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Final Report

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General information

Introduction and objectives

This final report[1] informs on the activities and results of grant project 2022-AT-Agri (grant agreement No. 101128830) carried out as part of the European Commission's process to modernise the economic accounts for agriculture (EAA). With the aim to contribute to improving the analytical capacity of EAA/agricultural accounts and their relevance to stakeholders and decision makers in the agricultural sector, the project focused on the two approaches ranked with the highest potential to expand the agricultural accounts by the Eurostat discussion group on expanding the EAA as of January 2023 (Eurostat 2023a): creating an "extended input output table with agricultural products" and "further developing the EAA by including secondary non-agricultural activities of the agricultural industry".

Dealing with intermediate steps for both approaches, the project comprised two work packages:

- Work package 1 (WP1): Secondary non-agricultural activities
  Inventory of data availability on secondary non-agricultural activities of the agricultural industry
- Work package 2 (WP2): Exploratory study on extended input output tables (IOTs)
  Product flow focus: Monetary supply/use calculations for selected agricultural products
  Production flow focus: Determination of intermediate consumption for selected agricultural products

The project started on 1 August 2023 and ran for 24 months. All work was carried out as planned in the grant application.

Description of activities and deliverables

The first aim was to provide an overview of the current available data on secondary non-agricultural activities of the agricultural industry, to clarify questions of delimitation to National accounts (NA) and to provide input for the current discussions at the European level on the elaboration of the EAA with regard to secondary non-agricultural activities. Consequently, **work package 1** included the following tasks and activities:

[1] As defined as deliverable two for work package one and two in our grant proposal and as stated in the call for proposals (Grant Agreement No: 101128830 – 2022-AT-Agri). Not to be confused with the final technical and financial report as part of periodic reporting.

- Work started with a review of former studies and reports on how to incorporate secondary non-agricultural activities of farmers in the agricultural accounts (**task 1.1 Literature review**) and the clarification of conceptual, definitional and delimitation issues (**task 1.2 Conceptual and definitional issues).**
- Task 1.1 and 1.2 formed the foundation for **task 1.3 Data review, collection and processing.** The activities of this task comprised the review and analysis of existing data and metadata in Austria related to secondary non-agricultural activities of farmers. Exchange of views with NA colleagues and external experts from the LBG Wirtschaftstreuhand and the Federal Ministry of Agriculture, Forestry, Climate and Environmental Protection, Regions and Water Management (BMLUK) took place. The collected data was processed and the compiled data set analysed.
- Based on the outcomes of tasks 1.1 to 1.3, conclusions and recommendations were derived (**task 1.4 Conclusions and recommendations**). These comprise
  - proposals on how given data gaps can be closed,
  - a review of the current classification of inseparable secondary non-agricultural activities of the agricultural industry,
  - considerations on the possible inclusion of separable (secondary) non-agricultural activities of farmers into agricultural accounts.
- Finally, possible implications for the current national EAA data on inseparable secondary non-agricultural activities of the agricultural industry were examined (**task 1.5 Implications for national EAA data**).

The target indicators of tasks 1.1 to 1.5 comprised:

- a comprehensive overview of the contemporary data availability for secondary non-agricultural activities of farmers and a first compilation of available data for a selected reporting year (milestone 1),
- the identification of data gaps and challenges to be faced in obtaining suitable data as well as proposals on how these could be closed (milestone 2),
- considerations regarding a more differentiated classification of inseparable secondary non-agricultural activities of the agricultural industry (milestone 3),
- considerations on the extensibility of the agricultural accounts with respect to separable (secondary) non-agricultural activities of farmers (milestone 4).

The preliminary work on extended IOTs carried out in the framework of **work package 2** pursued two approaches. Two selected product groups, one major crop category (cereals) and one major animal product group (pigs), were used as examples to follow a product flow focus (calculation of monetary supply and use tables (SUT)) on the one hand and a production process focus (determination of intermediate consumption (IC)) on the other hand.

Concerning the **calculation of intermediate consumption for the selected agricultural products (production flow focus)**, the following tasks and activities were carried out:

- The collection of the required input data, their preparation for further processing and the identification of data gaps formed the starting point. This task also included the assignment and mapping of the differing designations and classifications in the various data sources (**task 2.1 IC: Data sourcing**).
- The necessary specifications for the calculation of average input costs per unit of production (per hectare/animal) based on standard gross margins (SGM) were determined. Calculations for the selected reporting year 2021 were carried out (**task 2.2 IC: Calculation of average input costs per unit of production)**.
- The average input costs per unit of production were extrapolated to the national level (**task 2.3 IC: Extrapolation to the national level**).
- Based on the calculations performed for the selected product groups cereals and pigs, conclusions and recommendations regarding corresponding calculations for the remaining agricultural product groups were drawn (**task 2.4 IC: Conclusions and recommendations**).

The outcomes (target indicators) of these tasks were the following:

- an initial data set on input use for one major crop (cereals) and one major animal product group (pigs) for a selected reporting year,
- conclusions and recommendations regarding a future differentiation of input use for all product groups of the agricultural industry.

Regarding **monetary supply and use calculations for selected agricultural products (product flow focus)** the following tasks and activities were conducted:

- The first steps comprised activities related to the determination of the size and layout of the SUTs. Whereas the basic structure and used classifications are given by NA, decisions on the level of details, i.e. concerning the disaggregation of products and industries were necessary (**task 2.5 SUT: Determination of level of detail**). As data availability is a main limiting factor in this context, this task was closely linked to the next task.
- **Task 2.6 SUT: Data sourcing** comprised the identification and evaluation of possible data sources as well as the collection, gathering and validation of necessary data for the selected reporting year. Exchange of views with NA colleagues took place.
- In the next step, a first provisional SUT was created based on the existing data. Data gaps were identified and closed based on modelling and estimations **(task 2.7 SUT: Creation of provisional SUT).**
- Subsequently, plausibility checks were carried out to identify discrepancies and inconsistencies between our supply and use tables. The causes of the discrepancies and the reliability of the

underlying data were analysed. Adjustment focused on items with weaker data basis (**task 2.8 SUT: Balancing of the SUT**).

- Finally, the feasibility of creating SUTs for all agricultural product groups was evaluated (**task 2.9 SUT: Evaluation of feasibility for the remaining product groups**).

The outcomes (target indicators) of tasks 2.5 to 2.9 were:

- initial experimental SUTs for one major crop (cereals) and one major animal product group (pigs) for a selected reporting year,
- conclusions and recommendations regarding the creation of SUTs for all agricultural products.

In the following chapters, we will describe the methods and data sources used in the two work packages and the main results. These are followed by conclusions and recommendations.

An appendix including supplementary material to several tasks of the project and calculation results is also part of this report.

Work Package 1: Secondary non-agricultural activities

Review of literature, concepts and data sources

Literature review

A review of literature[2] on extending agricultural accounts with regard to secondary activities by farmers provided the basis of this work package. The sources analysed mainly included manuals, scientific papers, project reports, documents published by international institutions (such as OECD), audits and presentations.

Overall, the reviewed literature deals with three main topics:

- General issues concerning farm income measurement: A main topic in this context is the question of activity accounts (agricultural industry) versus accounts for institutional units (farm households). This includes the shortcomings of activity accounts as well as limiting factors for the implementation of accounts for farm households (e.g. OECD 2002; Hill 2008; UN 2011). Questions of assessing the performance of the EU's common agricultural policy (CAP) measures in relation to farmers' incomes and income comparisons with other population groups are also related to this topic (ECA 2016).
- Diversification of farm activities: Studies dealing with the economic importance and profitability of diversification (e.g. Augère-Granier 2016; Ivanovic et al 2020; Kirner 2018; Kirner et al 2021).
- Definition and treatment of secondary (non-agricultural) activities/other gainful activities in different (primary) statistics and administrative data sources (e.g. Eurostat 2013/2023b/2024a).

The review revealed the long-standing need for a broader focus of agricultural accounts, especially on the part of agricultural policy.

(i) An approach repeatedly proposed in the literature relates to the compilation of agricultural accounts for institutional units, as e.g. foreseen in the former Eurostat's Income of the agricultural households sector statistics (IAHS) which was discontinued at the turn of the millennium. However, a (joint) implementation of this approach in the European Union did not take place so far due to the limited availability of suitable basic data as well as for historical and other reasons (UN 2011, p. 435; Hill 2008).

[2] Task 1.1 Literature review.

(ii) An alternative approach mentioned that might be easier to implement is the extension of secondary non-agricultural activities covered by the EAA. A proposal by DEFRA (2006, p. 7ff) suggests to include all non-agricultural secondary activities using farm resources (such as land, buildings and machinery), regardless of whether separable or not. This would better reflect the economic reality of farmers than the current EAA. Provided that the necessary bridges to NA are compiled (as EAA constitute a data source for NA), also this approach presupposes the availability of suitable basic data.

Comparative analysis

EAA only take into account secondary non-agricultural activities which cannot be isolated, i.e. are inseparable from the main agricultural acitivity. The current EAA classification of inseparable non-agricultural secondary activities has the following structure (Table 1), with some AMS (agro monetary statistics) items being mandatory (AM17000, AM17100, AM17900) and the others voluntary.

Table 1: Inseparable non-agricultural secondary activities in the EAA

AMS Code	Label
AM170000	**SECONDARY ACTIVITIES (INSEPARABLE)**
AM171000	**Transformation Of Agricultural Products**
AM171100	Transformation of agricultural products - cereals
AM171200	Transformation of agricultural products - vegetables
AM171300	Transformation of agricultural products - fruits
AM171400	Transformation of agricultural products - wine
AM171500	Transformation of agricultural products - animals
AM171600	Transformation of agricultural products - animal products
AM171610	Transformation of agricultural products - animal products - milk
AM171620	Transformation of agricultural products - animal products - other animal products
AM171900	Transformation of agricultural products - other
AM179000	**Other Non-Separable Secondary Activities (Goods and Services)**

S: EUROSTAT, EAA transmission tables.

An analysis of EU member states data (including Iceland, Norway and Switzerland) on inseparable non-agricultural secondary activities shows considerably varying data availability regarding these mandatory and voluntary delivery items. For the reporting year 2023, no data on item AM17000 were recorded for two countries, whereas six further countries did not report data for item AM17100 and seven countries for item AM17900. Especially data on voluntary items are often not

provided. The comparison suggests that inseparable non-agricultural secondary activities are either of minor importance (as secondary non-agricultural activites may be generally relatively insignificant or are usually separable from the agricultural activity) or the calculation of inseparable non-agricultural secondary activities represents a considerable challenge.

A review of 15 available member states inventories shows that used data sources differ, albeit data from the Farm accountancy data network (FADN; since 2025 Farm sustainability data network, FSDN) are frequently used. A further finding is that the content of item AM17900 can vary greatly depending on the member state. However, agritourism is often explicitly mentioned as an activity covered by this item.

A main problem that hampers cross-country comparisons of non-agricultural secondary activities covered by EAA is the conceptual criterion of inseparability (see below for details) and the respective national handling of this. A further related disadvantage of the current approach that impedes both cross-country but also time-series comparisons is the fact that non-agricultural secondary activities are no longer considered once they become separable.

Conceptual and definitional issues[3]

The current treatment of non-agricultural activities in the EAA is due to the application of the industry concept and the use of the local kind-of-activity unit (local KAU) as basic unit in the EAA. This concept implies that non-agricultural secondary activities which cannot be separated from the main agricultural activity of local agricultural KAUs are recorded in the EAA (see Eurostat 2024a, p. 21ff).

Regulation (EC) No 138/2004 on the economic accounts for agriculture in the Community as amended (short: EAA regulation) and the EAA manual (Eurostat 2024a) contain the conceptual provisions specifying when a non-agricultural secondary activity of an agricultural holding is to be classified as **separable** or **inseparable**.

Due to point 1.16 of the EAA regulation, "[i]nseparable, non-agricultural secondary activities are activities whose costs cannot be observed separately from those of the agricultural activity." Point 1.26 states in more detail that information on "output, intermediate consumption, compensation of employees, labour input or GFCF *[Gross Fixed Capital Formation]*" are necessary to separate secondary activities from the principal agricultural activity. Hence, non-agricultural activities by farmers, for which the data mentioned can be determined separately, are to be classified as separable. Consequently, each separable secondary activity gives rise to a separate non-agricultural local KAU.

This means that regardless of the type of activity, a given non-agricultural secondary activity can be classified as separable or inseparable depending on whether it is possible to separate its costs from

[3] Task 1.2 Conceptual and definitional issues.

the main agricultural activity or not. Consequently, inseparable non-agricultural secondary activities as part of the EAA can vary between countries and over time. However, according to the EAA regulation, some activities are classified as separable by convention, such as the "production of GFCF of non-agricultural products (such as buildings or machines) for own account" (Annex I, point 1.27) or the "renting out of buildings or dwellings" (Annex I, point 1.28).

