Soufflenheim agricultural products according to the 1837 agricultural statistics

At the beginning of the 19th century, administrators for the Alsatian Departments of Bas-Rhin and Haut-Rhin sought to create a comprehensive picture of agricultural production in their territories. Their effort resulted in a set of statistics that reflect agricultural land use for the year 1836. An investigation using that data might help us better understand the agricultural situation in Soufflenheim at the time our ancestors were making their choice to emigrate. The historian Jean-Michel Boehler observed that, at the time these data were collected, "the Alsatian countryside was approaching its demographic maximum but had not yet transitioned to mechanized agriculture."

The agricultural data was collected and organized into two tables commune by commune. The first table identified various agricultural crops and reported the land area used, as well as their yields, and their money value. The second table reported the livestock found in the commune. Those data are reproduced below in Tables 1 and 2. The following are preliminary comments that focus on the use of cultivated land.

Soufflenheim reported 1,200 hectares of land, one-third of which (400 hectares) was cultivated (that is, plowed) land. The statistical report, which was dated January 1837, additionally identified 350 hectares of land devoted to meadows (hay fields) and another 50 hectares devoted to gardens. The remaining one-third of the land was forested woodland. The following table lists the crops reported for the cultivated land in Soufflenheim.

	Hectares	Percent
Wheat	70	17.5
Rye	30	7.5
Barley	110	27.5
Oats	30	7.5
Potatoes	150	37.5
Hemp	10	2.5
Total	400	100.0

According to this report, there were many crops that were not produced in Soufflenheim. For example, no vineyards were reported. That absence is understandable since Soufflenheim is not in the climatic region favorable to growing grapevines. However, there were other crops that one could reasonably expect to have been planted in Soufflenheim's fields, including broad beans, beets, peas, lentils, and fodder roots. Why these crops are missing is, at this time, an open question.

Among the crops that were reported, wheat was sown on 17.5 percent of the cultivated land. Wheat was harvested for human consumption and was used almost exclusively for bread or other flour-based food. Rye too was used for human consumption. Wheat and rye flour were often mixed to make "brown bread." Thus, taken together, wheat and rye were sown on 25 percent of the cultivated land.

Interestingly, Soufflenheim farmers devoted more land to barley than they devoted to wheat and rye (110 hectares v. 100 hectares). When we compute the value of output per hectare of land for barley, wheat, and rye, we find that barley was the least valuable of these three grains. (Using the yields given by the Soufflenheim agent, the value per hectare was 105 francs for barley; 120 francs for rye; 175 francs for wheat.) Why Soufflenheim farmers used a significate amount of land to grow barley instead of the more valuable wheat is a question worth researching.

Historians have found that, along with oats, barley was an important livestock feed in the early 19th century. Indeed, barley is seen as an important component in the agricultural revolution that affected

Alsace in the second half of the 18th century and in the 19th century. The data in the tables below will help us explore the Alsatian agricultural revolution in future articles.

However, as Jean-Michel Boehler tells us, barley was not used "exclusively for livestock feed." The grain was also used for human consumption. Like rye, barley was mixed with wheat flour to make "brown bread." Barley was also used as the base for making porridge. Professor Boehler suggests that the importance of barley "stems from its multiple uses."

Another interesting fact arising from this data is that the Soufflenheim table reports no root vegetables (turnips, carrots, beets). Historians have associated the agricultural revolution in Alsace with the systematic practice of stabling livestock. The transition to stabling required, among other things, a transition from animals foraging on public (communal) land to animals fed with the products of plowed (private) land.

Table 2 below identifies the array of livestock reported for Soufflenheim and it calls for an exploration of how Soufflenheim farmers fed these animals. The local official at Soufflenheim who compiled this data points us to the following: "The fodder roots cultivated after the wheat harvest and the second-cut hay mixed with barley straw are sufficient for the maintenance of horned cattle, and in summer, the yield from artificial meadows." Future research can explore this hint.

Yet another interesting feature found in the statistical data is the allocation of land use for growing potatoes. More than one-third of the cultivated land was used for potatoes. Like barley, the potato may have been used for both human consumption and animal feed. Alsatian historians have noted that in the 18th century potatoes "regularly enter, along with white turnips, chopped straw and hay, into forage mixtures." There is some evidence that potatoes were also used as a substitute for bread during periods of grain shortages. Their use during normal periods is less well understood for the 18th century, but potatoes seem to have found their way into the domestic kitchen by the 19th century.

A final preliminary observation concerning the agricultural data of 1836 is that ten hectares of land—2.5 percent of the cultivated land—was devoted to hemp. This was a fiber used for making woven cloth. It is considered an industrial crop along with hops, seed oil, tobacco, and flax. Some Alsatian villages responded to the agricultural revolution by increasing their production of industrial crops with the intension of selling rather than consuming the products. Oberroedern and Stundwiller, for example, grew oilseeds (like rapeseed and poppies) for the external market (Source: René Clauss, Raymond Schwengler, and Joseph Walter, *Oberrœdern Stundwiller : Deux Villages, Une Paroisse*. Strasbourg: Editions Coprur, 1993. Pages 167-174). While farmers in Schirrhein planned hops and oilseeds for sale in the external market. (Source: Caisse de crédit mutuel, *Schirrhein-Schirrhoffen : à la lisière de la forêt*. Strasbourg: Editions Coprur, 1995. Pp 64-92).

