

## MASS REPRODUCTION OF PEST INSECTS AND FACTORS AFFECTING IT

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### Abstract

This article covered the distribution area of a class of insects common on Earth and the factors affecting it. In particular, information is presented about the population dynamics of insects and the factors that affect their number fluctuation. Information has been given about the seasonal period in insects, the minimum crisis period, the concepts of biocenosis.

**Keywords:** Population, gradation, population dynamics, pest, Serpentine, biocenosis, abiotic factors, seasonal period, crisis period, cabbage butterfly.

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### INTRODUCTION

In nature, insects live in a population state and all species is considered an integral part of the ecosystem. Insects the number of individuals in the population, that is, the density of individuals, is not constant, constantly changes under the influence of environmental factors.

Population to changes in the number and density of insect individuals is called dynamics. This is of great practical importance. Phytophagous Insects are individuals that feed on cultivated plants. As their numbers and density increase, these insects become pests damages plants, yield and productivity does not end. The decrease in the number of the individual pest is him reduces the harmfulness, especially when the density is reduced it can become harmless for a while.

The process of all quantity (number) change—from the maximum to to a final minimum, which is sometimes referred to as the concept of gradation.

The reality of pest population dynamics development of understanding and its theoretical issues, pests of great practicality in plotting mass distribution extimo data is important. Based on this information, the damage of pests prevention measures should be taken in time.

The increase in the number of harmful insects is mainly due to the number of insects depending on:

- 1) the instability of the external environment and environmental factors of the species adaptation;
- 2) under the influence of sloppiness and external environment, of sensuality change

In this change, the quantities have two characteristics. First, change of individual density in the population (i.e. per 1 m<sup>2</sup> or one plant); secondly, the number of stations located may have changed. So decrease or increase in the number of individuals, but one or several species not the place of residence, but can occupy one or another part of the area. It is with these pointers that the scale of mass emergence is determined.

The abundance of insects and their ability to breed not big. Sometimes this reproductive potential is called biotic potential is determined.

The number of individuals in the population G. A. Viktorov's suggestion, is defined by two categories: modifiable and ordering factors.

Modifiable factors are abiotic factors, they affects the population, regardless of the density of individuals (ieresardless of the number of species). For example, cabbage in a cold quiche regardless of the number of butterflies or autumn moths (small or kupmi) will perish. Or the soft coming of a person is rare and dense population is a means of increasing the number of individuals.

So, these environmental factors affect the amount of individuals can vibrate, i.e. modify its amount,Controlling factors - the number of individuals in the population does not change, but regulates them. Except for these biological factors—natural agents (predators, parasites, diseases), intraspecies relations and nutrition. This biocenosis for the population density of one or another insect species to a high level when it is reached, reactive factors begin to affect. Phytophagous insects the increase of individuals to increase the number of entomophages creates conditions, individuals are in close contact with fungi, bacteria and others causes diseases, is food for phytophagous insects Some types of insects have a tendency to form a mobile gala phase brings As a result, the previous mass of the species, of individuals the amount in the population, the proportion of individuals or, in general, other as a result of migration (intensification) to the place is sharply reduced. In different types the number of individuals varies. Pests Identifying the specifics of population dynamics of species creates a scientific basis for the development of information methods.

All population dynamics can be divided into three types: resistant, seasonal and perennial.

1. Enduring tipmicdordynamics, less or less during the growing season kupmi is characteristic for species that have a constant amount. This The number of individuals of the species population is also during the seasonchanges, because high humidity is provided throughout the year. This typhoid bugs, grain bugs, caterpillar bugs and their larvae, black-skinned beetles and their larvae and others enters. For information on the approximate amount of these species to calculate the density and determine the spread in each field in the fall a must

2. Seasonal type of population dynamics during one season The density is characteristic of fast-growing species. These species are individual their amounts increase very much in one vegetation period, that is, from spring until autumn, it returns the same every year. There are many polyvoltine types and some high-severity monovoltine species: cabbage moth, bollworm aphids, plant lice, apple fruit borer, apple moth, hessian and swede includes flies, houseflies and others. A lot of steam yield or high fertility in one growing season of these species rapidly increases the number of individuals. This group is an individual for species increase in the amount is characteristic in the second half of the season or in autumn.