In the context of the EAA, agricultural production is considered as always separable. Agricultural secondary activitites of non-agricultural units are regarded as negligible or zero. Agricultural activities of enterprises whose principal activity is not agricultural are thus included in EAA (see Eurostat 2024a, p. 24). In addition, a separable non-agricultural activity of local agricultural KAUs always constitute separate local KAUs. This separable activity could constitute the principal or secondary activity of the respective enterprise. It is therefore not correct to speak of "separable non-agricultural secondary activities", which is why we speak of separable non-agricultural activities in the following.

Other major agricultural data sets, such as the FADN/FSDN, and even agricultural statistics such as the Integrated farm statistics (IFS) differ from the EAA regarding their definition of non-agricultural secondary activities of farmers. Both sources use the concept of "other gainful activities directly related to the holding" (short: OGA), whereby the decisive criterion is not the potential separability of the costs of a non-agricultural activity. According to the FSDN regulation[4], OGA "comprise all activities other than farm work, directly related to the holding and having an economic impact on the holding". This is the case when "either the resources of the holding (area, buildings, machinery, agricultural products, etc.) or the products of the holdings are used." (ibid., p. 56)[5] Furthermore, an OGA can be performed as a principal or a secondary activity (ibid., p. 129).

Data review, collection and processing[6]

The **Agricultural and forestry register** (AFR) covers all agricultural and forestry holdings in Austria. It contains information e.g. on the activities in section A according to the Austrian version of the statistical classification of economic activities (OENACE) 2008, but not on other OENACE sections. To gain an overview of the extent to which agricultural and forestry holdings are also engaged in other industries, we blended a selection of legal units with the **Statistical business register** (SBR), which contains information on activities for all OENACE sections. We used the population of the IFS 2023 for the selection containing 126,972 active agricultural/forestry holdings from 107,879 corresponding

[4] Regulation (EU) 2024/2746 of 25 October 2024.

[5] The IFS distinguishes between "OGA directly related to the holding" and "OGA not related to the holding". These activities refer to "non-farm work on the agricultural holding and work outside the agricultural holding", as long as they are not directly related to the holding, such as a hairdresser on the farm, teaching or work in a bank (Euroststat 2023b, p. 137).

[6] Task 1.3 Data review, collection and processing.

legal units according to the AFR. In a next step, all holdings without agricultural activities (according to the AFR) were excluded from the SBR dataset. As a result, we obtained a total of 2,494 legal units with 4,648 entries outside OENACE section A according to SBR (see Table A.2 in Annex 1 for a ranking of all OENACE divisions with more than 30 entries). As the data obtained do not allow for further monetary calculations on non-agricultural activites by farmes, AFR and SBR data could not be further used for the purpose of this project.

The **Structural business statistics** (SBS) contains information on companies that carry out agriculture as a secondary activity. The first-time reporting of revenues from secondary agricultural activities was in the 2021 survey. An evaluation however revealed that currently only a few companies actually report these.

The **IFS** provides data on the number of holdings carrying out various OGA (see Table A.1 in Annex 1). It also gives a rough indication on the economic importance of these OGA (contribution of total OGA to total revenue in size classes). As no revenues are collected for the various activities, the IFS data cannot be further used for the purpose of this project. But the IFS also contains detailed information on forestry holdings by farmers, which is useful for calculating forestry as a non-agricultural activity of farmers (see below).

The main data source for our calculations was the **national FADN** which provides monetary information on both separable and inseparable activities. The national FADN is more comprehensive than the FADN at European level[7]: (i) It contains more detailed data on inseparable non-agricultural secondary activities; (ii) it includes also data on separable non-agricultural activities of agricultural holdings (OGA not related to the holding, e.g. paid work); (iii) and finally, it is also available at the NUTS II level, what is relevant for calculating the regional economic accounts of agriculture (REAA). However, differences regarding the definition and classification of non-agricultural (secondary) activities ("inseparable/separable secondary activities" versus "OGA directly related to the holding") present a major challenge. This entails that FADN data on OGA are not sufficiently detailed for EAA purposes. Consequently, both high coordination effort regarding conceptional and data topics[8] as well as a considerable calculation effort for adjusting the available FADN data to EAA requirements (among others by combining the FADN data with other data sources described below), although only possible to some extent, were necessary.

A complementary data source on non-agricultural secondary activities of the agricultural industry stems from the Austian **social security system** (Sozialversicherungsanstalt der Selbstständigen, SVS). Farmers are required to report their revenues from "secondary activities" covered by the Austrian

[7] The national FADN data is the basis for the yearly report of the Austrian ministry of agriculture on the state of the Austrian agriculture (called "green report", see online: www.gruenerbericht.at). FADN data for Austria at European level are derived from these national FADN data. Due to conceptual and methodological differences (see Rebernig 2006 for details) the results between these two (national and European FADN) differ.

[8] The possibility of refinements and conceptual adjustments of FADN data for EAA purposes was discussed in two meetings and further written exchanges with the external data provider.

Farmers' Social Security Act. The legal condition is that the secondary activity (i) is subordinate to the main agricultural or forestry activity and (ii) that it is closely related to the agricultural or forestry holding (e.g. use of farm facilities and machinery or use of farmer-specific knowledge). Hence, on the one hand, detailed data on various secondary activities are provided by this data source. On the other hand, there are again major conceptual differences to the EAA's inseparable secondary activities. Therefore, only some items were used to supplement FADN data.

Finally, another complementary data source are calculations in the context of the **European forest accounts** (EFA) providing information on the production process of the forestry and logging sector. Data on the output value of the forestry industry served as the basis for calculating forestry as a separable non-agricultural activity of farmers.

Results

Approach

We reviewed and refined calculations on **inseparable** non-agricultural secondary activities, following the conceptual approach of the EAA regulation and EAA handbook outlined above. We also made an effort in calculating **separable** non-agricultural activities by farmers.

Mostly national FADN data, but also EFA and IFS data and, to a limited extent, SVS data were used for the subsequent preliminary estimations of the output generated by non-agricultural activities of agricultural holdings. To adjust national FADN data to EAA requirements, we furthermore built on various additional data sources like agricultural statistics provided by Statistics Austria (e. g. milk statistics or supply balance sheets), Agrarmarkt Austria (AMA) and Rolling agricultural market analysis (RollAMA) data, expert estimates and reasonable assumptions. Our work encompassed both a review and refinement of our previous calculations on inseparable non-agricultural secondary activities as well as first estimations on separable non-agricultural activities by farmers.

Regarding forestry as a non-agricultural activity of agricultural holdings, it should be emphasised that forestry is always treated as separable in the Austrian EAA and EFA. As forestry is historically very important in Austria, detailed information on intermediate consumption, GFCF or labour input regarding forestry are currently gathered within the framework of the national FADN.[9] Thus, on the national level, forestry as a separable non-agricultural activity by farmers is an integrated part of the EFA. Our calculations on the output of forestry as a separable non-agricultural activity were based on EFA and IFS data following a pragmatic approach: If according to IFS 2020 a holding was engaged in

[9] The national FADN also provides to some extend information on output, intermediate consumption and GFCF for some other non-agricultural secondary activities (e.g. vacation on the farm or tavern). However, as information on other items as compensation of employees and labour input is not or only partly available, they are considered as inseparable secondary activities.

both agricultural and forestry activities, we considered forestry output of the respective holding as a non-agricultural activity of an agricultural holding. According to this approach, the output of forestry as a separable non-agricultural activity is quite high.

Calculation results

The calculations were conducted for the year 2022[10] (see Table 2 and Table A.3 in Annex 1 for a more detailed version). According to our refined calculations, we estimate inseparable secondary activities to amount to an output value of 671.4 million euros in 2022, of which 298.4 million euros are attributable to the "transformation of agricultural products" and 373.0 million euros to "other non-separable secondary activities". The lagest share of the latter relates to agritourism (vacation on a farm and tavern). It further includes revenues from energy production, horse boarding services, landscaping services and other production and services (farm schools, childcare, greencare, etc.; see item "other" in the table below).

Table 2: Non-agricultural activities by farmers, results for 2022 – in million euros

AMS Code	Label	Output value
AM170000	**SECONDARY ACTIVITIES (INSEPARABLE)**	**671.4**
AM171000	Transformation Of Agricultural Products	298.4
AM179000	Other Non-Separable Secondary Activities (Goods and Services)	373.0
	Vacation on a farm	*179.0*
	Tavern	*123.5*
	Other	*70.4*
	NON-AGRICULTURAL ACTIVITIES (SEPARABLE)	**1 953.7**
	Forestry	1 530.1
	Rental activities	102.7
	Production of GFCF of non-agricultural products for own account	18.2
	Other	320.8

S: Own calculations.

Separable activities of farmers amounted to an estimated output value of 1,953.7 million euros and thus almost three times as high as inseparable secondary activities. The biggest share is attributable to forestry (1,530.1 million euros). The item "rental activities" comprises the renting out of non-

[10] The choice of 2022 has pragmatic reasons. For this year, we were able to obtain extensive detailed additional information for the adjustment of the FADN data to the requirements of the EAA.

residential farm bildungs as well as of residential buildings accounts for 102.7 million euros. The "production of GFCF of non-agricultural products for own account" was estimated to amount to 18.2 million euros and the item "other" comprising various business activities of farmers to 320.8 million euros.

To sum up, in 2022 the estimated output stemming from non-agricultural activities of farmers is estimated to account for 2,625 million euros, whereas almost three-quarters stem from separable activities.

Conclusions and recommendations[11]

Proposal on closing data gaps

Closing the existing data gaps as regards secondary non-agricultural activities in the EAA presupposes the collection of the relevant information in the underlying agricultural statistics.

- The most important data source in Austria in this context is the FADN/FSDN, whereby the national FADN/FSDN is more extensive than the FADN/FSDN at European level in terms of both level of detail and scope. For EAA purposes, the national FADN/FSDN would have to collect OGA in more detail, e.g. regarding the processing of agricultural products or individual other activities that are classified as inseparable in the EAA but are not available separately in the context of OGA. This would have the disadvantage that the burden on the responders would further increase.
- The IFS as another potential data source would have to cover also the the respective revenues received from the various OGA. Here, too, the burden on respondents would increase considerably. Secondly, it is very questionable to what extent the inclusion of monetary questions within the IFS would be accepted. In addition, a full survey is currently only carried out every 10 years, with two sample surveys in between. As a result, model calculations would be necessary for the missing years.
- A third option is to conduct a separate survey for this and other EAA purposes, as it is done by some member states. For member states that do not carry out such surveys so far, this would entail a considerable, probably unacceptable additional effort with corresponding costs and increase the general burden on respondents.

From an Austrian perspective, option 1 would be associated with the lowest additional burden (e.g. respondents and costs) and would therefore be more realistic than the other two options.

[11] Task 1.4 Conclusions and recommendations.

Classification of inseparable non-agricultural secondary activities

Above we have already addressed the problem that the conceptual criterion of inseparability hampers a comparison of member states results. We also pointed out that data availability varies between the member states.

We therefore suggest that future steps should first focus not on expanding or refining the classification, but on achieving better comparability of EAA results between the member states by leading a discussion on the application of the current concept for delimitating secondary activities. Alternative and possibly clearer concepts and criteria for determining which secondary activities are to be recorded in the EAA could be considered. In this context, a harmonisation with the IFS/FADN OGA definition could be an option, albeit taking also account of possible interconnections with NA.

A refinement of classification could possible also contribute in part to a better harmonisation, provided that the source data are available in the required level of detail. However, concerning the current classification of inseparable non-agricultural activities in the EAA, the voluntary subitems for item “AM17100 Transformation of agricultural products” seem very detailed to us. From the Austrian perspective, calculating these separately based on given data is only possible for selected items as the respective breakdown in the national FADN, which serves as data source, is insufficient for this purpose.

A further challenge in this context is that the EAA conceptually stipulate that the raw product value should be included in item AM17100. At least in the case of Austria, the use of FADN as main data source constrains the application of this approach due to conceptual differences. The conceptual approach intended for the EAA could be questioned also for another reason. If the output values for different processed agricultural products cannot be reported separately (which is currently the case for many member states), information is lost on the economic importance of the individual agricultural product groups (such as milk, fruit, etc.). Therefore, a discussion on the change of this approach should be considered.

The remaining item “AM17900 Other non-separable secondary activities” is very comprehensive. In principle, individual activities contained therein could be singled out and introduced as a separate item. However, as already stated above, this only makes sense if it can be implemented in the most member states.

