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MODELLING OF STABILITY OF DEVELOPMENT OF ECONOMY

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Development of economy and society in XX century has resulted to obvious no balance in technological, economic, ecological and social spheres. Maintenance of steady development of agrarian sphere is directed on the balanced decision of agrarian sphere directed on the balanced decision of agrarian socially economic problems of development of agrarian and industrial complex at no admission destructions and his(its) reduction a nature-resource potential, preservation improvement of a favorable environment, satisfaction of needs(requirements) present and the future generations of people in agricultural production and first of all in qualitative, ecologically safe food stuffs. We offer interpretation with reference to a problem of steady development of agrarian and industrial complex of such known principles in ecology, as a principle of complex(difficult) system, a principle of a variety and a principle of adaptibility. In development stability of system is influenced with various factors in political, economic, ecological and social spheres. Major factor in modern conditions is, in our opinion, an agrarian policy of the state and a measure of state regulation of the agrarian market at federal and regional levels. Recently the increasing danger is represented with an ecological situation in agrarian sphere. Menacing losses of fertility graund, a nature a layer, erosive processes and a deflation of a soil cover, pollution and a poisoning of an environment can result in irreversible consequences. Steady development of agrarian and industrial complex assumes social stability of a rural society and creation of conditions for a steady social - psychological condition of peasants. The factors connected to development of a social infrastructure, formation(education), public health services and sphere обитания countrymen, in many respects define(determine) the general(common) stability of development of agrarian and industrial complex and a social climate in the country.

The major factors causing unstable development in economy of agrarian and industrial complex, are:

- casual fluctuations of weather conditions (deposits, temperature of air and ground, humidity of air, intensity of solar radiation, force of a wind etc.);
- presence of 3-5-11-years(summer) cycles in change of weather conditions;
- administrative decisions at all levels the managements inadequate to developing economic conditions, capable to cause crisis situations;
- casual character economic, engineering-technology factors.

As an example we shall consider simple enough dynamic system:

$dY/dt = k*Y * (A-Y) - (a + \gamma)*Y$

$dA/dt = -b*A + \alpha*Y+C$

$dk/dt = \beta *k * (B-k) + \gamma *Y$, $Y (0) =Y0$, $A (0) =A0$, $k (O) =ko$,

Where Y-a level of economic development of the agrarian and industrial complex, expressed, for example, in a share of a total national product, And - the generalized ecological resource limiting a marginal level of economic development of agrarian and industrial complex, to the speed of economic development dependent on ability of economy to development own, and also to use and introduction of external high technologies in agrarian and industrial complex, In - a marginal level of technological perfection, restriction laws of a nature, With - speed of self-restoration of the ecological environment, ά *Y - intensity of expenses of a part of a total product on maintenance of a necessary condition of the ecological environment, γ *Y - the same on development own and import of external high technologies, p - speed of development of new high technologies, Y (O) =Yo, And (0) =Ao, k (O) =ko - an initial condition of economic system.

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