

**Ústav zemědělské ekonomiky a informací**

**Ivan Foltýn**

**Ida Zedníčková**

**RENTABILITA ZEMĚDĚLSKÝCH KOMODIT**

**Ekonomicko-matematické predikce**

**PROFITABILITY OF AGRICULTURAL COMMODITIES**

**Economic-mathematical predictions**

**(výzkumná studie)**

**Praha, 2010**

## **Executive Summary**

One of the significant problems of the Czech agriculture is its actual and future prosperity and competitiveness in the European and world context. For agricultural producers have big meaning supports in terms of the current and supposed CAP rules applied in the Czech Republic by the year 2013 (fixed CAP scheme) and after the year 2013 (open room for various scenarios for the revised CAP). The economic prosperity of the agricultural branch as a whole can be measured by the Economic Accounts of Agriculture (EAA) which are yearly processed and published by the Czech Statistical Office. The background of the EAA is economics of all important commodities of the Czech agriculture (production size, costs, market prices and supports).

From this point of view, the economic prosperity of the whole agriculture can be transformed on the profitability of individual agricultural commodities. The profitability of commodities is analysed on the basis of annual results of selective cost inquiry VÚZE/ÚZEI monitored in the CR since 1994 (further denoted by NAKL) in the 4 production regions (region K+Ř – agriculturally very convenient region, B – LFA slightly inconvenient region for agriculture, Bo+H – the worse conditions for agriculture, ČR – average of the Czech Republic) which covers for each commodity indicators of production intensity, cost items and prices. Like prosperity criteria for agricultural commodities there were chosen indicators profitability without supports (R-S) and with supports (R+S).

The future profitability R-S and R+S of agricultural commodities are predicted with the help of intensity and cost trends, trends of market prices and sum of supports which can be allocated to commodities. These reasons have led to creation of the econometric model RENT-4 which enables to predict economic prosperity for 37 agricultural commodities (25 for plant and 12 for animal commodities) for the period 2010-2014 outgoing from the inquiry NAKL for the period 1995-2009 and CAP rules for the Czech Republic applied from 2004 (for the 4 above-mentioned production regions).

Thus, the model RENT-4 should be at the disposal to the central decision sphere for analysing and simulations of impacts of the last and future variants of the agrarian policy on profitability of agricultural commodities.

The model RENT-4 is the research continuation of the model RENT-1 (created in the year 2008) which was constructed for the past analyses of profitability for the 10 main agricultural commodities for the period 2002-2006 (which covered about 50 % land size of the Czech agriculture). The model RENT-4 represents the significant progress in the theoretical and experimental aspects partly by the enlargement assortment on 37 commodities (covering nearly 97 % of the Czech agricultural land), partly by the enlargement data processing on the period 1995-2009 and finally progress in the new modeling apparatus which

enables to predict economic prosperity for all 37 commodities by the year 2014 and for 4 production regions with the help of large number of statistic regression functions.

Modeling calculations have shown that prospects of the Czech agriculture in the period 2010-2014 under in this study presented the intensity, cost and price assumptions are as follows:

- the plant production can be assessed from the economic point of view relatively favorable:
  - commodities winter wheat, rye, spring and winter barley, oat, corn maize, rape, poppy, potatoes for consumption, hop, caraway and apples have the positive profitability not only with supports, but also without supports,
  - commodities spring wheat, triticale, peas, sunflower and sugar beet are profitable only with supports,
  - commodities grapes for vine and apricots are unprofitable even with computation of supports;
- the animal production is mostly in the economic waste:
  - the only commodity suckler cows is with supports profitable, especially in the regions B and Bo+H,
  - commodities dairy cows/milk and fattening bulls are even with calculating of supports unprofitable,
  - pig breeding represented by pigs for fattening is permanently unprofitable,
  - as well for broiler breeding there is not reached the economic prosperity and also profitability of the commodity hens for eggs fluctuates about zero.