Thus, another question concerning Soufflenheim is how farmers used the hemp they grew. Was the hemp processed and consumed locally or was it intended for sale in the external market? If the latter, was the hemp sold as a raw material in the external market or was it processed locally, woven locally, and then the cloth sold in the external market?

While evaluating the data in Table 1 and Table 2 it is important to be aware of some problems. Jean-Michel Boehler wrote that "calculation errors and approximate estimates, for which local authorities bear responsibility, sometimes led the prefecture's services to correct figures that seem suspicious or implausible, by referring to data from previous years." The data from Soufflenheim includes this problem and thus Table 1 and Table 2 report both the values that the local authorities in Soufflenheim submitted, and the adjustments made by the prefecture.

Soufflenheim, 4 January 1837
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TABLE 1
Table of the municipality's crops, their area, and their yields

[Regarding total production: the first number is the quantity reported by the Commune. The second number is the quantity assigned by the Prefecture's official.]

Nature of crops and pastures	Extent of each crop in hectares[1]	Total production	Units of measure	Average price per unit in Francs and Centimes[2]
Wheat	70	875 / 1,050	hectoliters[3]	14.00
Maslin[4]	-			
Rye	30	390 / 375	hectoliters	9.25
Barley	110	1,650 / 1,925	hectoliters	7.00
Spelt	-			
Oats	30	480 / 825	hectoliters	6.50
Broad beans / Fava beans	-			
Buckwheat	-			
Maize / Corn	-			
Potatoes	150	21,000 / 18,750	hectoliters	2.00
Dry vegetables (beans, peas, lentils)	-			
Beets / Sugar beets	-			
Fodder roots (carrots and turnips)[5]		0 / 31,500	hectoliters	
Vineyards	-			
Plum brandy / Plum spirit	-			
Artificial (sown) meadows	50	21,000 / 150,000	kilograms[6]	3.60
Natural meadows	300	147,000 / 450,000	kilograms	4.80
Private woodlands/forests	-			
State and communal woodlands/forests	400	4,500 / 4,500	steres[7]	5.50
products made from firewood from the municipal forest [8]		20,000 / 20,000	steres	10.00
Fallow lands	-			
Pastures	-			
Gardens & built properties [9]	50			
Hop gardens / Hop fields	-			
Rapeseed, turnip rape, poppy (for oil)	-			
Tobacco	-			
Madder (dye plant)	-			
Flax / Linen	-			
Hemp	10	6,250 / 6,250	kilograms	50.00

[1] 1 hectare = 2.47 acres.

[2] A note says: “evaluated on the average price of the last 5 years” (“évalué sur le prix moyen des 5 dernières années).

[3] 1 hectoliter = 2.8 bushels.

[4] Mixed grains, planted together in the field; for example, wheat and rye sown and harvested together.

[5] The Soufflenheim agent reported no number of hectares and no quantity of output. A note was added by the local authority: “The fodder roots cultivated after the wheat harvest and the second-cut hay mixed with barley straw are sufficient for the maintenance of horned cattle, and in summer, the yield from artificial meadows” (“Les racines fourragères cultivées après la récolte des blés et le regain mêlé avec la paille d'orge suffisent pour l'entretien des bêtes à cornes et un été le produit des prairies artificielles”).

The Prefecture’s agent changed the quantity from zero to 31,500 hectoliters but left the number of hectares empty.

[6] 1 kilogram = 2.2 pounds.

[7] Cubic meters, typically used for timber and firewood

[8] This entry is a bit difficult to understand. My thought is that the local agent reported 400 hectors of public forest land. That land produced 4,500 steres of wood (perhaps firewood) and 20,000 steres of products made from “bundles of wood.” “Fallow lands” was crossed out and the following was handwritten: “produits des fagots de la forêt communale.”

[9] “And built properties” (& propriétés bâties) was added by hand to the description. A note for this line says: “gardens offer no real benefit” (“les jardins ne sont d'aucun avantage réel”) and no money price was reported.

TABLE 2
Quantities and values of cattle, flocks, horses, and other useful animals existing in the Commune

	Number	Price	Number consumed
Bulls	4	65 / 120	
Oxen / Steers			
Cows	400	35 / 100	77
Calves	218	15 / 12	60
Total cattle	622		137
Rams			
Sheep			
Ewes			
Lambs			
Total flocks			
Pigs / Swine	209	8 / 40	268
Goats			
Horses (stallions/geldings)	93	53 / 150	
Mares	47	60 / 120	
Foals / Colts	11	40 / 50	
Female and male mules			
Donkeys / Asses			

Regarding price: the first number is the unit price reported by the Commune. The second number is the price assigned by the Prefecture's official.

The local official wrote under the heading observation: "The expenses for food and maintenance, both for draft animals used for plowing and for those intended for consumption, far exceed the values returned to a farmer when selling them." ("Les dépenses de nourriture et d'entretien tant pour les animaux servant à la labour que pour ceux destinés à la consommation surmontent [surpassent] de beaucoup les valeurs revenant à un cultivateur en les vendant.")

The 1836 Census reported 2,962 residents in Soufflenheim. The agricultural report used the same number for the populations. More interesting is that the Census reported 562 households in Soufflenheim. Comparing that number with the number of farm animals reported in the same year, there were many families that did not own a milk cow, a pig, or a horse.