Materials of conferences

PHYTORECLAMATION OF PREBAIKAL REGION'S GREY WOOD SOILS

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The phytoreclamation, done by means of the introduction of new high-productive plants: Bunias orientalis, Galega orientalis, Polygonum divaricatum, makes a positive effect on basic indices of grey forest soil fertility and productivity in PreBaikal Territory.

A monodirectional, focused on grain production, use of tillable lands in present-day farming systems of Irkutsk Region leads to their advanced degradation. On the tillable lands agrochemical inspection results the humus rich soils areas have reduced by 131, 6 thousand ha for 15 years. For this period of time the humus poor soils areas have increased by 74, 9 thousand ha, and the average humus content soils areas – by 130 thousand ha [1].

Among soils characterized by low and unstable fertility the most common (46, 7% of all tillable lands) in Irkutsk Region are grey wood ones [2].

The state of "out-ploughness" is typical of grey wood soils. This negative phenomenon is associated with the decrease of fresh organic matter content in the soils and soil consistency deprivation. The deterioration of physical-chemical, biological and ecological properties results in their productivity lowering.

The grey wood soils guarantee getting only 8-10 centner of grain from ha.

Various forms of soil modification, among which the replantation (earthing), ruling, sanding, bituminous grouting (soil conditioning), soil chalking, etc., are recommended for the soils enrichment.

The phytomelioration (land reclamation) – is an agroecologically and economically sound method of their fertility rise.

Compared to other methods of land-clearing the use of phytomelioration is 5-20 times as cheaper.

The phytomelioration (vegetative reclamation) is carried out with the help of new and rare plants: Bunias orientalis, Galega orientalis, Polygonum divaricatum, possessing a super high biological productivity and extensive root system. These plants are introduced in Irkutsk Region on the initiative of the author.

A well-developed root system of these plants drains the tilth-top soil, improves physical-chemical properties of soils. The roots penetrate with underplow-layers, extract nourishments out of hardly soluble compounds and carry them into the top-soil. The plants form a super high photosynthetic potential (PP = 3, 0 – 5, 0 m^2/ha/days), produce a great amount of fresh organic matter, which performs various functions: defensive, ecological, physiological and productional.

The manufacturing expenditures on phytomelioration carrying out make 7-10 thousand rubles per 1 ha.

For four years of phytomeliorants cultivating 40-60 ton/ha of dry organic matter, 600 kg/ha of nitrogen are introduced into the soil; the content of water-resistant structural aggregates increasing up to 75%.

After four years of cultivation the soils are used as forerunners for grains for two years. The grains crop yield achieves 30-35 centner/ha (with no application of chemization means), the grains baking quality grows [3].

References:

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CATTLE RAISING INNOVATION DEVELOPMENT TRENDS IN NON-BLACK EARTH REGION

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The Russian market of meat and meat food is being integrated into the world's food market, the tendencies and processes of which, in their turn, influence the home meat food market state, to an increasing degree.

In present-day conditions at the high plane of all science branches development the ultimate meat product, as a rule, is a multicomponent one. Therefore, to solve the quality problem of a wide range of products, in the basis of which there is meat crude, it is necessary to think not only of the final meat processing technologies, but also, first of all, of obtaining meat system qualitative components forming the final product. The producer-enterprise is of a great importance as well, so as its technical level, assortment, pricing policy and the reputation in the market. The meat production competitiveness factors can be integrated into four groups: economical, technological, social and ecological ones.

For meat production consumers' market assessment the population survey was held in the region