It might be worth considering to list agritourism as a separate item as it is frequently cited in the EAA inventories. In addition, the FADN at European level includes the OGA variable SE725 Agritourism, with the disadvantage that these figures are not available at the NUTS II level.

Furthermore, energy production has become increasingly important on agricultural holdings in Austria[12] in recent years. On the one hand, income is generated by renting out agricultural land and buildings (e.g. for wind turbines or PV systems). On the other hand, energy production is carried out for own account, whereby the energy produced on the farm is used as an input[13] on the one hand and/or sold on the other. However, in Austria the data availability for calculating energy production as an inseparable non-agricultural secondary activity is currently inadequate. In general, a suitable data source could be the FADN/FSDN. As part of the OGA, data on energy production is already being collected, but unfortunately this is not yet reported in the FADN/FSDN standard results.

In summary, it can be stated that additional EAA items require refinement of the basic statistics.

Inclusion of separable non-agricultural activities of farmers into agricultural accounts

The EAA are a satellite account of the NA. This allows the EAA a certain degree of flexibility to meet specific data needs by rearranging concepts from the central framework or by providing more detailed or supplementary information (e.g. regarding the activities recorded in the EAA).

A first step to include information on separable non-agricultural activities in the EAA, without major changes to the existing sequence of accounts, could be to report the output on non-agricultural activities, i.e. separately at the end (analogous to labor input). A more sophisticated approach to include separable non-agricultural activities by farmers in the EAA accounting system is seen critical as (i) due to a lack of adequate data sources there are concerns about feasibility and (i) it would entail considerable extra effort and costs.

A possible, presumably more promising option could be to abandon the concept of inseparable non-agricultural secondary activities and instead adopt the FADN and IFS concept of “other gainful activities directly related to the farm”. This would (i) broaden the view of EAA to better reflect economic reality, (ii) enable a better consistency between agricultural statistics, specifically between EAA and IFS/FADN and (iii) help to establish comparability between the member states.

However, in how far this contradicts with the current applied concept of local KAU needs further discussion. Additionally, as EAA results are taken over by NA corresponding bridge tables are required showing the link. The further the EAA deviate conceptually from NA, the more complex this transition becomes. In addition, an essential prerequisite is that the relevant data are available.

[12] For Austria, for example, the IFS provides information on its increasing importance. Whereas according to IFS 2020, 4,145 agricultural and forestry holdings generated income from the production of renewable energy, according to IFS 2023, there were already 19,994 agricultural holdings (forestry holdings are not included in this figure, see Table A.1). In addition, as part of the overall energy transition efforts, Austria has also provided subsidies for agricultural holdings in recent years if they e.g. install PV systems.

[13] However, in practice there is the problem of delimiting what proportion of the energy is used as input on the farm and what is used for the private household.

Further concluding remarks

At this point, we would like to briefly address further issues arising in the broader context of the current treatment of non-agricultural secondary activities within the EAA:

First, it should be noted that the criterion of separability is also relevant in connection with the recording of subsidies and taxes in the EAA. Several subsidies in the context of rural development relate to farm diversification. A consistent approach is necessary when classifying secondary activities and the respective subsidies as separable or not which may be difficult to apply in some cases.

Second, we ask whether it does not make sense for the sake of completeness to record not only the "rents paid" but also the "rents received" in the entrepreneurial income account of the EAA. In Austria in 2022, the rents received by agricultural holdings accounted for 71 million euros. A discussion could also be led on the recording of "interest received" which currently should only comprise interest received by agricultural units organised as companies. In our opinion, including also rents received and total interest received would improve the economic picture of the agricultural industry.

Third, a problem worth considering when using FADN as a data source for secondary non-agricultural activities in the EAA is the following: When calculating the standard output of the bookkeeping farms within the framework of the FADN, the OGA directly related to the farm are not taken into account. As a result, some farms with a large proportion of OGA may be excluded from the selection framework within FADN.[14] If used as a data source, this in turn has corresponding repercussions on the inseparable non-agricultural secondary activities in the EAA. From this perspective, it should therefore be considered (or advocated) to include OGA when calculating the total standard output of agricultural holdings within FADN.

Implications for national EAA data

From an Austrian perspective, there are several implications for the current national EAA data on inseparable non-agricultural secondary activities of the agricultural industry.[15]

First, as an integral part of the project, we have improved and refined our calculations on inseparable non-agricultural secondary activities. As part of a major revision, we intend to incorporate and

[14] According to IFS 2020, for about 10,000 agricultural and forestry holdings the revenues stemming from OGA exceed their revenues from agricultural acitvities (see Table A.2 in Annex 1).
[15] Task 1.5 Implications for national EAA data.

update the time series accordingly. Among other things, we will also be able to provide figures for the item “AM 17100 Transformation of agricultural products” in the future.

Second, when reviewing the calculation of inseparable non-agricultural secondary activities, we have also refined the calculation of the item “AM15100 Agricultural services”.

Third, these adaptations not only affect the EAA but also apply to the REAA. Hence, also the REAA have to be revised.

Finally, with the implementation of these changes as part of a major revision, we may also have to adjust the bridge tables for the NA. Overall, close coordination with NA colleagues is required in order to avoid double counting or non-counting of separable and inseparable non-agricultural activities of the agricultural industry in the NA.

Work Package 2: Exploratory study on extended IOTs

As preliminary work for extended IOTs, the work package deals with the determination of intermediate consumption (IC) and the creation of supply use tables (SUT). The calculations focus on two selected product groups (cereals as a major crop category and pigs as a main animal product group).

IC: Methods and data sources

IC: Data sourcing[16]

The EAA display IC for the agricultural industry in total per IC item, without further allocation to agricultural products or product groups. As – at least in Austria's case – this also applies to the underlying data sources, an alternative approach is necessary to carry out this breakdown. While there exist different possible approaches to allocate IC to individual agricultural products (Hansen and Surry 2007, p. 1f), we opted for a bottom-up approach based on the individual activities of the agricultural industry. Average input costs per production unit (hectares for crop output and number of livestock for animal output) derived from gross margin calculations[17] were extrapolated based on area data respectively animal numbers.

To calculate average input costs, data on the average demand in terms of quantities per IC item for each agricultural product as well as their prices were required, if average input demands in terms of value were not available. In addition, data on yields were necessary for the calculation of average costs per unit for Austria and data on area and livestock to extrapolate average input costs per production unit to the national (or another regional) level. Regarding the calculation of average input costs per production unit, in Austria, a comprehensive, web-based tool for gross margin calculations is provided by the Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB), the so-called IDB (Interaktive Deckungsbeiträge)[18], which allows the interactive calculation of gross

[16] Task 2.1 IC: Data sourcing.

[17] Gross margins correspond to the monetised gross output of a product less variable costs. They enable to calculate the profitablity of agricultural production methods and thus serve as management tools. In the past, standard gross margins (SGM) based on average yields, prices and input quantities were also used as a measure of the economic size of agricultural holdings and for farm classification according to the EU typology (Ortner et al. 2004 and Eurostat 2025a).

[18] https://bab.gv.at/index.php?option=com_content&view=article&id=226:bab-015-10-gross-margins-and-databases-for-the-business-planning&catid=110&Itemid=413&lang=en (last accessed: 08.01.2025).

margins and its components for many agricultural products. Data on yields, areas and livestock were available as part of agricultural statistics compiled by STAT itself.

The IDB does not provide average gross margins or IC data but allows users to set numerous parameters. Examples of such parameters are field sizes, harvesting methods, tillage or feeding systems. Therefore, further information was required to depict average production processes at national (or regional) level rather than the individual setting of a specific farm and thus to be able to calculate average gross margins (resp. IC demands). Additional information on the average representative characteristics of these parameters for Austria overall was mainly derived from expert knowledge (e.g. from agricultural chambers), geodata and data on subsidies (see below for further explanations).

In the course of discussions with colleagues from BAB, we identified data sourcing via web scraping as the most efficient way to access the required data from the IDB. The data base underlying the IDB was thus accessed via web scraping in R, using a STAT internal R package as well as RSelenium. Collected data was then processed in R and exported as Excel files. The implementation of this process was associated with some effort, but guarantees that we can independently, at any time access the data and download it in the format that suits us best.

Due to differing designations and classifications, concerning both agricultural products as well as IC items, a mapping of IDB activities and costs to AMS codes was necessary (see Table 3 and Table 4). Inconsistencies between IDB and EAA occurred for both pigs and cereals.

For the two product groups analysed in this project, cereals and pigs, gross margin calculations were available in the IDB and most data required could be obtained that way. Data gaps mainly related to parameters of the production processes, which had to be defined to calculate average IC costs at the level of production units. There were also data gaps regarding some less common crops such as buckwheat, but the cereal varieties covered by IDB accounted for more than 90% of the output value of cereals in total.

Table 3: Mapping of IDB activities to EAA items

AMS Code	Label	IDB activity	
		Conventional prodcution	Organic production
AM010000	Cereals (including seeds)		
AM011000	Wheat and spelt		
AM011100	Common wheat and spelt	Winter wheat, summer wheat	Winter wheat, spelt
AM011200	Durum wheat	Durum	-
AM012000	Rye and winter cereal mixtures (meslin)	Winter rye	Winter rye
AM013000	Barley	Winter barley, summer barley	Winter barley, summer barley
AM014000	Oats and summer cereal mixtures	Oat	Oat
AM015000	Grain maize	Grain maize	Grain maize
AM016000	Rice	-	-
AM019000	Other cereals	Triticale, millet	Triticale
AM112000	Live pigs	Pig fattening, piglet production	Pig fattening, piglet production [19]

S: Own compilation.

For validation purposes, working group reports for specific product groups were used. Organised by the agricultural chambers, these working groups consisting of farmers serve to exchange technical and business knowledge. The annually published reports[20] provide results on production and economic data, such as IC at production unit level. Regarding some other product groups not covered by our project, working group reports could also be a possible data source.

[19] Pig fattening as well as piglet production are available also for organic production in the IDB but were not taken into account.

[20] https://www.arbeitskreise.at (last accessed: 09.01.2025).

Table 4: Mapping of costs according to IDB to EAA IC items

AMS Code	Label	Costs according to IDB
AM201000	Seeds and planting stock	Seed (certified seed)
AM202000	Energy, lubricants	Variable machine costs for crop production (diesel, energy), energy and heating fuels
AM203000	Fertilisers and soil improvers	Fertiliser (nitrogen, phosphorus, potash)
AM204000	Plant protection products	Plant protection products (herbicides, pesticides, fungicides)
AM205000	Veterinary expenses	Vet, medication, hygiene, vaccinations, insemination
AM206000	Feeding stuffs	Sow feed, suckling piglet feed, piglet rearing feed
AM207000	Maintenance of materials	Variable machine costs for crop production (repair and maintenance)
AM208000	Maintenance of buildings	-
AM209100	Agricultural services	Variable machine costs for crop production (costs in case of outsourcing), drying
AM209200	Financial intermediation services indirectly measured (FISIM)	-
AM209900	Other goods and services	Mulit-risk insurance, bedding, water, animal labelling, disinfectants, membership fees

S: Own compilation.

IC: Calculation of average input costs per unit of production[21]

Once data sourcing was largely completed, the calculation of average input costs per unit of production (hectare/animal) could start. Calculations were carried out for the reporting year 2021.[22]

As already explained, the calculation of average input costs included the determination of several production process parameters, provided that they should be representative for Austria. Mainly the following parameters had to be defined, including the data sources used for this purpose:

[21] Task 2.2 IC: Calculation of average input costs per unit of production.

[22] While we stated in our progress report of July 2024 that we would carry out calculations for 2020, in the meantime we recalculated for the reporting year 2021 which was also chosen as reference year for the SUT calculations within this WP as the latest NA SUTs were available for this year.

- Average plot sizes (affect machine costs): Integrated Administration and Control System (IACS) geodata
- Distribution of arid and humid regions (relevant for plant protection costs): regional classification by BAB
- Harvesting methods (affect machine costs): expert estimates
- Straw treatment (affect machine and fertiliser costs): expert estimates
- Tillage (affect machine costs): data on subsidies for conservation tillage
- Feeding systems and other production process parameters for pigs: IDB default assumptions

For yield-dependent IC items, we used yield data averaged over three years to minimise distortions caused by exceptionally high or low yields. Yield-dependent IC items are (in part) energy and lubricants, fertilisers, maintenance of materials and agricultural services. In the case of cereals, underlying data sources were sufficiently detailed to enable a distinction between organic and conventional production. Only for durum and millet the IDB does not offer a calculation for organic production, whereas gross margin calculations for spelt are only available for organic production. Regarding live pigs, only conventional production was taken into account as the share of organic pigs is low (according to IFS 2020 just 4 percent) and the annual livestock survey has not distinguished organic production so far.[23]

Based on the results of the data sourcing and mapping process, calculations of average input costs per IC item and unit of production were conducted via R. Specific formulas were used for each product group and IC item, which were mainly derived from IDB.

