Acta Agraria Kaposváriensis (2006) Vol 10 No 2, 271-275
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# The using of IFCN'S method in Hungary

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***ABSTRACT***

*The idea of the International Farm Comparison Network (IFCN) was born in Braunschweig, Germany at the Federal Agricultural Research Centre (FAL) in 1997. The program was developed on the basis of the objective to create a unique database updated ever year that makes it possible to compare the economic charachteristics of typical farms operating world wide. The three main goals of IFCN are the following: - to establish and operate a world-wide network dealing with the analysis of agricultural systems, - to analyse and predict the effects of political and technological changes in the participating countries, - to promote contact and change of data between theory and practice. Within the IFCN the basis of the analysis is a simulation model called TIPI-CAL. TIPI-CAL is a recursive-dynamic, production-simulating and accounting model which was developed for farm analysis With the help of the model we can analyse the effects of the change regarding political measures and legal circumstances, which is shown mainly in different management strategies. In relation to this within the European Union adjustment strategies induced by different development processes are of special importance. These processes are analysed both on national and international level thus with individual simulation we can also have some idea about international competitiveness.*
(Keywords: model, method, comparison, network)

## INTERNATIONAL FARM COMPARISON NETWORK

The idea of the International Farm Comparison Network (IFCN) was born in Braunschweig, Germany at the Federal Agricultural Research Centre (FAL) in 1997. The principles were developed together with the Agriculture and Food Policy Centre (AFPC) of the A&M University, Texas which had been doing research in this field for 15 years and had established an international system of typical plants extending it to Mexico and Canada.

Due to globalization the comparative advantages of the regions have more and more importance, and these can modify the circumstances of agricultural production. The basic question – which product should be produced by which production region – has an effect not only on the political decision-makers but also on people working in the agribusiness and on farmers as well. The questions related to this issue are the following:

- Is there an estimate to show the effects of alternative liberalization strategies on different types of farms?
- What are the main reasons for the lack of competitiveness?
- What is the best national strategy to enhance the competitiveness of a country?
- What are the effects of different systems on the environment at different points of the world?

Until the extension of the IFCN system these questions could not be answered due to the lack of information source that could have given an overall picture regarding these issues within a reasonable time. The reasons for this are the following:

- The majority of the agro-economists concentrate on the macro-economic level. The studies dealing with the competitiveness of a country were based on sources of information that were no longer valid at the time of the publication. Due to the different research methods the applicability of the data to compare the results can be questioned. In addition to this several studies put emphasis on the past instead of dealing with objective analysis about the future.
- The majority of the models used internationally deal only with the surface of the problem.However, it is possible to make a comparison between plants in different countries, this level is not thoroughly examined and there are a lot of questions to be answered. One of them refers to the possibilities of development in a region with regard to competitiveness.

As a consequence IFCN has three main goals:

- to establish and operate a world-wide network dealing with the analysis of agricultural systems,
- to analyse and predict the effects of political and technological changes in the participating countries,
- to promote contact and change of data between theory and practice.

Due to the development of IFCN there are three different sections with researchers from more than 35 countries (dairy production 33 countries, crops 13 countries, beef and sheep 15 countries). The Faculty of Economic Sciences of the University of Kaposvár has been participating in the network from the beginning.

## THE METHOD OF IFCN

TIPI-CAL is suitable for simulating real and so-called typical plants as well. With view to political counselling it is more adequate to deal with the latter and determine the general political conditions and production process of a given region.

A typical farm is developed with the participation of consultants, experts and managers of similar plants. Presumably a plant totally similar to this does not exist, however, the data fall into a track in which the production units of the region operate. This method has the following advantages compared with the arithmetical average of the accounting data:

- up to date data (the majority of the data of statistics are at least a year ago);
- individual phenomena can be eliminated;
- "mixed" farms made up of statistical data are usually not realistic.

