

THE INTRODUCTION OF NEW PLANTS MAY CAUSE ENVIRONMENTAL PROBLEMS

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Abstracts

It is shown, that introduction of new kinds of plants in local herbage can lead to essential environmental problems. The hasty introduction could lead to significant negative consequences, and to reduce the forage capacity of natural hayfields and pastures. The big danger is the importation of *Eichornia crassipes* into our country from the Amazon basin. It is widely advertised in the media. Proclaimed goal of the introduction is quite good – supposedly, this plant can serve as phytomeliorants and will quickly clean the water bodies from pollution. In terms of Russia rather aggressive behaves *Astragalus salignus* Willd. Originally it is a plant from North America. Habitat of *Astragalus salignus* is expanding rapidly, from the southern regions it is vigorously moving further and further to the North. The invasion of this plant is accompanied by rapid displacement of native species. It has no forage value.

Keywords: *Eichornia crassipes*, introduction of new plant, ecology, *Heracléum sosnóvskyi*

Last two decades for an ornament of country summer residences and manors in our country are actively delivered ornamental plants from all regions of a planet [1]. There is practically uncontrollable moving of kinds from one regions Russian Federations in others where this or that plant earlier never grew. In mass media such policy is actively supported. On some TV channels even there are special programs where various kinds of plants imported from other countries for arrangement of personal plots, squares and parks are advertised. However the similar approach is represented to the extremely short-sighted. In history many examples when rash import in other regions led to negative consequences are known. For example, introduction in Australia the cactus almost turned into a massive disaster for the local flora, which was superseded quickly by imported "newcomer". Only urgent delivery of specialized wreckers-insects has rescued a situation. The well-known problems that have arisen with the spread in various regions of the Russian Federation of *Heracléum sosnóvskyi*.

The big danger is the importation of *Eichornia crassipes* into our country from the Amazon basin. It is widely advertised in the media. Proclaimed goal of the introduction is quite good – supposedly, this plant will quickly clean the water bodies from pollution. This plant is extremely quickly made multiple copies and effectively suppresses other water plants [2], absorbs heavy metals and other harm-

ful substances in reservoirs. At the same time other advantage of this plant considers an opportunity of use of biomass *Eichornia crassipes* as a forage for an animal and a bird. Already in this statement essential discrepancy is covered - the green weight of a hyacinth polluted by heavy metals in no event cannot be used for feeding of cattle. Otherwise livestock products will represent significant danger to people. It is supposed, that new grass because of the low cold constancy by the autumn each time will die off. However the factor of duplication of this plant reaches 500 and more. Selection of forms of "newcomer" steady against a cold is inevitable. The result of *Eichornia* adaptation to climatic conditions of different regions of the Russian Federation will be a strong overgrowing of water bodies of the country.

That this plant is capable to turn quickly in weed and to lead to developments of stagnation in reservoirs, to infringement of work of irrigational and drainage constructions, to mass duplication of mosquitoes and other carriers of illnesses - many researchers [2, 4] inform. Already chineses conduct researches on selection of herbicides for struggle against *Eichornia crassipes* [2]. But whether it is necessary to plant a new weed that then heroically with it to struggle by means of pesticides? The answer is obvious. Huge environmental problems in connection with mass distribution of *Eichornia crassipes* already for a long time have arisen in the countries of the Western Africa [4]. Thus, the *Eichornia crassipes* has already passed test. Very much it would not be desirable, that we have repeated experience of africans. In our country hundreds of thousands of lakes and ponds. Monitoring once released "freedom" of a plant is impossible and it will inevitably turn into large-scale ecological disaster. Nevertheless already now under influence of persevering propagation of mass-media in the Krasnodar and Stavropol edges there were the enthusiasts-fans planting a *Eichornia crassipes*. It is in these fertile lands exist the most favorable conditions for the initial acclimatization of *Eichornia*. In the future, this plant will quickly move farther North, leaving behind a stinking stagnant fishless lakes and ponds.

In some articles in newspapers are invited to start the mass cultivation of barberry. Journalists point to the usefulness of the berries. However, it is the intermediate host for the development of *Puccinia* and contributes to mass disease of cereals. Accordingly, the yield of wheat, barley and other cereal crops will fall sharply, it will require the application of fungicides on a large scale, and it poses a serious threat to the health of the entire population of Russia. On one side of the scale – the utility of the berries, which are collected in the whole country, even with a significant increase in the area under the barberry is unlikely to exceed one or two hundred tons, on the other - tens of millions of tons of grain, which will significantly increase the content of pesticides, if we are on a large scale to cultivate the advertised culture. It is obvious that the damage on the orders block favor. The existing diversity of types

of fruit and vegetables by increasing their production enough to meet the needs of people in vitamin products.

In terms of Russia rather aggressive behaves *Astragalus salignus* Willd. Originally it is a plant from North America. Habitat of *Astragalus salignus* is expanding rapidly, from the southern regions it is vigorously moving further and further to the North. The invasion of this plant is accompanied by rapid displacement of native species. It has no forage value. Thus, according to Stankov S. S. and Taliev V. I. [5] in the middle of the last century this plant is met in Vilnius, Volyn, Kyiv and Dnipropetrovsk regions of Ukraine. Currently, however, it has already spread in the Belgorod, Vladimir, Kaluga, Kursk, Lipetsk, Moscow, Orel, Tambov, Tula regions and Republic of Mordovia [3]. According to our observations the climatic conditions of the Chuvash Republic have also proved suitable for its reproduction in old gardens and parks, along rivers. On normal valleys an introduced species forms a continuous curtain area up to 30 m². Plant grows actively until October. Accordingly, we observed multifold increase in the suburbs of Cheboksary in a few years the space occupied by North American "guest", inevitably accompanied by a decrease in food capacity of natural hayfields and pastures.

References

1. Bakanova M. V., Namzalov B. B. Introduction of plants.- Ulan – Ude: Publishing house of Buryat state University, 2009. – 207 p.
2. Ding Jian Qing, Wang Nian Ying. Effect of herbicides on mortality of eggs, larvae, pupae and adults of *Eichornia crassipes* weevil *Neochetina eichorniae* Warner // Chinese Journal of Biological Control. 14.-No 1. pp. 7-10.
3. Maevskij P.F. Flora of an average strip of the European part of Russia .- M.:Tovarishhestvo nauchnyh znaniy KMK, 2006.- 600 p.
4. Pieterse A.H., Mangane A. The *Eichornia crassipes* problem in West Africa and proposals for control strategies // Journal internationale sur la lutte contre les mauvaises herbes, Reims, France, 6-8 decembre 1995. -Tome 3.- pp. 1393-1400.
5. Stankov S.S., Taliev V.I. Identifier of plants of the European part of the USSR.- M: Sovetskaja nauka, 1957.- p.741.