At this point, it should be noted that based on the concept applied in gross margin calculations, the item “AM19030 Fertiliser and soil improvers” was calculated based on demand by the respective crops grown and supply by the livestock kept. While the EAA cover only commercial fertilisers, fulfilment of demand by manure and slurry is also taken into account and valued in monetary terms in the IDB und was thus considered in our calculations for this project. As no data is available on the ratio of commercial fertilisers vs. manure and slurry per crop, the actual IC costs for commercial fertilisers per crop cannot be shown. Effects from crop rotation are also not considered, which probably causes an overestimation of fertiliser use for certain crops.

Apart from this and further conceptual differences between gross margin calculations and EAA, the chosen bottom-up approach to calculate IC costs has a further major limitation. While for variable costs it is relatively easy to allocate them to individual production units (hectares for crop output and number of livestock for animal output), this is not the case for overhead and fixed costs such as maintenance costs for buildings. As the IDB covers only variable costs, data on these costs could not be derived from this source. This also applies to the IC item “Financial intermediatation services indirectly measured (FISIM)”. According to AAEA (Agricultural & Applied Economics Association

[23] Due to Regulation (EU) 2022/2379 on statistics on agricultural input and output (SAIO) this will however change with reporting year 2025.

2000), overhead costs should be allocated on the same basis as machine costs (e.g. by hectare). This was not possible for us, as to do so, we would have at least needed data for overhead costs differentiated for animal and crop production. We therefore allocated these to the individual EAA items according to their share in total output of the agricultural industry. We proceeded in the same way for FISIM.

IC: Extrapolation to the national level[24]

The next step was to extrapolate average IC costs per unit of production to the national level, mainly using data from agricultural statistics but also administrative data. In the case of cereals, extrapolation was based on cultivated areas according to harvest statistics, if necessary supplemented by IACS data. In the case of pigs, the number of animals according to livestock survey was used. IC costs for fattening pigs were multiplied with the number of average turnovers per fattening place. As already mentioned, regarding cereals data sources allowed us to take into account differences between organic and conventional production in our calculations.

IC: Results

Table A.4 in Annex 2 shows the resulting experimental data set of IC differentiated for cereals and pigs according to EAA classification.

Costs of IC for cereals amount to 0.73 bn euros in 2021. Agricultural services account for the largest share which is due to our assumption, that harvesting of cereals is mainly carried out by external service providers. In the case of grain maize, a large proportion of the costs are also attributable to drying it, which we assume to be also largely carried out by third parties.

We estimate IC costs for pigs to amount to around 0.64 bn euros, 85% of which are costs for feeding stuffs. Because of lacking data, we were not able to provide detailed calculations differentiated by type or origin of feeding stuffs. IC costs for fertilisers and soil improvers are negative, which is due to our calculation method based on demand and supply (see explanations above).

When comparing our results to (undifferentiated) EAA data, it has to be taken into account that calculated costs for fertilisers and soil improvers, as explained above, reflect nutrient requirements without consideration of crop rotation effects, including supply by manure and slurry. This explains why total IC costs for fertilisers and soil improvers in Austria according to EAA are slightly lower than the calculated value for cereals alone. Also, IC costs for agricultural services seem high when compared to the overall value for Austria according to EAA data, whereas IC costs for other goods and services seem low. In general, a plausibility check of our results by comparison with EAA totals

[24] Task 2.3 IC: Extrapolation to the national level.

for the indiviudal IC items is only possible to a limited extent, as the calculations would have to cover all EAA items.

IC: Conclusions and recommendations

Conclusions[25]

For the two product groups chosen in this project, cereals and pigs, the IDB largely is a sufficient data source for the individual items according to the (national) EAA classification. Data for industrial crops, forage plants, potatoes and wine as well as cattle, sheep, milk and egg production are also available in the IDB. Regarding vegetables and horticultural products, fruits and fattening poultry, data gaps occur and other data sources have to be identified, albeit BAB is planning to include further items to the IDB in the future. One possibility could be to use gross margin calculators from Germany (e.g. from KTBL[26]), which cover a wider range of products, but the question of comparability with Austria arises.[27] Using various other data sources also means that data are available in different formats (e.g. web-based tools vs. Excel sheets), intervals and classifications, which in turn causes a more complicated and time-consuming data collection and processing. If the calculations are to be carried out annually, this is a considerable disadvantage.

One feature of gross margin calculators, especially of the IDB, that has resulted in extra effort is the level of detail that some of these tools provide. They are aimed at farmers and are primarily used for production planning (BAB 2022). By allowing many different production parameters to be set, it enables precise configuration. Our calculations, however, should reflect average production processes for Austria in total. For example, the IDB makes it possible to differ between conventional and conservation (no-till) tillage, with an impact on the associated machine costs. For our purposes, the two methods had to be weighted to derive the average variable costs for tillage.

The way we chose to access and process data from the IDB (via web scraping and R scripts) is efficient under the condition that it is available in its current form for many years. If there are (regular) revisions to the technical implementation of the IDB, this will result in increased maintenance efforts for our R scripts.

[25] Task 2.4 IC: Conclusions and recommendations.

[26] Kuratorium für Technik und Bauwesen in der Landwirtschaft e.V. (https://www.ktbl.de/).

[27] In the course of our research on alternative data sources, models of full cost calculations for several horticultural products were made available to us by the chamber of agriculture, albeit based on data from Germany. In general, several experts pointed out, that data from Germany could be a suitable alternative. Thus, KTBL could be a possible data source, as pointed out above.

In contrast to the EAA, which pursues a macroeconomic approach, the bottom-up approach based on gross margins is a microeconomic approach. In some cases, this may require specialised knowledge and the involvement of external experts.

When interpreting the quality of our results, we face the challenge that there is hardly any empirical data on actual input costs, differentiated by product and aggregated for Austria (or individual federal states). In order to check how reliable our results are, a survey would be necessary, as Hansen and Surry (2007) also note in their study.

Concerning individual IC items, our remarks are as follows:

- Fertilisers and soil conditioners: the IDB calculates fertiliser costs based on yield-dependent nutrient removal. What we did thus not take into account are crop rotation effects. Furthermore, it is also not possible to consider if part of the nutrients required is covered by organic manure, which, in contrast, is not recorded in the EAA.
- Feeding stuffs: according to EAA, data differentiated by feeding stuffs purchased i) from agricultural holdings, ii) from outside the agricultural industry and iii) produced and consumed on farm is required. This is not possible using the IDB and has been omitted.
- Other goods and services: this item comprises many sub-items, some of which are overhead costs, for which gross margin calculators may not provide a sufficient data source. By taking account of a lump sum for multi-risk insurance per hectare respectively for “disinfectant, drawing pen, fly repellent, membership fees” per animal, these are only approximately considered in our project. A possible approach for a more detailed analysis could be to take a closer look at the sub-items that make up the largest share. For Austria, these include service charges for insurance and expenses for direct marketing.
- Maintenance of buildings (respectively overhead costs in general): it is common for agriculture to incur costs related to several activities, as farms produce different products in a given period (Ronzon et al. 2014). In addition to the maintenance of buildings, some of the machinery-related input costs are overhead costs, but the IDB allows their allocation to production units. According to AAEA (2000), costs for buildings should be allocated on the same basis as machine costs, in its Handbook on Agricultural Cost of Production Statistics, the Food and Agriculture Organization of the United Nations (FAO) also describes other options (FAO 2016).

Recommendations

Gross margin calculators are not sufficient as the only data basis. As mentioned, gross margin calculators allow a variety of configurations to take account of the characteristics of the respective farm for which the calculation is to be carried out. For calculations on a macroeconomic, respectively regional or national level, however, a production process that is representative must be defined. Ideally different production processes (e.g. different harvesting processes) are considered with a

corresponding weighting, which in turn needs a considerable amount of additional data and calculations.

Besides, gross margin calculators are available in different formats with an impact on the accessibility of the data as well as the effort and complexity of data collection and processing. In our case, an interactive web-based gross margin calculator is available, for which access via web scraping has proven to be the most effective. This requires technical expertise. If the calculations are carried out regularly, the maintenance efforts of the system must also be considered. In many cases, it will not be possible to obtain gross margin calculations for all EAA products from one source. Consideration must therefore be given to the impact this has on the effort required to create data collection and processing systems. It is also important to check in advance the timeliness and reliability of the selected gross margin calculators. Is the data included regularly updated and can be made sure that the data will continue to be reliably available in the future? It should also be clarified in advance whether and to what extend the format of the data basis will change as this has an impact on the maintenance efforts of the data collection and processing tools developed.

Gross margin calculations are mainly available and regularly updated for common agricultural activities whereas information on niche products is often insufficient. One possibility would therefore be to identify those key products in each product group which, for example, cumulatively contribute to 80% of the output value of the respective product group. IC is then only calculated for these products. The production units of less important products could be allocated to other products with a similar structure of input costs. Another approach would be to allocate the share of uncovered products to the other products on a pro rata basis.

To validate results, it could be examined whether a top-down calculation leads to similar results and might be easier to implement. One example of such a method is the study by Hansen and Surry (2007). In their study, production process-specific factor input quantities where estimated based on REAA data using the maximum entropy method for agriculture in Germany. To our knowledge, there has been no comparable study been carried out for Austria. It is therefore difficult to check the quality of aggregated calculations in Austria. A one-off or ideally regular survey of the actual factor input quantities, as also suggested by Hansen and Surry (2007), would involve considerable effort and costs.

In the future, the procedures and calculations developed in the course of this work package will in all probability be further utilised and expanded for other product groups. On the one hand, data from the IDB has already been used for calculations within the framework of the EAA and access as well as processing the data via webscraping and R will make this easier and less error-prone in the future. And on the other hand, the calculation of IC within the framework of the EAA at NUTS III level[28] is also to be modernised, whereby the results of this project can be used.

[28] These calculations have been carried out at intervals of several years on behalf of BMLUK.

SUT: Concepts, methods and data sources

The European system of accounts (ESA) 2010 suggests that agricultural accounts could also include, among others, a supply and use table providing a systematic overview of the supply and use of agricultural products (Eurostat 2013, point 22.59). As a complement to NA SUTs, these expanded SUTs could enable a deeper and more granular insight into developments of supply and demand components of agricultural commodities and their respective importance. A further development of agricultural accounts to make more detailed information available on factors impacting agricultural income such as the role of imports, developments in demand for agricultural products (domestic and foreign), supply to the food industry and final consumption is also proposed by the European Court of Auditors (ECA 2016, p. 20).

Taking up this proposal, this working package focusses on monetary SUT calculations for two major agricultural product groups (cereals and pigs), with the broader objective that this pilot study allows conclusions also to be drawn for other agricultural product groups.

Account structure

SUTs provide a comprehensive description of the supply and use of products and services, including agricultural products, in an economy during an accounting period (in the context of this project: 2021). They show how products become available either by production by domestic industries or by import, with output disaggregated by products and industries. Further they describe how these products are used within the economy during the accounting period with the uses divided into intermediate consumption of industries, final consumption, capital formation (including changes in inventories) and exports (Eurostat 2024b, p. 137ff). As the uses of products are valued at purchasers' prices, whereas production is valued at basic prices, it is necessary to add trade and transport margins, and taxes on products less subsidies on products to the supply side so both sides are expressed in purchasers' prices (SNA 2008, point 14.4 and 14.5 and Eurostat 2013, point 9.06).

The monetary SUTs for cereals and pigs follow the specifications of the SUTs of NA, as presented in ESA 2010, chapter 9 (Eurostat 2013). The tables were compiled separately, to clearly distinguish between the supply and use sides of accounting, collecting and recording data from any industry that may be producing or consuming these agricultural products. As the project focused on selected product groups, not all components of the NA SUT (such as value added at basic prices) could be calculated.

The supply table differentiates between the output of domestic industries and imports by type of product. These items were compiled first at basic prices, reflecting the valuation of the data sources. Total supply at basic prices was then transformed into total supply at purchasers' prices, through the addition of valuation adjustments covering trade and transport margins, taxes on products and subsidies on products. The supply table therefore comprises the following columns:

- Output by industry (at basic prices)
- Total supply of products by industries (domestic output; at basic prices)
- Imports (cost, insurance and freight (CIF))
- Total supply (at basic prices)
- Trade and transport margins
- Taxes and subsidies on products
- Total supply (at purchasers' prices)

Showing the use of goods and services by product and by type of use the use table covers the following columns:

- Intermediate consumption by industry (at purchasers' prices)
- Final consumption (with a further differentiation between final consumption expenditures by households, non-profit institutions serving households (NPISHs) and general government)
- Gross capital formation (GCF; broken down in its components of total value of gross fixed capital formation (GFCF), changes in inventories and changes in valuables (the latter being dropped as not relevant for the present calculations))
- Exports (free on board (FOB))
- Total use (at purchasers' prices)

Following the Eurostat Manual of Supply, Use and Input-Output Tables (Eurostat 2008), the statistical classficiation of products by activity (CPA) 2.1 was used for the classification of products and the nomenclature of economic activities (NACE) Rev. 2 for the classification of industries.

