonic Rhineland. Additionally, a friendship with the prefect Lezay-Marnesia helped to bring him into this position. Both had met during Lezay-Marnesia’s prefecture in the department Rhin-et-Moselle in 1809 where Schwerz was employed as director for an arboretum [Baumschule] in Koblenz.^{xx} Though such biographical connections have been crucial for the nomination of Schwerz, his strong interest in the tobacco cultivation in the Rhineland was more important: already before the tobacco monopoly was established in the Empire Schwerz had investigated Dutch and Belgian agriculture with a special focus on the local tobacco cultivation processes during his travels in 1802, as well as 1809 and 1810. The outcome of these travels were his three volume strong “Anleitungen zur Kenntniss der belgischen Landwirthschaft” published in 1806, 1808 and 1811 that encompass several parts on tobacco cultivation.^{xxi}

The example of Johann Nepomuk Schwerz, expert for the agricultural knowledge of tobacco in the Rhineland, proves well that tobacco experts circulated from one department to the other. When we see this case in perspective with the exchange of tobacco seeds and the transfer of guides and manual books on tobacco cultivation between the Rhineland and Strasbourg, we can see an emerging space of circulating tobacco knowledge that did not cross the Rhine and remained in the ‘Inner-French’ Empire. However, while there was on the one hand a circulation space that connected Bas-Rhin to the Rhineland, we can find other geographies in the Empire when we lay focus on other administrations.

III. Baden and the Palatinate

The introduction of the tobacco monopoly in 1810/11 did not just provide stimulating effects for the circulation of knowledge between the Rhineland and Alsace, the monopoly also influenced the other side of the Rhine. The Grand-Duchy of Baden was, contrary to states as the Grand-Duchy of Berg,

sovereign enough to be spared from being incorporated into the French monopoly system. However, also in Baden the introduction of the monopoly stimulated knowledge circulations. Administration officials from Baden did not establish networks with the Rhineland, neither did they very deeply with their neighbouring Bas-Rhin department, but they connected the territory of the Grand-Duchy with the tobacco areas of the Palatinate region, which had become part of the Duchy of Baden in 1803. While the circulations of agricultural knowledge were limited to this new state space, tobacco experts in Baden created notions of an exclusively ‘Badian’ circulation that were, in comparison, absent in the discussions of administrators in the French departments.

Furthermore, the introduction of the tobacco monopoly in Baden did not raise discussions about the general improvement of tobacco quality as in the administration of the Bas-Rhin department. We can rather observe a certain climate of fear concerning future shortages of raw tobacco: In January 1811 the *Landes Öconomie Departement*, the domain for agriculture in the ministry of interior, wrote to the financial ministry that a “oral message that a tobacco monopoly had been introduced in France and that all export of tobacco has been prohibited” had brought the administration to the idea to provide for the risk that the “lands of Baden” would not suffer “lack” of tobacco.^{xxii} State officials urgently wanted to prevent scenarios of tobacco “lack” by applying new expertise of tobacco cultivation that would help to increase the production in Baden and make the territory more independent from imports.

Beside the interest in trade with raw tobacco, the neighbouring department of Bas-Rhin surely did not present an overwhelmingly interesting tobacco space for the administration of Baden. In February 1811 officials from the Ministry of Interior noticed that in the “lower Rhine province“ (meaning the former prince Alsace) one could find a printed manual for the „wise introduction in tobacco cultivation“ and the officials of the ministry wondered if one could still find some of these books in the localities next to the border.^{xxiii} However, these attempts remained the only sign of connections and there is no further evidence that circulations of tobacco knowledge in the border area were deepened in the Napoleonic times.

