Projection models of agricultural markets and a survey of Russian agricultural producers

РАЗВИТИЕ МОДЕЛЕЙ ДЛЯ ПРОГНОЗИРОВАНИЯ АГРОПРОДОВОЛЬСТВЕННЫХ РЫНКОВ И ОБЗОР ПРОИЗВОДИТЕЛЕЙ СЕЛЬСКОХОЗЯЙСТВЕННОЙ ПРОДУКЦИИ В РОССИИ

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R E P O R T

Dear colleagues, first, allow all of you to greet and offer the report on those directions of work which are directly connected with the basic theme of our seminar and in which the department of regulation of the agrarian markets of our institute (VIAPI) is engaged.

Marketing research is a gathering, processing and the analysis of the information for the purpose of uncertainty reduction at acceptance of administrative decisions.

Administrative decisions can be accepted at federal level or level of the separate company.

In this connection, it would be desirable to break a theme of the performance into two basic questions conditionally.

The first question is connected with working out of forecasting models of development of the markets of agricultural production. The long-term forecasts executed by bodies of federal management, two main tasks allow to solve: first, to directly controls to have the most probable scenario of development of a market situation in concrete sector of the agrarian market. If this scenario on what that to the reasons will not satisfy controls ways of the decision of problems which the market can face subsequently in this case can be in due time found. On the other hand, the long-term forecast of the market approved by bodies of a state administration, will serve as a reference point for manufacturers of agricultural production. They will build the plans for short-term, intermediate term and long-term prospect according to the forecast accepted by controls.

Other prominent aspect of a considered theme. For the timely decision of problems which can arise in the future nearest or kept away on terms, state regulation bodies should have possibility to consider various scenarios of development of the market. For this purpose it is necessary to develop additional modules to the model focused exclusively on working out of the forecast at initial operating conditions of the market.

These modules should help with realization of possible scenarios at change of initial operating conditions of the market.

What can be factors of development of the market which change can lead to essential change of results of the forecast.

First, from among factors internal (or external) character, it is investments.

Inflow of investments, regardless to their origin (the mixed states based on partnership and a private sector or exclusively private, national, foreign or the joint capital) promotes growth of manufacture and is capable to change a situation in the market.

The foreign trade regulation, the second factor, capable to strengthen or weaken a role of national manufacturers in sector of agrarian manufacture.

Considering the most essential influence of two considered factors, by employees of department of regulation of the agrarian markets of our institute (VIAPI of A.A. Nikonov) has been developed model of the partial balance, allowing to consider influence of investment and foreign trade factors both separately and in aggregate.

The base module of model which, mainly, also has defined a methodical basis of model was made by model of the partial balance taken from work «Impact of Potential Dairy-Beef Production on China's Beef Supply, Demand and International Trade», опубликованной в Australasian Agribusiness Review - Vol.16 – 2008 Dong Wang, Kevin A. Parton and Claus Deblitz.

The short description of the basic module of model.

$S_1 = D_1 + E_1$ (1),

where S - the supply of conventional beef in the forecasting year;

D_1 - the domestic demand in the forecasting year;

E_1 - the net export volume of conventional beef in the forecasting year.

$S_1 = S_0*[1+(P_1/P_0-1)*E_s]$, (2)

where S_0 - beef supply in the datum year;

P_1 - the beef retail price in the forecasting year;

P_0 the beef retail price in the datum year;

Es - the long run price elasticity of supply.

$D_1 = D_0*\{1+[(1+In)^T-1]*E_{IN}+(P_1/P_0-1)*E_D\}*(1+Pop)^T$, (3)

where: D_0 - the domestic demand in the datum year;

In - the annual income growth of the consumer;

E_{IN} - the income elasticity of beef demand;

E_D - the price elasticity of beef demand;

Pop - the annual population growth rate;

T – forecast interval.

$E_1 = E_0*[1+(P_1/P_0-1)*E_E]$, (4)

where E_0 - the net export volume of beef in datum year;

E_E - the net export elasticity of beef products;

If we combine equations 2, 3 and 4 into equation 1, with P_1 endogenous, the final partial equilibrium model in the absence of beef production is as follows:

$S_0*[1+(P_1/P_0-1)*E_s] =$

$D_0*\{1+[(1+In)^T-1]*E_{IN}+(P_1/P_0-1)* E_D\}*(1+Pop)^T$ (5)

$+ E0*[1+(P_1/P_2-1)*E_E]$.