Decisions had to be made on the granularity of the SUTs, such as the level of commodity and industry details[29]. The main criteria for the chosen levels of disaggregation were analytical relevance and data availability, considering also the suggestions of the discussion group on expanding the EAA from January 2023 (see Eurostat 2023a, Annex A). To keep and generate as much information as possible we strived to choose a very disaggregated level of detail of products and industries at the working level, however in the awareness of constraints posed by the availability of appropriate source data and the necessity to close data gaps by estimates. Concerning the disaggregation of products, after mapping EAA codes to NACE/CPA we decided to use the lowest level for the CPA classification (level 6 of CPA) as working level. In the case of industries, on the supply side, we differentiated between Division 01 Crop and animal production, hunting and related service activities, Division 02 Forestry and logging Industry and other industries, with a further subdivision of Division 01 by groups. On the use side, we worked on the level of divisions, refraining from a further subdivision of Division 01 due to reasons of data availability. For imports and exports the EU share is shown separately.

[29] Task 2.5 SUT: Determination of level of detail.

Data sources

The analyses of potential data sources and data collection[30] first focussed on NA data. These comprised NA SUTs, but also internally prepared commodity flow calculations and detailed calculations on intermediate consumption by industries. Agricultural statistics (especially EAA, supply balance sheets and IFS) as well as administrative data, business statistics and household surveys were also reviewed regarding their usefulness for SUT compilation including possible differences in concepts and definitions.

The process involved the following main data sources (see also Table A.5 in Annex 3):

SUTs compiled by NA

NA supply and use tables formed the central foundation and framework for the SUT calculations within this project. As the most recent available reporting year was 2021, this year was also chosen as reference year within this work package.
NA SUTs are broken down by activity according to NACE and by goods according to the compatible CPA classification. In Austria, they are published at a level of detail of 74 goods and 74 activities. No further differentiation is therefore made in the national publications regarding CPA Code 01 Agricultural and hunting products and related services and NACE Rev. 2 Division 01 Crop and animal production, hunting and related service activities. At working level, however, the detailing of products is more differentiated. In the case of agricultural products ten subheadings are distinguished. [31]

NA commodity flow calculations

The annually compiled commodity flow calculations turned out as a further important data source. They provide information in a very detailed breakdown of goods (mostly at level 6 of CPA) for the entire use side and allow a detailed examination of the individual valuation components as well as the supply channels.[32] In the case of agricultural products, commodity flow calculations are available at CPA 6-digit level showing the allocation of domestically available goods – calculated as sales[33] from domestic production plus imports minus exports – to individual categories of use.

[30] Task 2.6 SUT: Data sourcing.

[31] Other agricultural products, tobacco, fiber plants and wool, natural rubber, live breeding animals, agricultural services, forage plants and breeding material, fruit and vegetables, seeds and planting material, crude vegetable substances n.e.c. and raw milk.

[32] For details on the methodology regarding the allocation of each supply item to one or more use categories see Bayerl (2017, p. 311 ff.).

[33] In contrast to the SUT/IOT, for technical reasons the comflow table focuses on sales from domestic production, i.e. domestic production is adjusted for internal uses such as feedingstuffs and changes in inventories.

NA intermediate consumption matrix

For the allocation of intermediate consumption to the using acitivites (NA commodity flow calculations do not contain this information), the NA IC matrix could be used. The annually compiled detailed macroeconomic IC matrix shows the composition in terms of goods of IC by sectors and industries.[34] The level of detail of industries and products is very disaggregated: 6-digit level of CPA for products and NACE divisions for industries. For this project, the most recent available reporting year was 2021.

Economic accounts for agriculture (EAA)

Providing detailed information on the output value of agricultural goods and services, EAA are a main data source for SUTs on agricultural products. Beyond further items scheduled in the EAA delivery programme, depending on the degree of detail at working level, they could deliver a range of additional useful information in the context of SUTs, such as the intra-unit consumption of selected plant products as animal feedingstuffs, own final consumption of selected products, sales to other agricultural units, changes in inventories and own-account GFCF.
As EAA concepts are adapted to the particular nature of the agricultural industry, some characteristics are to be taken into account in order to derive SUT data from the EAA. This concerns, among other things, the delimitation of the agricultural industry. Although the EAA correspond, in principle, to Division 01 in NACE Rev. 2, there are some differences. This includes, inter alia, separable secondary agricultural activities of units whose principal activity is not agricultural (see Eurostat 2024a, p. 30f and p. 37f).

Foreign trade statistics

The main data source for compiling the items “imports” and “exports” is Austria’s foreign trade statistics (international trade in goods statistics, ITGS). To obtain imports and exports of goods according to ESA 2010 rules, several additions and adjustments to the ITGS are made. Under ESA 2010 rules, transactions involving processing as well as maintenance and repair work are no longer part of imports or exports of goods. Additional corrections of ITGS concerning non-resident units (VAT-traders) and imports and exports of goods without crossing the border are necessary (STAT 2021, p. 27).

[34] This is achieved in compliance with maximum and minimum limits. The macroeconomic ceilings are derived from balanced use tables of IO statistics and from commodity flow calculations. Microeconomic lower limits for the intermediate consumption totals stem from the material input statistics and import data from foreign trade statistics prepared according to NA concepts. These microeconomic data are merged and then adjusted to the specified maximum limits. The result of the balancing process is a detailed macroeconomic intermediate consumption matrix in compliance with the maximum and minimum limits.

Further data sources reviewed include:

- **Integrated farm statistics (IFS):** In contrast to other agricultural statistics (such as harvest and animal statistics), IFS enables evaluations by main activities of the holding on the level of NACE classes. This allowed a further breakdown of the output of the agricultural industry (NACE Division 01) by groups. For this purpose, data from IFS 2020 were used.
- **Structural business statistics (SBS)**: SBS provided information on separable secondary agricultural activities of units whose principal activity is not agricultural. This information is included since 2021.
- **Material input statistics (MIS):** Within the context of NA SUTs and the NA IC matrix, MIS provide the microeconomic lower limits for the intermediate consumption totals. As this grant project benefited from the corresponding preliminary work conducted within NA IC matrix, MIS were only used to a limited extent.
- **Supply balance sheets:** Supply balance sheets deliver quantitative information on the supply and use of primary agricultural products including the most important processed products. The various forms of use including consumption as food, animal feed and technical-chemical industry are considered. Limiting factors regarding the usability within this project concern the fact, that only data in physical quantities are available. Methods, concepts and classifications differ from those of NA. In the case of plant products, the reference period also differs from SUTs (marketing year instead of calender year).
- **Administrative data:** Data from Agrarmarkt Austria's market and price reporting are a further potential data source for SUTs on agricultural products. AMA collects information about purchases and prices from companies working at the first processing level of the secondary sector (mills, dairies, slaughterhouses). In the case of cereals, the reports include quantities of purchases, sales, processing and stock levels. AMA also compiles cereal balance sheets transmitted to the Directorate-General for Agriculture and Rural Development (DG Agri).
- **Household budget survey (HBS):** In NA, the expenditure data from the household budget survey are used to validate the calculation results for private consumption. In contrast to NA, however, expenditure by institutional households is not recorded in the HBS. The latest available data for this grant were from the HBS 2019/2020.
- **Rolling agricultural market analysis (RollAMA):** Information on purchase quantities and expenditure by Austrian private households on food is also provided by RollAMA. This panel includes meat and poultry, sausage, milk and dairy products, cheese, fruit, vegetables, eggs, potatoes, frozen products, ready meals, plant-based alternatives, baked goods and flour. However, unprocessed cereals do not represent a separate category.
- **Robust Food Supply Chains in Austria (Robvek)**: Carried out in 2022 and 2023 on behalf of BMLUK, this research project included a work package dealing with the transparency of the availability of agricultural products and foodstuffs in Austria. In this work package, value added chains of pork and cereals were analysed (see Hambrusch et al. 2023).

Methods

The compilation process startet with the **construction of initial and unbalanced versions of the supply and use tables**[35]. Overall, in this and the following steps, continuous exchange with NA colleagues was sought to ensure consistency of the project with the NA SUTs compilation and to make best use of already available information.

As a first step, the components of **supply** (domestic output and imports) were estimated for the selected products and converted into purchasers' prices by determining trade and transport margins as well as taxes and subsidies on products.

Output by industries (at basic prices)

Domestic output by products corresponds to the sum of (main and secondary) output of the different industries. EAA data provided the basis for the supply calculations. However, within EAA agricultural activities are considered to be always separable by convention, whereas it might happen that in NA, some institutional units belonging to other industries are not able to separate secondary agricultural activities and thus record them as an inseparable activity in their proper industry (Eurostat 2025b, p. 9). To determine the secondary output of units outside the agricultural (and forestry) industry, SBS data was used. In the case of the selected product groups, SBS does not show any production by other industries for the reporting year 2021.
The disaggregation of output within the agricultural industry and the determination of eventual output by the forestry industry was achieved using IFS data. For this purpose, the monetary values provided by EAA were allocated to the groups (3-digit level) of NACE classification according to their share in total area under cultivation of the respective product (in the case of cereals), respectively according to the share in the respective total livestock kept (in the case of pigs). In this process it was, however, not possible to consider possible differences in quality, variety and uses that may result in varying average producer prices and output values achieved by different farm types.

Imports (CIF)

Data on imports according to IOT/SUT concepts could be taken over from NA.[36] As data were already available at CPA 6-digit level, no further disaggregation was necessary.

[35] Task 2.7 SUT: Creation of provisional SUT.

[36] These are cif values. Non-EU imports are adjusted for customs duties levied at the EU's external border and paid directly to the EU institutions (Rotterdam effect). Adjustments are also made regarding the concept of transfer of ownership of goods (as the decisive criterion applied in the NA) and foreign units.

Trade and transport margins

Trade and transport margins were calculated based on assumptions within commodity flow calculations regarding sales channel, the rates of (wholesale and retail) trade margins and the respective rates of transport margins for the specific products.

Taxes and subsidies on products

Data on import duties, other taxes on products and subsidies on products were available at IOT working level (as explained above, in the case of agricultural products ten subheadings are distinguished). The necessary further disaggregation at CPA 6-digit level was based on information from commodity flow calculations. Non-deductible VAT was also derived based on commodity flow calculations.

The components of the initial and unbalanced **use table** were calculated as follows.

Intermediate consumption by industry (at purchasers' prices)

Data on IC of the respective products within the agricultural industry (including IC produced and consumed on the same agricultural holding such as feedingstuffs) were obtained from the EAA. For IC of agricultural products by other industries, data were available from the NA IC matrix. As the level of detail of industries and products of the NA IC matrix is already very high (CPA 6-digit level for products and NACE divisions for industries), no further disaggregation was necessary.

Final consumption expenditure

Final consumption expenditure consists of final consumption of households, NPISHs and government (see UN 2018, p. 159).

- According to data on **household** final consumption expenditure provided by IOT at CPA 6-digit level, households are final consumers of only a few agricultural products, e.g. peanuts (in shell) and sunflower seeds. Of the two product groups analysed as part of this project (cereals and pigs), final consumption by households is only reported for rice.[37] Assumptions within EAA on the value of on-farm consumption of cereals for nutritional purposes (mainly based on cereal balance sheets of AMA) were used to supplement IOT data.
- In the Austrian NA there are no social transfers in kind from **NPISHs** and therefore no final consumption expenditures by them (Statistics Austria 2020).

[37] Regarding pigs (live and not processed to meat), this seems plausible but concerning cereals, some final consumption of unprocessed products by households seems realistic. Unfortunately, the HBS and RollAMA do not collect data on cereal products in a sufficiently differentiated way. During our research, we could not identify any other data source on the final consumption of unprocessed cereal products by households.

- Regarding **government** final consumption expenditure for agricultural products, IO statistics from STAT also show a value of zero.

Gross capital formation

GCF comprises gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables. Since according to NA SUTs the latter is zero for agricultural products, we focused on GFCF as well as changes in inventories.

