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**LONG-TERM DYNAMICS DENSITY OF DEVELOPMENT
INTERSPECIFIC NATURAL POPULATIONS KOKTSINELID
(*COLEOPTERA, COCCINELLIDAE*) THROUGHOUT THE GROWING
SEASON OF WINTER WHEAT UNDER STEPPES UKRAINE**

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Actuality: Coccinellides (*Coleoptera, Coccinellidae*) - are among the most effective entomophages of many pests of agriculture and forestry. The vast majority of species of coccinellide are predators destroying aphids, leaflets, worms, shields, tryps, spider mites, leafworm larvae, many small arthropods, and are natural regulators of their numbers. Biochemical properties of coccinellide allow them to be widely used to protect plants from pests, thus limiting the use of pesticides and replacing them with biological means. Hazy coccinellides were among the first to be used in the biological method of struggle, and in many cases, due to their use, success has been achieved in regulating the number of dangerous pests of agricultural, forestry and ornamental plants.

Of the 75 species of coccinellide, 70 are predators, which, depending on the systematic affiliation of prevailing food items, are divided into the following environmental groups:

- Afidophagy, eating aphids;
- Coccidophagous, which feed on coccidia;
- Acariphages eating vegetable spider mites;
- polyphages that feed on other different insects.

When studying the covetessness of coccinellide, it was found that the Imago *Coccinella septempunctata* L. eats from 120 to 176 larvae of aphids of different species per day, and the larvae of the IV age from 108 to 185 larvae of aphids of various species. *Coconinidids AdoniavariegatGoeze* and *Adaliabipunctata* L. eat during the day from 110 to 160 and from 95 to 172 aphid larvae, respectively. In this case, the larva IV of the age *AdoniavariegatAgoeze*

destroys from 85 to 168 larvae of aphids per day, and the larva IV of the age *Adaliabipunctata* L. - from 72 to 83.

In most affidophagus, the specialization in nutrition by aphids is poorly expressed. Thus, *Adoniavariegata* Goeze destroys aphids of more than 18 different species, *Coccinellaundecimpunctata* L. - 12, *Oenopiaconglobata* L. - 14 species of aphids. In South-East Kazakhstan, *Coccinellaseptempunctata* L. feeds with aphids more than 13 species, while destroying even more larvae of cicatlope and leaf blubber, tryps, cereal aphids, eggs and larvae of some scallops and beetles. In relatively few afidophases, forage specialization is expressed quite well. On the dynamics of the number of coccinidoles, the parasitic insects have a noticeable effect: an attack: larvae of older age groups, blackheads and syrphides on egg laying and coccineidal larvae of younger ages. Coccinelid larvae: *Coccidularufa* Herbst., *C. Scutellata* Herbst., *Tytthaspissedecimguttata* L. eat nuts, carnivorous bugs. Zhukov coccinellide destroys grasshopper green (*Tettigoniaviridissima* L.) and pseudoslaw (*Trichodes* sp.), Which most often attack *Bulaealichatshovi* Hum. *Anthocorisnemororum* L. bug is registered as a predator of puppets of coccinellide. The beetles attack the ants, not allowing them to colonies of aphids. Particularly aggressive *Formicarufa* L., *F. Pratensis* Retz., *F. rufibarbis* F. Occasionally, coccineidal species of the genus *Laphria* Mg. and sucked them.

Destruction of cereal aphids: common cereals (*Macrosiphum* (= *Sitobion*) *avenae* F.), large grasses (*Schizaphis* (= *Toxoptera*) *graminum* Rond.), Cherry Grass (*Rhopalosiphum padi* L), barley (= Russian wheat) (*Diuraphis noxia* (*Mordvilko*) = *Brachycolus noxius* Mordvin.). Damage to winter wheat bugs and coccinate larvae bring great benefits to agriculture.

Objective: to study the peculiarities of the seasonal fluctuations of multi-year dynamics of the density of interspecific natural populations of coccinellide (Scoleoptera, Coccinellidae) throughout the growing season of winter wheat under the conditions of the forest-steppe of Ukraine.

Methods: Experimental studies were conducted during 2014-2016 under the conditions of stationary experiments of Agrocompany SyngentaAG in p. Small

Bolshannaya of the Bila Tserkva district of the Kyiv region on the Lybid variety of winter wheat.

During spring-summer and autumn route surveys, the density of state of development of interspecific natural populations of entomophagous coccinellide was carried out by counting insects in the area of $0,5 \times 0,5$ m with the help of a frame in 10-fold repetition, and then converted to 1 m^2 .

Results: The long-term observations and research results show that in the spring-summer period of 2014, the total density of the development of natural populations of coccinellide ranged from 0 to 21 cfu/ m^2 . Bulk summer coccinellide was observed from the third decade of May to the third decade of July.

In the spring-summer period of 2015, the total density of the development of natural populations of coccinellide varied from 1 to 17 cf./ m^2 . Bulk summer coccinellide was observed from the first decade of June to the third decade of July.

In the spring-summer period of 2016, the total density of the development of natural populations of coccinellide varied from 2 to 21 units/ m^2 . Bulk summer coccinellide was observed from the third decade of May to the third decade of July.

Consequently, in the spring-summer periods of 2014-2016, the total density of the development of natural populations of coccinellide was from 1-21 cf./ m^2 .

Conclusions and perspectives: During the growing season of winter wheat in the spring-summer period, in the period from 2014 to 2016, the total density of the development of natural populations of coccinellide was from 1-21 cf./ m^2 .

In the autumn winter period of winter wheat during 2014-2016, the total density of the development of natural populations of coccinellum was from 1-10 per/ m^2 .