ASCLEPIAS SYRIACA CAPTURES THE FIELDS OF UKRAINE

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Formulation of the problem. In recent years, vicious, limited, little-known weeds have become more widespread in Ukraine. Unfortunately, not all specialists in agricultural production know the general complex of dangerous species of segetals, because they have not met them all in their fields. However, these plants can quickly become a serious problem for land users at all levels.

Asclepias syriaca L. belongs to the Asclepiadaceae family – it is a perennial plant of the dicotyledonous class, is a big problem in crops of corn, sunflower, potatoes, canola, sugar beets, as well as wheat and other crops.

Homeland Asclepias syriaca – North America. There it can be found on railway embankments, along roads, in fields, etc. The first Asclepias syriaca came to Europe in the XVII century as a technical culture and quickly spread in France, Germany and other European countries, including Ukraine.

Asclepias syriaca (other names: american vatochnik, common milkweed, wild cotton, wild silk, common silk) is becoming more common. With the beginning of the production of artificial rubber, the vatochnik remained in the fields of Ukraine as a perennial weed. It is widespread in Kyiv, Poltava, Chernihiv, Cherkasy, Dnipropetrovsk and other regions. Given that the Asclepias syriaca is a very vicious weed that is not subject to either chemical or mechanical destruction, due to which it multiplies rapidly, this poses a serious threat to Ukrainian fields. It is assumed that previously in crops cotton wool did not appear due to excessive chemicalization. Current pesticides are considered more loyal to the environment.

Presenting main material. Asclepias syriaca attracts people and insects with its appearance. It blooms in July and August. The smell of its flowers resembles the smell of chocolate cake.

The plant forms a powerful rosette, which has a fairly high growth energy, so in June-July can significantly exceed such crops as sunflower, sugar beet, corn, wheat, soybeans, canola and others.

The root system of the species is very powerful, able to penetrate into the soil to a depth of 4-5 m to compete for water and nutrients.

Propagated by roots and seeds. Upon entering the soil, the seeds germinate quickly and during the growing season form a colony of plants, as the bushes grow quickly. White silky hairs on the seeds help to spread them by the wind over a considerable distance. New plants from the buds of the root system begin to form in July - August, but they reach the soil surface only next spring. The growth of roots and root shoots stops in mid-August to early September. A young plant of Asclepias syriaca, sprouted from root shoots, begins to form new root sprouts as early as 18-22 days after germination.

The seeds remain viable in the soil for three years. Under conditions of prolonged soil drought (more than five months), the seeds of Asclepias syriaca die.

In recent years, in some fields in the western forest-steppe of Ukraine, we have found that Asclepias syriaca appears in the fields mainly in May. Regardless of the amount of precipitation, this weed grows up to 2.5 m.

Cutting down or cutting (mechanical destruction) of plants only stimulates the further development of the root system. If you do not follow the measures to control the number of this plant in the agrocenosis, then in a short period of time (3-5 years) the field will turn into a solid colony. It is extremely difficult to control Asclepias syriaca, this problem has not been studied enough. Only some scientific institutions and farms search for the most effective herbicide compositions and determine the optimal timing of their application.

A prerequisite for successful control of the number of Asclepias syriaca plants in agrocenoses is timely inspection of crops to determine the species composition of weed seedlings in the cotyledon phase in order to further implement protective measures. Unfortunately, the use of a herbicide that would effectively destroy cotton wool in crops has not yet been created. Very strong and well-developed root system of the plant successfully resists the effects of existing herbicides. The use of available plant protection products ensures the destruction of only the aboveground part of the Asclepias syriaca, inhibiting its growth and development, but complete destruction can not be achieved.

Therefore, no pesticide manufacturer can offer farmers a form of the drug that can completely destroy the Asclepias syriaca. Therefore, the best way to control it in the fields is to apply herbicides at an early stage, in the early stages of weed development. In the phase of cotyledons and 1-2 leaves, the effectiveness of herbicides is quite high. They make it possible to completely destroy the aboveground part of the fleece and help the culture to stay ahead of development in the process of competition. Experts should know that in the phase of 6-8 leaves of Asclepias syriaca, milk appears in the juice, which blocks the effect of the herbicide, so the application of the herbicide is not effective.

After application of the herbicide for three weeks there is a re-regrowth of plants and mowing or other mechanical destruction is not advisable to perform them, because it will stimulate the development of the root system. If necessary, the herbicide treatment is repeated.

Seedlings of Asclepias syriaca which did not have time to develop, can be successfully controlled by a large number of drugs. As practice shows, the best results are obtained by combining several herbicides with different active substances or the use of drugs containing 2-3 active substances. According to field studies, treatment with drugs was effective: Tornado, RK (active substance - isopropylamine salt of glyphosate, 486 g / l) + surfactant Adyu (to increase the effectiveness of the drug) - 4-5l / ha + 5l / ha; or Hlyfovit (active substance - isopropylamine salt of hlyphosate) and Hlyfovit Extra (active substance - potassium salt of hlyphosate), as well as pesticides based on clopyralid.

Conclusions. Asclepias syriaca in places of its growth is able to displace from the phytocenosis almost all cultivated plants and weeds and cover a large area.

According to the harmfulness of agricultural land at the state level, weeds are divided into quarantine and malignant. Asclepias syriaca in Ukraine is classified as a vicious weed. Agronomists are concerned about the spread of this plant, as it is difficult to chemically and mechanically destroy, multiplies rapidly and becomes a serious threat to Ukrainian fields.

Optimal results can be obtained only by combining chemical protection of crops with the implementation of effective agronomic measures. An important condition for limiting its spread is thorough cleaning of agricultural machinery when moving from one field to another, mechanical destruction of adult plants to prevent their flowering and fruiting (shedding and transfer of seeds).

It has been established that the most effective destruction of Asclepias syriaca is the autumn application of herbicides, when weeds are draining nutrients to the roots.

Asclepias syriaca is a perennial highly competitive plant with creeping lateral root stock and no one-time exterminating measure of influence (even with 100% efficiency of destruction of the ground part) will ensure complete eradication of warbler from the field. To do this, it is necessary to carry out a multifaceted purposeful 2-5-year struggle.

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