On the contrary, we have much evidence that a wide range of Palatinate tobacco experts reaching from botanical agronomists to ‘simple farmers’ were more interesting for the administration of the Grand-Duchy. The Palatinate tobacco region had just become part of the Duchy of Baden in 1803 and in 1806 part of the Grand-Duchy. Simultaneously with the incorporation into the new state former tobacco inspectors of the Electoral Palatinate had introduced and informed their new regent Karl Friedrich in 1803 about the expertise and economic significance of the Palatinate’s tobacco areas.^{xxiv}

However, stronger ties between Palatinate tobacco experts and the administration in Baden were just established after the introduction of the French tobacco monopoly 1810/11, when the officials started to regard tobacco expertise as a significant way to improve their administered territory. Let us at first focus on the correspondence between the ministry of interior and the tobacco expert and priest Joseph Anton Helfrich (or Helferich) from Palatinate Heidelberg in 1812. As Frank Konnersmann has shown, priests as Helferich were very actively participating in the production of knowledge on botany and the different enquiries into agricultural knowledge from the middle of the 18th century onwards.^{xxv} Moreover, the agronomist Helferich was entangled with agricultural research institutions of the former Electoral Palatinate. For example: the botanical garden in Schwetzingen, where he entertained contacts with the botanist Kastner. Helferich's interest was, similar to those of the administration in Bas-Rhin, centred on such species and their properties, but he also emphasized for instance the role of fertilizers for the cultivation process of tobacco.^{xxvi} After 1812 Helferich's research was financially supported by Baden's ministry of interior.

The Grand-Duchies' administration did not just develop connections to savants or agronomists from the Palatinate like Helferrich, but was also interested in letting 'normal farmers' with experience in tobacco cultivation circulate through Baden's new territories along the Rhine. In March 1811 the Konstanz based Seekreisdirektorium requested from the *Landes Ökonomie Departement* a "man that was experienced in growing tobacco".^{xxvii} One month later the latter institution presented a local tobacco farmer named Joseph Bruckner from Schwetzingen near Heidelberg, who was, by official order, considered to spread new knowledge and help to establish a tobacco production in the area around the Bodensee. The ministry of interior in Karlsruhe ordered the local administrations to be obedient to Bruckner's expertise and follow him like they were supposed to follow the law. The special authority as a 'state official' who was assigned to the tobacco expert Bruckner becomes visible if we consider the fact that local municipalities were ordered to provide fields of community property for Bruckner's in the Seekreis. Both connections to Bruckner and Helferich clearly indicate the administration's new strategy to connect the Grand-Duchy's territories with tobacco cultivation experts from the Palatinate, especially the area around Heidelberg, and the openness of the administration towards different social types of experts ranging from the rather 'savant' agronomist Helferich to the 'farmer's' expertise of Bruckner.

In contrast to the French departments, in which a feeling for economic concurrence in the system of the state monopoly did not visibly limit the mutual exchanges of knowledge, administrations

officials were motivated by a certain feeling of economic patriotism for the tobacco economy. They thus showed less interest to share the knowledge from the Palatinate. We can find evidence for such notions in the perceptions of the Seekeisdirektor and Hofrat Hofer who commented on a book of Anton Burkart, the major of the city of Konstanz, who transcribed Bruckners practical expertise into a book on tobacco cultivation after the farmer from Schwetzingen has crossed his city. In September 1811 Hofer took the publication of the book as an occasion to write to the central government in Karlsruhe, calling for public honoring of Burckart and, at the same time emphasizing that Burckart should be honored not by mentioning the tobacco brochure and its “goals”. Hofer feared, as he explicitly said, that “our neighbors the Swiss [...] would initiate very quickly similar writings to support their local tobacco culture.”^{xxviii} Such patriotic aims might have been unrealistic to push through in reality. However, they prove that the circulation of knowledge was supposed to serve the benefits of the Grand-Duchy of Baden, while economical competitors in the neighboring territories of Switzerland were not considered to be part of the geography of knowledge that Baden’s state officials imagined.

IV. Conclusion

My aim today was to show how the new spatial organisation of the Napoleonic Empire set important conditions for the geographies of the circulation of knowledge of tobacco cultivation. I have investigated this circulations from the perspectives of administrations in Baden and Alsace that both started to establish connections with experts of tobacco cultivation exterior to the administration when they began to perceive the effects of the state tobacco monopoly in 1810/11. Though the interpretations of the state officials were different both initiated circulations just after the new pressure of the monopoly.

