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## PROBLEMS OF GEOGRAPHICAL REGIONALISATION AND TYPOLOGY OF AGRICULTURE IN CZECHOSLOVAKIA

At the last meeting of this subcommission you were already informed that a small group of the members of Geographical Institute in Czechoslovak Academy of Sciences has started to prepare delimitation of agricultural regions. This work is prepared as a part of the important research program called »Geographical Regionalisation of Czechoslovakia«.

As concerning land use mapping, our work was practically limited to a small area in South Moravia. In 1967 the complete geographical research of this area was done by the Geographical Institute, because it had been decided to build up a new dam on the Dyje river.

A unified scale of the maps to be for regionalisation, 1:200.000, made it necessary to utilize agricultural farms as basic units. There are approximately 6 thousand agricultural farms on the territory of Czechoslovakia. It was possible to use districts, although it should be more practical there being only 105 districts in our country. We have no other units between districts and farms. Therefore it was necessary to prepare first of all basic maps with the boundaries of all agricultural farms. These maps were not central by published but they had to be prepared through field studies. Members of the Geographical Institute had collected materials in regional agricultural cooperations, in managements of state farms and so on. Only then it was possible to start with the regionalisation work itself.

In agricultural geography regions are usually established by following typological principle. Types of agricultural production seem to be in geographical environment areas of internal homogeneity, that have common features inside a limited area and also they differ by the same features from other areas. For this reason we have decided in the first stage of our work to start from structural indexes and not from the indexes of intensity. Our criterion for the delimitation of the regions was the homogeneity of structure of agricultural production.

Czechoslovak statistical materials allowed us to find the structure of gross and market agricultural production for all agricultural products, but not the data concerning the structure of final production, which should be more useful for our purposes.

For an explanation of agricultural regions we preferred to use gross agricultural production (enclosing by products) than market production.

Basic diversification of agricultural products, for which we calculate the percentage share in gross agricultural production, is as follows:

- 1) Grainplants (corn, leguminous plants, including by — products as straw etc.)
- 2) Potatoes (including early and food potatoes)
- 3) Sugar beat
- 4) Other technical crops
- 5) Other intensive crops (vine, hops, fruits and vegetables)
- 6) Fodder crops (including fodder root crops)
- 7) Beef
- 8) Pork
- 9) Milk
- 10) Poultry (including meat and eggs)
- 11) Other branches of animal production.

This main diversification, in which several products are grouped together, is necessary. If we took greater amount of groups, we should gain too large a number of combinations. It was also important to keep the equilibrium in the amount of groups of gross animal and crop production, because also the whole diameter of state for the value of gross production is in accordance with approximately this equilibrium.

When engaged in a rough delimitation of regions it is necessary to give the characterization of special type in a more detailed way: by stating which product from the group is most typical in the region. The special type of agricultural production will be always determined by several largest groups of agricultural products, the number of which is given by method applied. From the number of groups only the group of fodder crops is excluded, because it is connected with the share of animal production. The gross agricultural production is given in permanent (comparable) prices.

Except of the basic indexes of the structure of gross agricultural production for determination of agricultural regions we want to use also some other indexes to be shown on special maps. There is, for example a basic diversification of gross agricultural production into crop and animal production.

As a subsidiary map we prepare also a map in which gross agricultural production per 1 ha of agricultural land will be given. This index of intensity could be used for delimitation of regions only to a very moderate extent. In areas under examination it does not differ greatly. Regions with very different structure of production are generally only slightly diversified on this map.

One of the very important factors exercising making a great influence on agricultural production is the number of permanent workers in agriculture. Even if it is not possible to find a purely quite mechanical interdependence between the number of workers and the level of gross agricultural production per 1 ha agricultural land, after all there is a rough causality in the sense that in the majority of causes agricultural farms with higher number of workers give also higher gross production per 1 ha. For better explanation of this fact we can compare the map with the number of permanent workers and the map of gross agricultural production in South Bohemian Region. It is very clear that on both maps areas along

the state boundaries strictly differ where mostly state farms are situated. These areas have low agricultural production and also their supply with manpower is the worst not only in South Bohemia Region but in the whole state. Although there are not such sharp differences in inland area, we can easily find the connection between these two features in some parts of this region (for example district of Pelhrimov and Pisek with higher values, district of Jindrichuv Hradec with lower values and so on). Giving the overall characteristics of the agricultural regions we can hardly suffer this important index of agricultural workers. Therefore an explanation on the maps will be an essential constituent part of our agricultural regionalisation.

One can also construct a map of profitability of agricultural production representing the level of final production per 100 Kčs of the comparable proper costs. It could be used only for agricultural cooperative and not for state farms, because this indicator is not given in their statistics.

Very important indicator, especially for the proper delimitation of regions will be also the structure of market production; nevertheless for our purpose it is not the basic indicator.

At present we are preparing unified methodology for a delimitation of the regions on the final maps. I am very sorry I can't show you some examples of this map. The whole work is proposed to be finished only in 1971 and so far we have prepared statistical and cartographical materials.

We hope to have in the near future an opportunity, after having finished the first stage of our work connected with delimitation of agricultural regions, to construct also simplified land utilization maps for these regions.