Panel meeting consists of several steps:

- choosing the region;
- determining the size of the farm typical of the region (consulting with a local expert);
- the first collection of data by using a questionnaire filled in by the expert;
- the first panel when the correctness of the farm (compiled by the local expert) is discussed by 3–5 farm manager working in the same environment;
- the first simulations using TIPI-CAL;

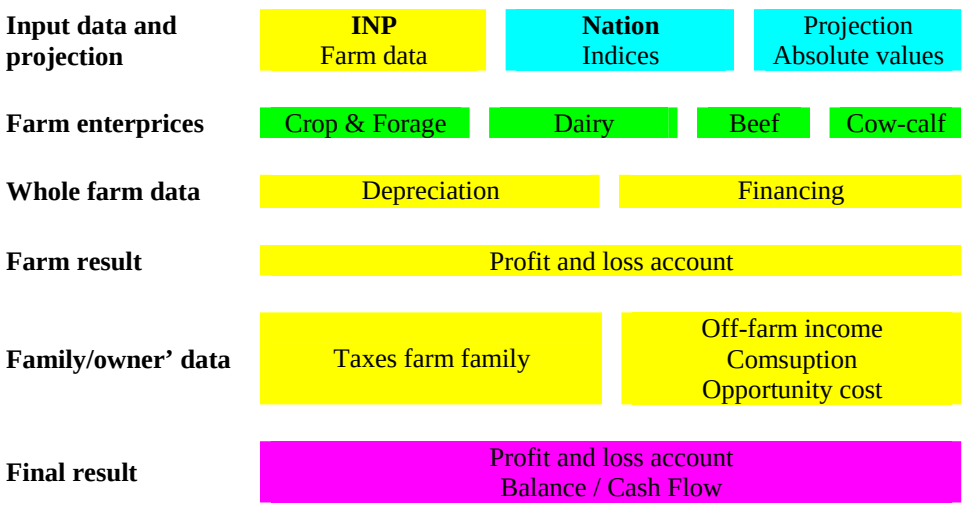
– the second panel: discussion of the correctness of the farm on the basis of the first model results, making corrections if necessary;
– closing the typical farm, carrying out further simulations.

At this point it has to be mentioned that the operation of the above mentioned "classic panel" is difficult in Hungary. Compiling the farm is predominantly the task of the user, experts help only in special fields. A panel meeting with 3–5 producers is not feasible because it would require 10 people (two experts from each farm providing breeding and accounting data). In order to solve this problem the discussion takes place at the farm with the experts.

TIPI-CAL is a recursive, dynamic, production-simulating and accounting model for plant modelling developed by the Farm Economics Institute of the Federal Agricultural Research Centre (FAL) of Germany in collaboration with the Agriculture and Food Policy Centre (AFPC) of the Texas A&M University (*Figure 1*). The model was developed in 1997 particularly for analysing milk production plants. This model type is primarily suitable for beef finishing and cow-calf analysis was developed in 2001.

**Figure 1**

**Content of TIPI-CAL (tm3-beef.xls)**




*Source:* www.ifcnnetwork.org

The model demonstrates the effects of political measures and changes in the legal environment on farming, especially the ones determining different management strategies.

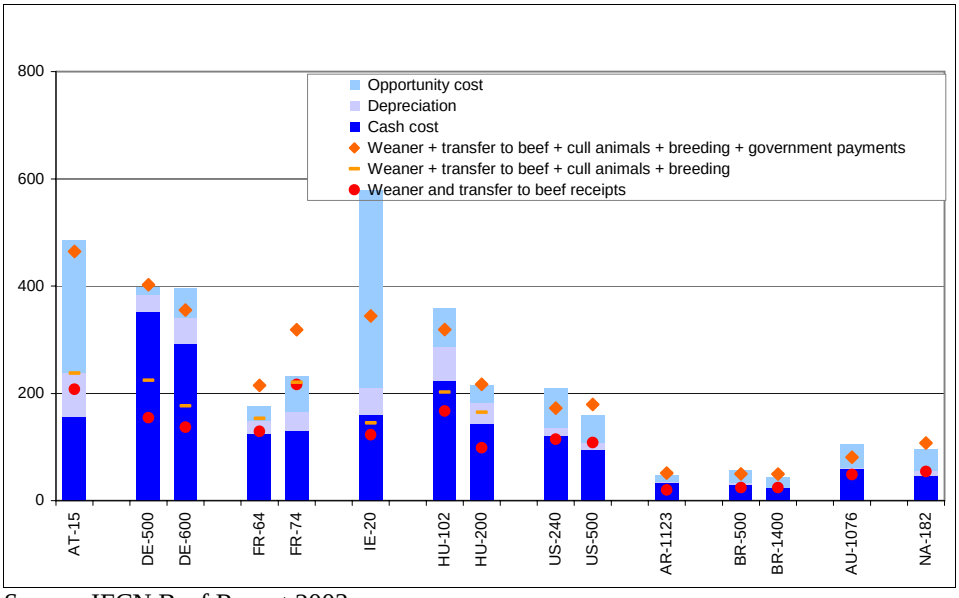
The model is basically a simulation of the agricultural production. At the end of each economic year it makes a balance, profit and loss account and Cash Flow and it is also possible to determine profit-sharing and after-tax profit. Though the model has an internal controlling system – especially as regards allowances in kind – the correctness of the plant data and expense price rate has a considerable influence on the result. The model input consists of two parts: first farm data and strategies then prices and yield are processed. Of course, it is possible to adapt the model to the general conditions of the