Now, different geographies of knowledge circulation developed: seen from the perspective of state officials in Bas-Rhin, knowledge of tobacco cultivation was transferred from the departments of the Rhineland or came from tobacco experts like Johann Nepomuk Schwerz, who were specialised on the cultivation of the Rhineland. The Alsatian circulations remained on the left side of the Rhine, because the prefect's notion of “Empire” was limited to the French departments in the Rhineland. Here, tobacco knowledge was produced in cooperation with local farmers, and intra-imperially circulated exclusively by French administrators. On the contrary, administration officials in Baden did not rely on the circulations in the ‘Inner-French’ Empire. However, they frequently tried to connect the Grand-Duchies' territory with experts from the northern possessions of the former Electoral Palatinate. The

Grand-Duchy of Baden therefore formed an own geography of circulation encapsulated in the wider Napoleonic Empire, but without connections to the Rhineland and just minor attempts to connect with the neighbouring Alsace.

Contrary to the research on circulations of experts and knowledge in the Napoleonic Empire that rather ignored the meaning of territorial spaces, such results suggest that we have different and independent geographies of circulation of *savoir d'État* that were shaped by the territorial integration of areas of tobacco cultivation into the Napoleonic Empire. Nonetheless, we can see that the geographies of knowledge circulations were not just established through the practices of Parisian actors, but from various 'peripheral' administrations that initiated own dynamics for circulations, though they were never detached from the general policy of the Imperial center. However, the notion of a space of 'Germany' that was often emphasized after 1806 does not appear in the administration's practices or perceptions. On the contrary, the notion of the Rhineland as a 'French' territorial space indeed shaped the view of the prefect of Bas-Rhin. However, for the administration on the other side of the Rhine the borders of the Grand-Duchy of Baden and the territorial patriotism had a strong importance. The states' territorial reorganisation and the new imperial borders, I want to conclude, did provide an important influence on the geographies of knowledge circulation of tobacco cultivation in the Napoleonic Empire.