- **GFCF** in agricultural assets comprises plantations (such as fruit trees and vine) and fixed asset animals (such as breeding animals and dairy cattle) used repeatedly and continually for the production of goods such as fruit and milk (see Eurostat 2024a, p. 73). Cereals (as one of the product groups analysed in this project) are not fixed assets. In the case of pigs, only breeding animals are fixed assets. Data on GFCF in pigs could be taken from EAA.
- Data on **changes in inventories** relate to output inventories, input inventories and inventories of goods for resale. EAA and NA were used as data sources, whereby data from the latter are based on SBS and are included in the IOTs adjusted for holding gains and losses. EAA data formed the basis for output inventory changes. Data for changes in input inventories and inventories of goods for resale were obtained from NA IOTs and disaggregated by products in accordance with the more detailed product structure according to comflow data.

Exports (FOB)

Data on exports were provided by NA. As data were already available according to IOT/SUT concepts and at CPA 6-digit level, no further adaptations and/or disaggregation were necessary.

Plausbility checks and balancing

After initial estimates were available for all SUT components, **plausibility checks** were carried out. These comprised a comparison of the shares of the different supply components in the total supply (the same for the use side) to detect unexpected ratios among data. Discrepancies and inconsistencies in the preliminary unbalanced SUT versions were identified and possible causes of discrepancies analysed. The **balancing process**[38] mainly focused on the identity between supply and use for the selected product groups. Further SUT identities such as identity by industry and identity for gross value added (see UN 2018, chapter 11) could not be checked as this is only possible in the framework of the complete NA SUT whereas this project focused on two selected product groups. Using time series for plausibility checks was also not possible as the calculations were only carried out for 2021.

[38] Task 2.8 SUT: Balancing of the SUT.

We tried to follow a systematic approach to tackle the observed inconsistencies. We analysed the data sources used to identify strong and weak sources[39] and consulted NA colleagues to question discrepancies in data sources. Further additional information was used to improve the estimates. Balancing was conducted in an iterative process. Due to the pilot character and the limited focus of the project, it was mainly carried out manually.

SUT: Results and evaluation of feasibility

Results

For reasons of data confidentiality, the balanced SUTs available at working level had to be further consolidated for data dissemination. Table A.6 and Table A.7 in Annex 3 provide the results of this final step. Again, the experimental character of the results has to be emphasised which is attributable to the fact that final balancing and cross checking requires the complete NA SUT/IOT framework.

Evaluation of feasibility for the remaining product groups

The findings emerging from the exemplary SUT calculations for the selected product groups formed the basis for the evaluation of prerequisites and feasibility to perform these also for the other agricultural products/product groups.[40]

Mapping of classifications

Detailed SUT compilation for agricultural products requires the mapping of AMS classification (used for EAA compilation) with CPA/NACE (used in NA) and Combined nomenclature (CN, used in External Trade Statistics). Even though AMS classification is quite disaggregated regarding agricultural products and IC, a one-to-one link or a many-to-one link with CPA classification, which would enable a distinct reclassification, is only partly the case at the chosen working level of the pilot project (CPA 6-digit level). Above all, Eurostat's EAA's transmission programme is in many cases not as detailed as CPA classification at 6-digit level. This also applies to CPA 4-digit level for which several EAA items correspond to two or more CPA items.

Straightforward mapping even at CPA 4-digit level is, for instance, not possible regarding agricultural services output: according to CPA classification, agricultural and animal husbandry services (except veterinary services) (CPA A 01.6) are divided into 01.61 Support services to crop production, 01.62

[39] For example, “changes in inventories” was identified as rather “soft” data in terms of estimates.

[40] T 2.9 SUT: Evaluation of feasibility for the remaining product groups

Support services to animal production, 01.63 Post-harvest crop services and 01.64 Seed processing services for propagation whereas in the EAA framework no further breakdown is expected.

When it comes to analysing the feasibility of SUTs, or subsequently IOTs, a distinction must be made between the goal of creating SUTs/IOTs for total agricultural industry or a focus confined to agricultural products. If the agricultural industry is to be analysed as a whole, non-agricultural secondary activities (inseparable) and IC must also be considered. The inclusion of non-agricultural secondary activities (inseparable) requires the allocation to the respective CPA codes which in turn necessitates more detailed information on the output value of these activities. As outlined in the chapter on WP1, in the case of Austria, this is only partly feasible and Eurostat's EAA transmission programme does not provide for a further subdivision of item “AM17900 Other non-separable secondary activities” so far. Regarding intermediate consumption, individual EAA items also cannot be clearly assigned to CPA codes.

Supply

As mentioned before, EAA provide no further breakdown of agricultural **output** by activities (or farm types) according to NACE. Within Division 01 and 02, an approximate disaggregation was therefore carried out based on IFS data. As these are only structural data, only a rough estimate of output value distribution is possible, not considering differences in quality and further factors that impact output value. Furthermore, this approach is not feasible for all products, as for some of them no data (e.g. rice) or insufficiently detailed data (e.g. fibre plants) is available in the IFS. Regarding NACE group 01.6 Agricultural and animal husbandry services, data availability is also insufficient for a further breakdown at CPA 4-digit level. Data on the output of agricultural goods in “other industries” can be derived from SBS but is only available in year n+2.

Data on **imports** is available at a very detailed level and can be provided by NA, already processed for their use in SUTs/IOTs. Again, data for agricultural services is not available in sufficient detail.

Regarding **trade and transport margins**, the same procedure as for cereals and pigs can in principle be also applied for other products. Although this can be done with relatively little effort, the result is subject to uncertainties.

For **taxes less subsidies on products,** NA data can be used, but further, time-consuming processing is necessary as these data are only available at a more aggregated level. While the same procedure as for cereals and pigs is also feasible for the other agricultural products, the accuracy of the result cannot be guaranteed.

Use

Input of products (resp. intermediate consumption) by Division 01 can be retrieved from the EAA (with the already described restriction that data on agricultural services are not available in sufficient detail). Data for other divisions and sections can be derived from the NA IC matrix.

According to NA IOT, there is no **final consumption** of agricultural products by government or NPISHs in Austria. The final consumption of private households is estimated by NA as part of the commodity flow calculations. HBS is a central data source, but as it is only conducted periodically in Austria, it is mainly used for benchmarking. However, as the HBS does not cover all items in detail as required, there are data gaps for agricultural products, as was evident for cereals.

As already mentioned, **GFCF** in agricultural assets comprises plantations and fixed asset animals. Data for Division 01 can be obtained from EAA.

Information regarding **changes in inventories** is poor. Although data for Division 01 can be derived directly from EAA, there is no sufficient data available for other industries. Although benchmarks can be adopted from NA, uncertainties arise as an allocation to a lower level, e.g. CPA 4-digit, is required.

For **exports**, ITGS data in sufficient detail, processed by NA for IOT, can be used.

SUT: Conclusions and recommendations

Expanded SUTs offer a suitable tool to extend the macroeconomic view on agriculture. By making available more detailed information on the supply and use of agricultural products (i.e. by showing the importance of external trade and interrelations with other industries), they could complement the economic data on agricultural production, value added and income provided by EAA. Based on an established methodology and subject to a close linkage to NA SUTs, they constitute a consistent and coherent framework to do so. Detailed SUTs for agricultural products could also contribute to enhance consistency and coherency within the statistical system, specifically between EAA and NA.

Concerning the main prerequisites for their implementation (see also Eurostat 2014, p. 182), the following conclusions can be drawn from our pilot project:

- **Availability of data sources:**
  The present working package could draw to a significant extent on already existing data from EAA and NA calculations carried out at a more detailed level than the disseminated data. Nevertheless, these data (i) are subject to greater uncertainty than the published data, (ii) are usually not foreseen for publication and (iii) do not cover all necessary input data.
  The two product groups analysed in the project, cereals and pigs, are relatively well covered by

administrative data which were used to supplement statistical data. For example, data on inventories of cereals collected by AMA enabled further plausibility checks. Such data are not available for all product groups.

- **Classifications:**
  Apart from data gaps, differing **classifications** (i.e. NACE and CPA classification are not used in agricultural statistics and agricultural administrative data sources) complicate SUT compilation. A better harmonisation and integration of classifications used within agricultural statistics with standard statistical classifications and the provision of correspondance tables by Eurostat (i.e. between AMS and CPA classification) could help in this context.
- **Human and financial resources:**
  The pilot project showed that the implementation of extended SUTs is laborious and time-consuming. SUT compilation requires extensive know how and expertise usually located in the NA unit. A close collaboration and involvement of NA is indispensable for the successful realisation of expanded SUTs for agriculture. It is also necessary to ensure consistency with NA data.
- **User needs:**
  Concerning usability of SUTs, a very high level of detail is desirable from the data user's point of view. However, apart from availablity of adequate input data for their compilation, data confidentiality is a main constraint concerning the level of detail of SUTs.
  A further restriction effecting the possible usability of extended SUTs is the survey unit of NA. In the 2024 benchmark revision, the survey unit in the Austrian NA changed from level of establishment to company level. The company and its (former) establishments are now assigned in their entirety to the economic sector, in which the company generates the majority of its value added. This resulted in shifts between industries with corresponding effects on SUTs (e.g. regarding the use of IC in the different industries).
  Furthermore, purely monetary calculations may be of limited use for questions regarding security of food supply. For purposes of agricultural policy, also calculations in physical units such as foreseen in EFA (see Eurostat 2024b) and in the System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries (SEEA AFF; see FAO and UN 2020) could be valuable.

In conclusion, due to the considerable human and financial resources involved, an in-depth review and assessment of user needs is a central prerequisite before taking further steps to develop and implement SUTs/IOTs specifically for agriculture, whilst also considering foreseeable restrictions concerning the possible level of detail for data availability and data protection issues.

List of abbreviations

AFR	Agricultural and forestry register
AMA	Agrarmarkt Austria – Austrian Paying Agency for Agriculture and Rural Development
AMS	Agro monetary statistics
BAB	Bundesanstalt für Agrarwirtschaft und Bergbauernfragen / Federal Institute of Agricultural Economics, Rural and Mountain Research
BMLUK	Bundesministerium für Land- und Forstwirtschaft, Klima- und Umweltschutz, Regionen und Wasserwirtschaft / Federal Ministry of Agriculture and Forestry Climate and Environmental Protection, Regions and Water Management
CAP	Common agricultural policy
CIF	Cost, insurance and freight
CN	Combined nomenclature
CPA	Statistical classification of products by activity
DG AGRI	Directorate-General for Agriculture and Rural Development
EAA	Economic accounts for agriculture
EFA	European forests accounts
EC	European Commission
ECA	European Court of Auditors
ESA	European system of accounts
FADN	Farm accountancy data network
FISIM	Financial intermediation services indirectly measured

FOB	Free on board
FSDN	Farm Sustainability Data Network
GCF	Gross capital formation
GFCF	Gross fixed capital formation
HBS	Household budget survey
IACS	Integrated Administration and Control System
IAHS	Income of the agricultural households sector statistics
IC	Intermediate consumption
IDB	Interaktive Deckungsbeiträge und Kalkulationsdaten / interactive calculator for gross margins
IFS	Integrated farm statistics
IOT	Input output table
ITGS	International trade in goods statistics
KAU	Kind-of-activity unit
KTBL	Kuratorium für Technik und Bauwesen in der Landwirtschaft e.V.
MIS	Material input statistics statistics in industry and construction
NA	National accounts
NACE	Nomenclature of economic activities
NPISH	Non-profit institutions serving households
OENACE	Austrian statistical classification of economic activities
OGA	Other gainful activities directly related to the farm
ONA	Other national authorities

REAA	Regional economic accounts for agriculture
Robvek	Robust food supply chains in Austria
RollAMA	Rolling agricultural market analysis
SAIO	Statistics on agricultural input and output
SBR	Statistical business register
SBS	Structural business statistics
SEEA AFF	System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries
SGM	Standard gross margins
STAT	Statistics Austria
SUT	Supply and use tables
SVS	Sozialversicherungsanstalt der Selbstständigen / Social security system
UN	United Nations
VAT	Value added tax
WP	Work package

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Annex

Annex 1: Secondary non-agricultural activities by farmers

Table A.1: Number of entries in the SBR by OENACE 2008 division of legal units with agricultural activities, as of June 2024

Division	Label	Entries
P 85	Education	686
G 47	Retail trade, except of motor vehicles and motorcycles	607
I 56	Food and beverage service activities	430
G 46	Wholesale trade, except of motor vehicles and motorcycles	237
N 81	Services to buildings and landscape activities	237
I 55	Accommodation	235
O 84	Public administration and defence; compulsory social security	187
N 77	Rental and leasing activities	162
R 93	Sports activities and amusement and recreation activities	162
Q 88	Social work activities without accommodation	149
F 43	Specialised construction activities	144
C 10	Manufacture of food products	119
L 68	Real estate activities	116
H 49	Land transport and transport via pipelines	98
S 96	Other personal service activities	78
Q 87	Residential care activities	71
D 35	Electricity, gas, steam and air conditioning supply	70
C 11	Manufacture of beverages	63
G 45	Wholesale and retail trade and repair of motor vehicles and motorcycles	60
M 70	Activities of head offices; management consultancy activities	55
R 91	Libraries, archives, museums and other cultural activities	51
E 38	Waste collection, treatment and disposal activities; materials recovery	47
Q 86	Human health activities	37
E 37	Sewerage	36
F 42	Civil engineering	35
J 62	Computer programming, consultancy and related activities	35
C 33	Repair and installation of machinery and equipment	31
K 66	Activities auxiliary to financial services and insurance activities	30

S: STATISTICS AUSTRIA, AFR, SBS. Own calculations.