Completion of the basic module in the form of investment and foreign trade modules allows not only to receive forecasts, but also to consider the scenarios allowing

Because model one-grocery, therefore, in absence of cross elasticity it is necessary to concern critically interpretation of results, first of all to the home market prices as at increase in duties at beef there will be a switching of demand for the nearest substitutes, for example, fowl.

If the model presented above is the tool of the analysis and the forecast of the market of production of animal industries for state administration bodies the second question which has been announced at the very beginning of my performance, also is connected both with planning of activity of the companies, and with the analysis of a condition of the agrofood market as a whole.

In 2008 with support of the Ministry of Agriculture of the Russian Federation our institute spent questionnaire of heads large and average agricultural enterprises. In the beginning it is required to explain that from itself represent agricultural enterprises and they occupy what place in the market of agrarian production of the Russian Federation.

All agricultural manufacturers are presented to Russia by three basic groups: to **farmers**, **rural households**, **agricultural**

enterprises. The structure in agricultural products manufacture is approximately that: 7 %; 52 %; 43 % respectively.

Conditionally speaking, **rural households** are personal economy of the population which, mainly, make production for itself. To **farmers** – it, as a rule, medium-sized manufacturers. **Agricultural enterprises** are large enough farms.

And so, as a result of questioning than thousand agricultural enterprises have been interrogated more. It would be desirable you to acquaint with some results of interrogation.

Given table 1 confirms primary growth of sectors with a low competition. Many agricultural enterprises are looking forward to increase the release of grain, meat and milk production and grain, and it occurs on all groups of the organizations: with good, satisfactory and unsatisfactory financial and economic position. The most dynamical growth it is necessary to expect in dairy sector. Positive changes are predicted in the markets of grain, beef and sunflower.

Table 1

Short-term tendencies in manufacture of separate kinds of production (% from all people in the survey)

Kind of production	To increase	To reduce	To leave at former level	difficult to answer
grain	57	2	20	2
sugar beet	3	3	2	1
potato	9	1	6	1
vegetable	6	1	3	1
fruit and berries	2	0	1	1
sunflower	13	1	6	1
beef	44	5	20	2
pork	10	4	6	1
mutton	5	1	2	1
poultry	3	0	1	1
eggs	2	0	1	1
milk	61	2	8	2
wool	3	1	2	1

Table 2

Short-term tendencies in manufacture of separate kinds of production (% from all people in the survey)

Category of credit	Absolutely not satisfied	More than on third	More than half	More than on two third	Comple-tely
short-term	21	14	13	6	24
investment	19	8	10	6	16

Data of table 3 confirms that most a serious obstacle to growth of competitiveness of the organizations are the high prices for petroleum products (85% from all enterprises).

Table 3

Obstacles in increasing of competitiveness CXO (% from all people in the survey)

Obstacle	%
High prices for petroleum products	85
Deterioration of agricultural machinery, the equipment	49
Nonefficient technologies	38
A lack of qualified specialists	53
A lack of workers	45
High costs of energy	68
The problem of getting an access to market information	4
Problems of service from other organizations	11
Resellers, processing and retail companies are lowering purchasing prices for agricultural products	52

In table 3 the basic directions of a state policy and their estimation from outside heads of agricultural enterprises are presented. And in this table the problem of the high prices for petroleum products also dominates. And it is not casual, as in Russia, one of most big exporters of oil, the price for gasoline and diesel fuel in home market sometimes above, than in the countries-importers. A current situation principal cause – the weak antimonopoly law and judicial executive system.

Table 4

The most important for CXO directions of a state policy (% from all people in the survey)

State policy measures	%
Decrease in tax burden for commodity producers	63
To decline the prices for petroleum products	92
To decline prices for fertilizers	67
Insurance problems	16
Development of leasing	40
Protection from monopolists	30
Limit imports	27
To written off loans	35
To help in creating employers organization for different agricultural sectors	7
To stimulate integration between production, processing and selling	11
Development of land market	7
To increase the investment climate	12
To increase the amounts of state purchasing from farmers on guarantee prices	46
To resist the corruption	22
Development of social sphere in rural areas	51
Other	3

Thus, I hope, I could create a picture which characterizes activity of our division in a direction of the analysis of a market situation in agrarian sector of the Russian Federation.

Thanks for attention!

Назад в раздел

Поделиться...

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