3. Complexity and diversity of long-term population dynamics is characterized by the number of individuals in the population and The density of the location spans several years and the population The dynamics is related to the use of several periods. Basically 4 periods: A period of minimum or depression is the number of insects is minimal and does not cause significant damage, The period of growth or growth is the number of insects and its density in the population increases under the influence of climate conditions and they spreads to a new place of residence, but the damage is not so significant;The period of maximum or mass sudden outbreak is in this insects have the highest density in population and location is in an ecological and physiological optimal state. To some extent

will cause damage. Decline crisis is the first under the influence of unfavorable conditions Abiotic factors (natural conditions, lack of food) reduce the drug

begins, the density of the population and the number of settlements decreases, damage decreases sharply.

The total attendance of the population dynamics cycle of the whole period, at least 4 years in monovoltine types in perennial type, most 6-10 and more years in types, 2-3 years in bivoltine and trivolttnns.

An insect species is distributed and with certain ecological conditions the described site is called the

habitat of a particular species station. In nature, each species has a certain territory, that is, a place occupies. Dispersal of a species in a place, partially or completely of the environment environmental conditions and the ability of this species to select conditions dependency. These wheat fields are affected by wheat thrips, Swedish fly, grain bugs and for others it is considered a station or place of residence. Central Asia for locusts, the river in the south, the swamp in the ash and seas reed fields are considered as a station, and for May Day, pine fields, forest massifs and others. Each of the above stations has its own vegetation cover, soil, microclimate has a similar feature. But further observations show that the species station can be changed. Change the type station to zone, time of year, etc. It has been determined that it can occupy different places. These are the conditions prof. G. Y. Bey-Bienko called the principle of change of place of residence. Wide a lot of the same insects spread out in the north, where it is dry and warm occupies the stations, and in the south it is more humid and the vegetation grows thickly lives in places. Stations in hot and dry regions Seasonal change is clearly felt. For example, locusts are common in the temperate zones of Europe in places, and in the south, in swampy stations, scattered or pistlokhors under the canopy of trees in forests and deserts, and in semi-deserts in soil, roots and others. In short, a pest It is harmful to know exactly the change of species station of great practical importance in determining pest control measures have. Choosing a place of residence is the principle of permanence, its antipode is living. The principle of exchange of place is the relationship of the species with its habitat shows its complexity. Relationship with the habitat of the species without understanding and taking into account its ecology and some biological It is impossible to understand the side of the fight against harmful species breeding of useful species, development of practical activities delay.

The total area occupied by a species is called its range. Types geographical distribution, i.e. area, environmental and environmental requirements of the species conditions, in particular, ambient temperature, humidity and food resources dependency. If the globe has three climates: hot (tropical and subtropical), moderate. If it is divided into hot and cold (northern regions) zones, then the species the number varies in these zones. For example: amphibians are the first in the zone - 3400, the second - 150, the third - 2.

The humidity of the area is also important for the distribution of insect species. For example: Moroccan locust from the south of Ukraine to Transcaucasia, It has spread to south-eastern Central Asia as far as Krygyzistan. This in the territories in the spring months (March, April, May) about 100 mm there will be precipitation. Average soil moisture for Moroccan grasshoppers exceeds 100 mm eggs die from fungal diseases. Dry spring months arrival also causes the death of eggs and their larvae.

The role of the food factor is important in the distribution of insect species is important. Especially for monophages, for example, wheat thrips is wide it is scattered and it is found in all grain regions. Cabbage butterfly kaerda if cabbage is planted, it will spread there. That is, from agricultural crops if apricots are scattered in any area, their pests Raw can be found. But climatic conditions play an important role. For example: Cabbage butterfly and autumn moth are not found in Siberia. In short, the range of the species is ecological determined by the complex effect. For some species climatic factors of the area, for some, food factors are important can play a role.



Cabbage White Butterfly (*Pieris rapae*)

In conclusion; Accurate and reliable information on insects In development, they are deep in biology and ecology each type of pest with information has a separate population, It is necessary to know the characteristic feature of dynamics.

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