economic policy of the country. The model has a "matrix" as a complementary element for the analysis of different economic policies, management and organization strategies. It is possible to analyse and compare 10 different environments of economic policy, and farm management strategies.

*Figure 2.* shows the costs and returns of the cow-calf farms. It shows that the returns of the Hungarian plants, just like those in the majority of the European countries cover only a part of the opportunity costs. In case of the Hungarian plants the revenues from the *weaners* do not even cover the cash cost. Basically these plants are dependent on state subsidy. Southern-American and Australian plants have an exceptionally low level of costs which is particularly due to the extensive range management.

**Figure 2**

**Total returns and cost by cash and non-cash cost**

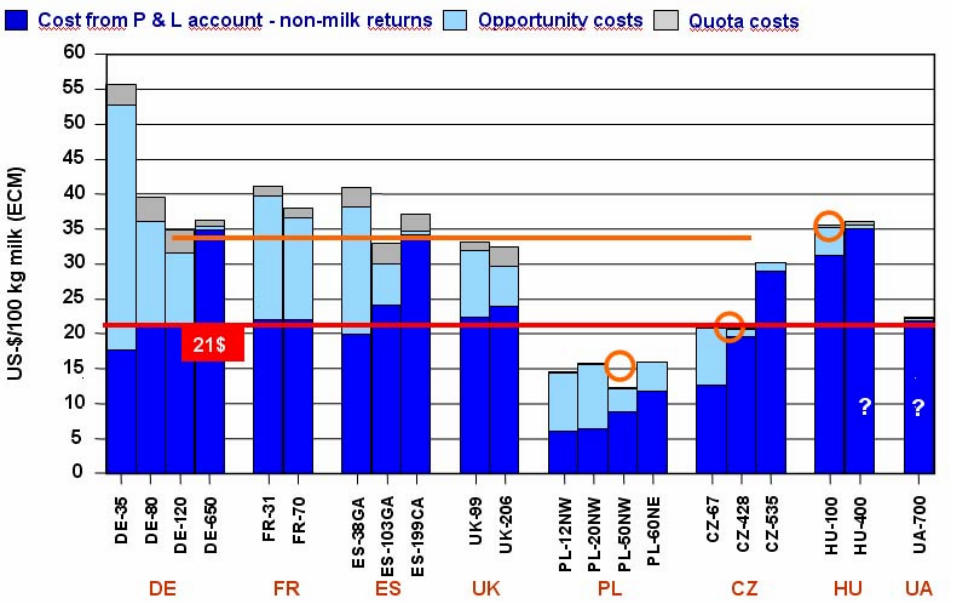



*Source*: IFCN Beef Report 2003

*Figure 3* shows the total cost of production in the examined countries. It reflects the fairly high cost of production. a characteristic of the Hungarian milk production in the past few years. In Hungary this is primarily due to the high forage costs but cost of supplement for livestock and labour costs are also determining factors. Surprisingly the former cooperative farm in East-Germany and the Spanish 199 farm – said to be large under local conditions – are considered to be similar to the Hungarian 400 farm. The Polish plants are classic family farms operating at low costs, however, their efficiency and productivity are far beyond those of the competitors.

**Figure 3**

**Total cost of production**




*Source: IFCN Dairy Report 2005*

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