Table A.2: Other gainful activities directly related to the holding according to the IFS

List of other gainful activities[1]	Number of agricultural and forestry holdings					
	1999	2010	2013	2016	2020	2023[5]
Provision of health, social or educational facilities[2]	-	-	-	890	1 076	2 114
Tourism, accommodation and other recreational activities	13 236	10 293	10 473	9 103	8 397	8 655
Handicrafts	767	454	653	470	360	471
Processing of farm products[3]	15 413	10 549	9 429	9 525	10 167	11 808
Production of renewable energy	926	6 411	8 128	4 876	4 145	19 994
Wood processing (e.g. sawing)	1 325	968	1 820	1 183	2 331	2 047
Aquaculture	715	359	427	262	328	272
Contractual work	4 330	7 007	8 355	7 667	7 377	-
Agricultural (for other holdings)	-	3 391	4 020	3 897	4 067	4 444
Non-agricultural	-	4 598	5 315	4 709	4 177	4 217
Forestry	-	47 353	68 913	37 741	36 713	31 896
Other (e.g. partial tenancy of predominantly used agricultural buildings)	3 231	1 521	2 544	3 246	2 076	2 299
Agricultural and forestry holdings in total	217 508	173 317	166 317	162 018	154 953	101 036
Other gainful activities directly related to the holding[4]	34 244	64 548	83 299	56 988	56 284	57 068
Share of other gainful activities directly related to the holding in %	15.7	37.2	50.1	35.2	36.3	56.5
Percentage of the final output of the holding[4]						
1–9%	-	52 450	55 989	32 545	29 804	-
10–49%	-	8 724	16 989	15 200	16 132	-
50–100%	-	3 374	10 321	9 243	10 348	-

S: STATISTICS AUSTRIA, IFS.

1) Comparison with previous surveys only possible to a limited extent due to changes in the characteristics. Multiple answers possible. – 2) Before 2016, this activity was classified under the category "Tourism, accommodation and other recreational activities". – 3) As of 2010: holdings excl. wine production. – 4) 1999: without forestry. – 5) All numbers without forestry holdings.

Table A.3: Inseparable non-agricultural secondary activities by farmers, results for 2022 – in million euros

AMS Code	Label	Output Value
AM170000	**SECONDARY ACTIVITIES (INSEPARABLE)**	**671.4**
AM171000	Transformation Of Agricultural Products	298.4
AM171100	Transformation of agricultural products – cereals	:
AM171200	Transformation of agricultural products – vegetables	:
AM171300	Transformation of agricultural products – fruits	29.1
AM171400	Transformation of agricultural products – wine	6.7
AM171500	Transformation of agricultural products – animals	:
AM171600	Transformation of agricultural products – animal products	46.9
AM171610	Transformation of agricultural products – animal products – milk	46.9
AM171620	Transformation of agricultural products – animal products – other animal products	:
AM171900	Transformation of agricultural products – other	215.7
AM179000	**Other Non-Separable Secondary Activities (Goods and Services)**	**373.0**
	Vacation on a farm	179.0
	Tavern	123.5
	Other	70.4

S: Own calculations.

Annex 2: IC – Experimental data set for cereals and pigs

Table A.4: Intermediate consumption of cereals and pigs, experimental data set for 2021 (at current prices) – in million euros

Output		AM010000	AM011000	AM012000	AM013000	AM014000	AM015000	AM019000	AM112000
Intermediate consumption		Cereals (incl. Seeds)[1]	Wheat and spelt	Rye and winter cereals mixtures (meslin)	Barley	Oats and summer cereal mixtures	Grain maize	Other cereals	Live pigs
AM200000	**Total intermediate consumption**	**733.5**	**212.1**	**25.1**	**91.3**	**16.8**	**336.3**	**51.8**	**637.0**
AM201000	Seeds and planting stock	**64.3**	12.4	2.5	6.7	1.2	36.7	4.7	**0**
AM202000	Energy, lubricants	**57.3**	23.2	2.9	9.3	2.2	14.4	5.2	**13.5**
AM203000	Fertilisers and soilimprovers	**187.5**	67.4	7.0	25.2	4.6	69.0	14.4	**–27.4**
AM204000	Plant protection products	**55.1**	17.6	1.6	11.2	0.5	20.8	3.4	**0**
AM205000	Veterinary expenses	**0**	0	0	0	0	0	0	**55.9**
AM206000	Feeding stuffs	**0**	0	0	0	0	0	0	**544.9**
AM207000	Maintentance of materials	**82.2**	34.3	4.4	14.5	3.3	18.2	7.6	**4.4**
AM208000	Maintenance of buildings	**12.0**	3.8	0.3	1.3	0.2	5.5	0.8	**8.1**
AM209100	Agricultural services	**238.4**	40.9	5.0	18.1	4.0	157.3	13.1	**0**
AM209200	FISIM	**21.8**	7.0	0.6	2.5	0.3	10.0	1.5	**14.8**
AM209900	Other goods and services	**14.9**	5.5	0.7	2.5	0.5	4.4	1.3	**22.9**

S: Own calculations. – 1) excl. rice – EAA data: as of 16.12.2024, IDB data: as of 20.11.2024.

Annex 3: SUTs for cereals and pigs

Table A.5: SUTs data sources

Data source	Compiled by	Mainly relevant for	Explanations	Link
NA SUTs	STAT	Main framework for all SUT components	NA SUTs are part of IO statistics. Their compilation follows the harmonised methods provided by ESA. With preliminary results of annual NA as upstream statistics, NA SUT and IOT compilation is based on a variety of data sources. They are compiled on an annual basis, with results available at t + 36 months.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/VW_en/engl_std_v_input-output-statistik.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/VW/std_v_input-output-statistik.pdf
NA commodity flow calculations	STAT	Adjustments, use components	The annually prepared commodity flow calculations are no officially published statistics, but an internal calculation instrument of NA of Statistics Austria. The aim of the commodity flow approach is to split the domestic supply of goods and services into the different use categories. With important advantages in terms of detailed information on the flow of goods, they are an important instrument of IO statistics.	https://www.statistik.at/fileadmin/pages/224/GNI_Inventory_ESA2010_AT_20012022.pdf, page 251
NA intermediate consumption matrix	STAT	IC	Detailed macroeconomic IC matrix showing the composition in terms of goods of IC by sectors and industries; compiled annually as part of IO compilations	See Bayerl 2017
EAA	STAT	Output, use components	The EAA are a satellite account of NA. They analyse the production processes of the agricultural industry and the primary income generated by these activities. Although the structure of EAA matches very closely that of NA, their compilation requires the formulation of appropriate rules and methods adapted to the specific nature of the agricultural industry. The EAA are annual statistics updated several times a year.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/RW/std_r_lgr.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/RW_en/engl_std_r_lgr.pdf

(Continued) Table A.5: SUTs data sources

Data source	Compiled by	Mainly relevant for	Explanations	Link
Foreign trade statistics	STAT	Import and export	Recording imports and exports of movable goods, including electricity, the international trade in goods statistics (ITGS) are based on data from the Intrastat (which records cross-border goods transactions within the EU) and Extrastat (which focuses on cross-border goods transactions with non-EU countries) data collection systems. The ITGS are compiled on a monthly basis. Statistics Austria publishes the results of Austria's ITGS based on national concepts.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/U_en/engl_std_u_itgs.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/U/std_u_itgs.pdf
Integrated farm statistics (IFS)	STAT	Output *(Further breakdown of Division 01 by groups)*	The purpose of IFS is to obtain reliable data at regular intervals on the structure of agricultural and forestry holdings, including land use and livestocks. According to EU legislation, a census is conducted every ten years, with sample surveys at three- or four-year intervals in between.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/RW_en/engl_std_r_agrarstrukturerhebung_2020.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/RW/std_r_agrarstrukturerhebung_2020.pdf
Structural business statistics (SBS)	STAT	Output *(Information on separable secondary agricultural activities of units whose principal activity is not agricultural)*	SBS are statistics about the economic structure of the production and service sector (sections B to S (without O and S94) of NACE Rev. 2). They comprise data employment, personal expenditures, revenue and expenditure structure, production value, value added, gross operating surplus, investments by economic activities, regions and enterprise size-classes. SBS are conducted as a combination of primary survey, use of secondary statistical data, data from the statistical business register, administrative data as well as model-based estimation.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/U_en/engl_std_u_ls_ab_2021.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/U/std_u_ls_ab_2021.pdf

(Continued) Table A.5: SUTs data sources

Data source	Compiled by	Mainly relevant for	Explanations	Link
Material input statistics (MIS)	STAT	Intermediate Consumption *(Lower limit for IC by activity)*	The MIS in industry and construction collects data on basic and raw materials, purchased intermediate products, auxiliary products as well as other operating materials that are used as input material of producing entities in industry and construction (ÖNACE section B to F). It is conducted as a primary survey on an annual basis.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/U_en/engl_std_u_guetereinsatzstatistik_ab_2014.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/U/std_u_guetereinsatzstatistik_ab_2014.pdf
Supply balance sheets	STAT	Intermediate and final consumption	Calculated annually, supply balance sheets provide a comprehensive overview of the food supply in Austria. Domestic use is calculated by comparing domestic production and import with export and change in stocks. The supply balance sheets for crops comprise twelve main groups, which include many detailed balance sheets. They cover the marketing year, which lasts from 1 July until 30 June of the following year, with the exceptions of wine (1 August until 31 July) and sugar (1 October until 30 September). The animal sector contains six main groups, again with many detailed balance sheets. The reference period is the calendar year from 1 January until 31 December.	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/RW_en/engl_std_r_versorgungsbilanzen.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/RW/std_r_versorgungsbilanzen.pdf
Administrative data	AMA[41]	Intermediate consumption, stocks	Data from Agrarmarkt Austria's market and price reporting: According to the implementation of the Market Organisation Act, AMA collects information about purchases and prices from companies working at the first processing level of the secondary sector (mills, dairies, slaughterhouses).	https://www.ama.at/marktinformationen/aktuelle-marktinformationen

[41] AMA is the Austrian Market Organisation and Paying Agency for Agriculture and Rural Development in compliance with EU regulations.

(Continued) Table A.5: SUTs data sources

Data source	Compiled by	Mainly relevant for	Explanations	Link
Household budget survey (HBS)	STAT	Final consumption	The HBS collects data on household expenditure, possession of consumer durables and household income of private households It is conducted every five years. The 2019/20 HBS was conducted as a sample survey of private households from the end of May 2019 to mid-June 2020. The population was made up of private households in Austria (about 4.0 Mio.).	https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/B_en/engl_std_b_konsumerhebung_2019-20.pdf Long version (available in German only): https://www.statistik.at/fileadmin/shared/QM/Standarddokumentationen/B_2/std_b_konsumerhebung_2019-20.pdf
RollAMA	AMA	Final consumption	Household panel conducted on behalf of AMA-Marketing GesmbH. Its aim is to observe the purchasing behavior of Austrian private households. The sample comprises at least 2,800 households / year. Only purchases by private households are recorded (including purchasers from food retail, specialist retailers and direct marketing). All forms of out-of-home consumption, impulse purchases, purchases by the catering trade and bulk consumers in the food trade are also not included.	https://b2b.amainfo.at/de-at/marktinfo/rollama-2024
Robust food supply chains in Austria (Robvek)	BAB	Intermediate and final consumption	In this research project, which was conducted on behalf of the BMLUK, the robustness of the food supply in Austria was examined with a view to current market developments. WP 2 dealt with the transparency of the availability of agricultural products and foodstuffs in Austria. The aim of this WP was to use a pilot project for a selected sector (pork) to visualise the material flows between the actors in the value chain (material flow Sankey diagrams), to identify data gaps and to examine the transferability of the form of presentation to other sectors. Calculations were also conducted for cereals.	https://dafne.at/projekte/robvek#release-general https://dafne.at/content/report_release/b5b6a174-28a1-461e-83a7-76275655f209_3.pdf

S: Own compilation.