- ⁱ Marcus Popplow (ed.), *Landschaften agrarisch-ökonomischen Wissens. Strategien innovativer Ressourcennutzung in Zeitschriften und Sozietäten des 18. Jahrhunderts*, Münster [inter alia] 2010.
- ⁱⁱ Regina Dauser / Lothar Schilling: Einleitung: Raumbezüge staatsrelevanten Wissens, in: *discussions: Grenzen und Kontaktzonen – Rekonfigurationen von Wissensräumen zwischen Frankreich und den deutschen Ländern 1700 – 1850*, 7 (2012), http://www.perspectivia.net/content/publikationen/discussions/7-2012/dauser-schilling_einleitung (11.03.2014).
- ⁱⁱⁱ David N. Livingstone, *Putting Science in its Place: Geographies of Scientific Knowledge*, Chicago [u.a.] 2003; Kapil Raj, *Beyond Postcolonialism ... and Postpositivism: Circulation and the Global History of Science*, in: *Isis*, 104 (2013), pp. 337-347.
- ^{iv} Stuart Woolf, *Napoleon's Integration of Europe*, London / New York 1991, chapter 1.
- ^v Bernhard Struck / Claire Gantet, *Revolution, Krieg und Verflechtung 1789-1815*, Darmstadt 2008, pp. 19-28.
- ^{vi} Pierre-Yves Lacour, *Les Commissions pour la recherche des objets d'art et de sciences en Belgique, Allemagne, Hollande et Italie. 1794-1797: des voyages naturalistes?*, in: Nicolas Bourguinat / Sylvain Venayre (ed.) *Voyager en Europe de Humboldt à Stendhal. Contraintes nationales et tentations cosmopolites 1790-1840*, Paris 2007, pp. 21-39.
- ^{vii} Marie-Noëlle Bourguet, *Déchiffrer la France: La statistique départementale à l'époque napoléonienne*, Paris 1989.
- ^{viii} Natalie Zemon Davis, *Decentering History: Local Stories and Cultural Crossings in a Global World*, in: *History and Theory*, 50 (2011), pp. 188-202.
- ^{ix} Archives Départementales du Bas-Rhin (ADBR), 15M402, brochure of the prefect André de Lezay-Marnesia, dated on the 12. Septembr 1811, p. 3.
- ^x Bourguet, *Déchiffrer la France*.
- ^{xi} (see end note IX), pp. 3-5.
- ^{xii} ADBR, 11M196, *Le compte de l'Empire, Conseiller d'État grand Officier de la legion d'honneur, Directeur général de l'administration des Droits Réunis, des Tabacs, et des Octroi de bienfaisance à Monsieur de le Baron Lezay-Marnesia Préfet du Département du Bas-Rhin*, Paris, 9 march 1812, (without page numbers).
- ^{xiii} *Ibid.*
- ^{xiv} There are several letters from this cities addressed to the prefect of Bas-Rhin concerning tobacco in the box 11M196 of the ADBR.
- ^{xv} Augus Boerner, *Kölner Tabakhandel und Tabakgewerbe. 1628-1910*, Essen 1912, p. 159.
- ^{xvi} (Anonym), *Manuel du Cultivateur de Tabac, à l'usage des arrondissements de Clèves et de Cologne, Departement de la Roer, Aachen 1812*, pp. 23-24.
- ^{xvii} ADBR, 11M194, *Gruet to the prefect of Bas-Rhin*, 7 mai 1812, (without page numbers)
- ^{xviii} One exception is a letter from Lippies, a lower administrator from Cologne. ADBR, 11M196, *Lippies to the prefect of Bas-Rhin*, 10 march 1812, (without page numbers).
- ^{xix} *Stadtarchiv Koblenz, N5, Préfecture du Bas-Rhin, Extrait du Registre des Arrêtés du Préfet du Département du Bas-Rhin, Commandant de la Légion d'honneur, Strasbourg, 16 juin 1812.*
- ^{xx} Günther Franz, *Johann Nepomuk Hubert Schwerz. Gedächtnisrede anlässlich der 200. Wiederkehr seines Geburtstages bei der Jahresfeier der Landwirtschaftlichen Hochschule am 20. November 1959*, Stuttgart 1960, p. 10.
- ^{xxi} Johann Nepomuk Schwerz, *Anleitung zur Kenntniss der belgischen Landwirtschaft*, 3 volumes, Halle 1807-1811.
- ^{xxii} *Generallandesarchiv Karlsruhe (GLA), 236, 16731, Ministerium des Innern, Landes Oeconomie Departement, Karlsruhe, 19 january 1811, (without page numbers).*
- ^{xxiii} *GLA, 236, 2071, Direktorium des Seekreises die Emporbringung des Tabak= und Hopfenbaues im Seekreis betreffend, Konstanz, 23 february 1811, (without page numbers).* I refer to the comment that the ministry of interior left on the document that was written by officials from Konstanz.
- ^{xxiv} Ferdinand Schröder, *Zur Geschichte der Tabakswesens in der Kurpfalz*, Berlin 1909, pp. 94-97.
- ^{xxv} Frank Konnersmann, „Ueber die Nuzbarkeit des Predigeramtes“. *Pfarrer als Agrarschriftsteller und Landwirte in der Pfalz (1770-1852)*, in: *Aufklärung*, 16 (2004), pp. 5-33.
- ^{xxvi} (?) Helfferich, *Bericht über den Anbau einiger edlern Tabaksarten in der Gegend in Heidelberg. Veranlaßt durch das Bad. Magazin Nro. 85. vom 9. Juny 1811*, in: *Badisches Magazin*, 2 (1812), pp. 29-31, 35-36, 38-40, 42-43, 46-47, 49-50.
- ^{xxvii} *GLA, 236, 6072, Ministerium des Innern, Landes Oeconomie Departement, Karlsruhe, 2 march 1811, (without page numbers); GLA, 236, 6072, Ministerium des Innern. Landes Oeconomie Departement, Karlsruhe, 16 march 1811, (without page numbers).*
- ^{xxviii} *GLA, 236, 6072, Statement from Hofer, Karlsruhe, 8. september 1811, (without page numbers).*