

2000 m²

Calculation Tool



STEP BY STEP INSTRUCTIONS

1. Calculate your arable land.

- Arable land includes all land on your farm / in your region / in your country that is used for crop rotation, including ley. It does not include permanent cultures like permanent grassland, orchards and afforested areas, as well as it doesn't include fallow land.
- If you know the amount of arable land on your farm / in your region / in your country, it is enough to fill in the number in column B.
- If you know the total agricultural area on your farm / in your region / in your country and some other figures, you will need to do some calculations in order to come to the amount of your arable land as close as possible. This you can do by subtracting area which is not arable land from the total area you have at disposal.
- **Please note:** Please be careful with the wording. There is no clear definition and consistent use of “agricultural area”, and its meaning may vary especially between different countries. If you use data at country level, please check what exactly the data indicates. E.g., in polish statistics “agricultural area” includes permanent grassland, other kinds of permanent crops, kitchen gardens, fallow land, and arable land, which means that arable land is only one component of the total “agricultural area” and you need to separate the arable land from it if you want to continue working with data on arable land only.

2. Calculate your number of people to feed.

- Following the 2000 m² concept, every person on Earth has approx. 2000 m² to grow his or her food, which corresponds to 0,2 ha. If you want to find out how many people your arable land should feed, it is enough to divide your arable land (data in hectares) by 0,2 ha. You will need to know the number of people your arable land should feed in the following steps, when you will transfer your production data into a potential “weekly diet”.

3. Gather your production data, calculate your consumption data.

- On sheet 3.1 and further you can fill in production data from your farm, region or country. You can create as many sheets as you want, depending on the production data you have. You will use the production data sheets also to calculate consumption and final product data.
- **Please note:** Production, consumption and final product data are not the same! Production data tells you about the bare production of a product. Consumption data tells you how much of the gross production is left for consumption. The final product data finally tells you how much processed product you will get out of the raw product (e.g., how many breads you will get out of the net grain production). Some product sheets provide examples of how to transfer net production data into final prod-

ucts, but of course you are more than welcome to elaborate your own calculations for any final product you can dream of!

3.1. Vegetables: You may know the total annual yield of the vegetable species you grow, their total number of pieces or the number of packages you have produced. In the latter case, please multiply the number of pieces or packages by the respective weight in order to get the total production weight. Please subtract any vegetables you have used for animal fodder or seed production from the total production weight. Finally divide your final total production by your number of people to feed (step 2) and then again by 52 (number of weeks per year). This will give you the amount of vegetables every person will have for consumption per week.

- **Please note:** You will repeat some steps from sheet 3.1 (gathering production data, dividing by the number of people to feed, and dividing by 52) on any of the production data sheets you have produced. After having done so you will know how your weekly diet may look like if it will be based on production from your farm/ your region/ your country and follow the 2000 m² idea.

3.2. Cereals: Proceed similarly to step 3.1. Please subtract any cereals you have used for animal fodder or seed production from the total yield. Please multiply the yield of spelt and einkorn wheat by 0.7 in order to get the final yield of these

cereal species, as they have an above-average share of husk.

Final product calculation: Please multiply your net cereal production by 0.75 in order to find out how much flour you will get out of your net grain production. Please divide the amount of flour you got (in kg) by 0,3 kg, which will show you how many 0,5 kg breads you will get out of flour (300 g of flour is enough for a 500 g bread).

3.3. Milk: Please note that milk production is very difficult to assess if you want to follow the 2000 m² concept, but don't have the detailed data needed. The crux about milk production is that you need to know if it is based on permanent grassland, ley, grains, or fodder imports. In the example shown a calculation can be easily done, as we know that dairy cows feed only fresh grass and hay and animal fodder comes only from our own farm, and we also know the share of ley and permanent grassland in the total grassland. We have a total of 990 ha of grassland in our example, out of which 650 ha are ley, i.e. arable land. This results in a share of $650 \text{ ha} / 990 \text{ ha} = 0,66$ milk production based on arable land. Now it is enough to multiply the annual milk production by 0,66 (or any other coefficient which is true under your specific conditions). If you don't have such detailed data (which is quite likely, especially if you look at data at national level), you can watch out for data

on permanent grassland and ley and make the corresponding calculations. But there will still be a bias, as a considerable part of milk production usually is based on grain and grain imports. You can try to find data on feed grain and feed grain imports among the data on grain production to solve the problem.

Final product calculation: Please divide your net milk production by 5 in order to find out how much cottage cheese you will get out of your milk, or by 15 in order to find out how much hard cheese it will give you.

- 3.4. Meat:** The explanations introducing step 3.3 are also true for meat production. In the example shown meat production can be quite easily assessed, as we know that slaughter animals got only feed produced on the farm's arable land. If you don't have such detailed data, you can use general data on animal production, e.g. at national level. But please note that this will give you only approximate values for the same reasons as presented in step 3.3.

Final product calculation: Please subtract 50 % of the live weight in order to get the slaughter weight (this is the part of the slaughtered animal meant for further processing). Please subtract 25 % of the slaughter weight in order to find out how much edible meat you will have.

- 3.5. Eggs:** Proceed similarly to step 3.1. Please subtract any eggs you have used for animal fodder, hatching, or any losses.

- 3.6. Honey:** Proceed similarly to step 3.1.

- 3.7. Rape seed:** Proceed similarly to step 3.1.
Final product calculation: Please multiply the yield of rape seed by 0.3 in order to calculate the amount of rape seed oil.



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