Table A.6: Supply table at basic prices with transition to current purchasers' prices for 2021 – in million euros

Code (CPA)	Label	A	thereof							Other industries	Supply of products by industries
			01	01.1	01.2	01.3	01.4	01.5	02		
	Cereals (exept rice)	**1 149.29**	**1 137.74**	**611.90**	**54.59**	**0.68**	**321.33**	**149.24**	**11.55**	**0.00**	**1 149.29**
01.11.1	Wheat	369.13	364.64	240.74	24.05	0.24	64.36	35.25	4.49	0.00	369.13
01.11.11	Durum wheat	28.02	27.62	24.44	1.71	0.00	0.67	0.81	0.4	0.00	28.02
01.11.12	Wheat, exept durum wheat	341.11	337.02	216.31	22.34	0.24	63.70	34.44	4.09	0.00	341.11
01.11.2	Maize	527.07	522.09	263.71	19.69	0.36	162.52	76.62	4.17	0.00	527.07
01.11.20	Maize	527.07	522.09	263.71	19.69	0.36	162.52	76.62	4.17	0.00	527.07
01.11.3	Barley, rye and oats	175.69	173.77	76.95	8.12	0.08	63.87	24.75	1.92	0.00	175.69
01.11.31	Barley	129.81	128.17	54.16	6.39	0.07	51.28	16.27	1.01	0.00	129.18
01.11.32	Rye	31.04	30.49	16.74	1.45	0.00	6.76	5.53	0.55	0.00	31.04
01.11.33	Oats	15.46	15.11	6.05	0.27	0.00	5.83	2.96	0.35	0.00	15.46
01.11.4	Sorghum, millet and other cerelas	77.40	76.43	30.50	2.73	0.00	30.58	12.62	0.97	0.00	77.40
01.11.41	Sorghum	7.20	7.16	3.72	0.51	0.00	2.09	0.85	0.04	0.00	7.20
01.11.42	Millet	6.25	6.18	3.78	0.54	0.00	1.14	0.72	0.07	0.00	6.25
01.11.43	Triticale	55.55	54.84	16.90	1.25	0.00	26.69	10.00	0.71	0.00	55.55

Code (CPA)	Label	A	thereof						Other industries	Supply of products by industries
			01	01.1	01.2	01.3	01.4	01.5	02		
01.11.49	Other cereals	8.40	8.24	6.10	0.44	0.00	0.65	1.05	0.16	0.00	8.40
01.11.5	Cereal straw and husks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01.11.50	Cereal straw and husks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01.12.1	Rice	0.92	0.92	0.49	0.05	0.00	0.26	0.12	0.00	0.00	0.92
01.12.10	Rice, not husked	0.92	0.92	0.49	0.05	0.00	0.26	0.12	0.00	0.00	0.92
	Swine, live	**777.78**	**776.97**	**6.55**	**2.69**	**0.01**	**643.67**	**124.05**	**0.81**	**0.00**	**777.78**
01.46.1	Swine, live	**777.78**	**776.97**	**6.55**	**2.69**	**0.01**	**643.67**	**124.05**	**0.81**	**0.00**	**777.78**
01.46.10	Swine, live	**777.78**	**776.97**	**6.55**	**2.69**	**0.01**	**643.67**	**124.05**	**0.81**	**0.00**	**777.78**

(Continued) Supply table at basic prices with transition to current purchasers' prices for 2021 – in million euros

Code (CPA)	Label	Imports (CIF)		Total supply (at basic prices)	Trade and transport margins			Taxes less subsidies on products	Total supply (at purchasers' prices)
		Total	Therof EU		Wholesale margins	Retail margins	Transport margins		
	Cereals (exept rice)	**563.90**	**521.10**	**1 713.20**	**78.06**	**0.00**	**24.06**	**1.29**	**1 816.60**
01.11.1	Wheat	261.03	259.06	630.16	32.21	0.00	9.71	0.59	672.68
01.11.11	Durum wheat	19.10	19.01	47.12	2.78	0.00	0.84	0.04	50.79
01.11.12	Wheat, exept durum wheat	241.93	240.06	583.04	29.42	0.00	8.87	0.55	621.89
01.11.2	Maize	237.56	199.31	764.64	31.49	0.00	9.49	0.54	806.16
01.11.20	Maize	237.56	199.31	764.64	31.49	0.00	9.49	0.54	806.16
01.11.3	Barley, rye and oats	44.70	44.66	220.38	10.02	0.00	3.02	0.10	233.53
01.11.31	Barley	38.23	38.22	167.41	7.76	0.00	2.34	0.09	177.60
01.11.32	Rye	2.94	2.94	33.99	1.56	0.00	0.47	0.01	36.03
01.11.33	Oats	3.52	3.50	18.98	0.70	0.00	0.21	0.01	19.90
01.11.4	Sorghum, millet and other cerelas	10.97	8.43	88.37	3.68	0.00	1.11	0.04	93.20
01.11.41	Sorghum	0.79	0.66	7.99	0.29	0.00	0.09	0.00	8.37
01.11.42	Millet	1.37	1.01	7.62	0.34	0.00	0.10	0.00	8.07

Code (CPA)	Label	Imports (CIF)		Total supply (at basic prices)	Trade and transport margins			Taxes less subsidies on products	Total supply (at purchasers' prices)
		Total	Therof EU		Wholesale margins	Retail margins	Transport margins		
01.11.43	Triticale	1.78	1.78	57.33	2.06	0.00	0.62	0.01	60.03
01.11.49	Other cereals	7.03	4.97	15.43	0.99	0.00	0.30	0.02	16.73
01.11.5	Cereal straw and husks	9.64	9.63	9.64	0.66	0.00	0.72	0.01	11.03
01.11.50	Cereal straw and husks	9.64	9.63	9.64	0.66	0.00	0.72	0.01	11.03
01.12.1	Rice	1.67	0.83	2.59	0.26	1.43	0.05	0.28	4.61
01.12.10	Rice, not husked	1.67	0.83	2.59	0.26	1.43	0.05	0.28	4.61
	Swine, live	**59.11**	**59.06**	**836.89**	**33.85**	**0.00**	**15.12**	**3.45**	**889.31**
01.46.1	Swine, live	59.11	59.06	836.89	33.85	0.00	15.12	3.45	889.31
01.46.10	Swine, live	59.11	59.06	836.89	33.85	0.00	15.12	3.45	889.31

S: Own calculations.

Table A.7: Use table at current purchasers' prices for 2021 – in million euros

Code (CPA)	Label	Input of products												
		A	of which	B-E	of which					F	G	H-N	O-U	Use of products by industries
			01		10	11	20	21	35					
	Cereals (exept rice)	471.48	467.04	856.56	679.75	C	C	0.21	4.83	0.08	18.19	4.05	0.00	1 350.35
01.11.1	Wheat	80.04	80.04	C	C	C	C	0.14	2.32	0.07	C	3.00	0.00	464.32
01.11.11	Durum wheat	0.85	0.85	C	C	C	C	0.02	0.38	0.01	C	0.50	0.00	33.02
01.11.12	Wheat, exept durum wheat	79.19	79.19	345.13	337.29	C	C	0.11	1.93	0.06	4.43	2.49	0.00	431.30
01.11.2	Maize	257.51	257.51	C	C	C	C	0.00	0.00	0.00	C	0.00	0.00	585.61
01.11.20	Maize	257.51	257.51	C	C	C	C	0.00	0.00	0.00	C	0.00	0.00	585.61
01.11.3	Barley, rye and oats	92.76	92.76	114.76	77.35	C	C	0.01	1.94	0.01	2.66	0.52	0.00	210.70
01.11.31	Barley	74.10	74.10	92.78	56.31	C	C	0.00	1.68	0.00	2.03	0.27	0.00	169.19
01.11.32	Rye	10.72	10.72	15.69	14.96	C	C	0.01	0.18	0.01	0.51	0.23	0.00	27.16
01.11.33	Oats	7.93	7.93	6.29	6.07	C	C	0.00	0.08	0.00	0.12	0.01	0.00	14.36
01.11.4	Sorghum, millet and other cerelas	36.73	36.73	46.44	45.19	C	C	0.06	0.58	0.00	1.57	0.53	0.00	85.28
01.11.41	Sorghum	3.38	3.38	2.88	2.80	C	C	0.00	0.04	0.00	0.10	0.03	0.00	6.39
01.11.42	Millet	0.00	0.00	3.51	3.41	C	C	0.00	0.04	0.00	0.12	0.04	0.00	3.67
01.11.43	Triticale	33.35	33.35	28.70	27.92	C	C	0.04	0.36	0.00	0.97	0.33	0.00	63.34

Code (CPA)	Label	Input of products												
		A	of which	B-E	of which					F	G	H-N	O-U	Use of products by industries
			01		10	11	20	21	35					
01.11.49	Other cereals	0.00	0.00	11.36	11.05	C	C	0.01	0.14	0.00	0.38	0.13	0.00	11.87
01.11.5	Cereal straw and husks	4.45	0.00	0.00	0.00	C	C	0.00	0.00	0.00	0.00	0.00	0.00	4.45
01.11.50	Cereal straw and husks	4.45	0.00	0.00	0.00	C	C	0.00	0.00	0.00	0.00	0.00	0.00	4.45
01.12.1	Rice	0.00	0.00	1.33	1.31	C	C	0.00	0.00	0.00	0.01	0.22	0.00	1.55
01.12.10	Rice, not husked	0.00	0.00	1.33	1.31	C	C	0.00	0.00	0.00	0.01	0.22	0.00	1.55
	Swine, live	**3.08**	**3.08**	**851.53**	**851.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**854.61**
01.46.1	Swine, live	3.08	3.08	851.53	851.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	854.61
01.46.10	Swine, live	3.08	3.08	851.53	851.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	854.61

(Continued) Use table at current purchasers' prices for 2021 – in million euros

Code (CPA)	Label	Final consumption			Gross fixed capital formation	Changes in inventories	Exports (FOB)		Total use (at purchachers' prices)
		Government	Non-profit instutions serving households	Households			Total	Thereof EU	
	Cereals (exept rice)	**0.00**	**0.00**	**3.87**	**0.00**	**-1.36**	**463.73**	**398.62**	**1 816.60**
01.11.1	Wheat	0.00	0.00	1.64	0.00	-10.21	216.93	189.66	672.68
01.11.11	Durum wheat	0.00	0.00	0.34	0.00	1.03	16.41	13.85	50.79
01.11.12	Wheat, exept durum wheat	0.00	0.00	1.30	0.00	-11.24	200.53	175.82	621.89
01.11.2	Maize	0.00	0.00	0.21	0.00	24.70	195.64	166.36	806.16
01.11.20	Maize	0.00	0.00	0.21	0.00	24.70	195.64	166.36	806.16
01.11.3	Barley, rye and oats	0.00	0.00	1.40	0.00	-10.46	31.88	29.16	233.53
01.11.31	Barley	0.00	0.00	0.00	0.00	-11.18	19.59	18.46	177.60
01.11.32	Rye	0.00	0.00	1.40	0.00	0.40	7.07	6.52	36.03
01.11.33	Oats	0.00	0.00	0.00	0.00	0.32	5.23	4.17	19.90
01.11.4	Sorghum, millet and other cereals	0.00	0.00	0.62	0.00	-5.35	12.66	12.03	93.20
01.11.41	Sorghum	0.00	0.00	0.22	0.00	0.28	1.48	1.48	8.37

Code (CPA)	Label	Final consumption			Gross fixed capital formation	Changes in inventories	Exports (FOB)		Total use (at purchachers' prices)
		Government	Non-profit instutions serving households	Households			Total	Thereof EU	
01.11.42	Millet	0.00	0.00	0.19	0.00	0.00	4.22	3.94	8.07
01.11.43	Triticale	0.00	0.00	0.00	0.00	-5.63	2.31	2.17	60.03
01.11.49	Other cereals	0.00	0.00	0.22	0.00	0.00	4.65	4.44	16.73
01.11.5	Cereal straw and husks	0.00	0.00	0.00	0.00	-0.03	6.61	1.41	11.03
01.11.50	Cereal straw and husks	0.00	0.00	0.00	0.00	-0.03	6.61	1.41	11.03
01.12.1	Rice	0.00	0.00	3.05	0.00	0.00	0.01	0.00	4.61
01.12.10	Rice, not husked	0.00	0.00	3.05	0.00	0.00	0.01	0.00	4.61
	Swine, live	**0.00**	**0.00**	**0.00**	**34.85**	**-1.46**	**1.32**	**1.21**	**889.31**
01.46.1	Swine, live	0.00	0.00	**0.00**	**34.85**	**-1.46**	**1.32**	**1.21**	**889.31**
01.46.10	Swine, live	0.00	0.00	**0.00**	**34.85**	**-1.46**	**1.32**	**1.21**	**889.31**

S: Own calculations.