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DEFINING PESTS OF MEDICINAL PLANTS AND CONTROLLING THEM

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ANNOTATION

The article provides information about the growth, development, products of the plant chamomile, which is one of the medicinal plants and using it in pharmaceutical industry in the condition of Karakalpakstan, at the same time, biology, ecology, development of pests, that are considered to be damaging type of harmful factors, and actions of control.

KEYWORDS: *plant, medicine, pharmaceuticals, harmful factor, pest, biology, development, control.*

INTRODUCTION

Today, a great attention is being paid to develop pharmaceutical industry and make medicine on the basis of using medicinal plants as raw materials in the world. According to the information of World Health Organization, today 60 % of medicine consists of preparations taken from the products of medicinal plants [6, 7].

At the same time, in our Republic some scientific-practical works are being conducted in developing the branch of medicinal plants and requirement of pharmaceutical industry for raw material products of medicinal plants is being satisfied. On the basis of scientific and practical researches, methods of growing, manifolding and producing medicinal plants in the places near mountains and irrigational lands were created and recommendations were given to the concerned household [3].

In the degree of Cabinet of Ministers of the Republic of Uzbekistan “About state protection of medicine creating branches of the Republic of Uzbekistan” it is mentioned about

protecting medicinal plants concerned in local flora and introducing, and manifolding them.

Therefore, it is required to manifold spreading areas of these types and production by taking into consideration that types of medicinal plants and ecosystems are met a lot in agrobiocenosis in the condition of Karakalpakstan. In information, collected until today, pest types, feeding, damaging factors have been identified in the growth-development of medicinal plants [5]. In order to decrease damaging degree of these factors, it is necessary to determine types of plants, pests spread in them and damage, carrying out controlling actions.

THE OBJECT AND EXPERIMENTAL METHODS OF THE THEME

The main object of the research is chamomile (*Matricaria recutita L.*), which is one type of medicinal plants, and pests, that are counted as harmful factors of it.

Research was conducted with the help of applying special methods used in the fields entomology, agrotoxicology and plant



protection. Experiments, biometrical measuring and analyzing them were carried out on the basis of methodologies of B.A.Dospekhov, Sh.Nurmatov and others [2, 4]. Methods of B.P.Adashkevich, Sh.T.Khujaev, V.B.Golub and others were used in defining types of pests spread in chamomile and collecting samples, and methods of H.Mirzalieva, H.H.Kimsanbaev, Sh.T.Khujaev and E.Sh.Toreniyazov were used in organizing actions of controlling pests [1, 8].

RESULTS OF THE RESEARCH

The main type of plants, which spread in primary ecosystem, agrobiocenosis in the territory of Karakalpakstan, is medicinal plants. They have been used widely in people's medicine and today medicinal products are being made by reproduction. As a result of conducted observations on defining these types of plants, chamomile is considered to be adapted for the condition of the region, agroclimate and soil. In order to use the type effectively it is necessary to determine pests and then creating actions of control.

The plant chamomile (*Matricaria recutita* L.) consists of medicinal features, the height reaches to 15-40 cm, like an annual plant. The stem is straight growing, with a lot of branches, porosity inside. The leaf is divided twice, segments are as a thin line, sharp. The stem and branches end with flowers gathered to a basket. Flowers, which are at the sides of basket, are white, like a tongue, flowers in the middle are two gendered, yellow, like a nay. The fruit is dark-green peanut. Blossoms from May until autumn.

A ready product consists of flowers collected in a basket. The diameter of medicinal chamomile's basket is 4-8 mm, like a half round, leaves are placed as tiling. On the sides of the basket there are 12-18 flowers as a white tongue.

Flowers in the basket consists of 0,22-0,8% essential oil, apiin, quercimerythrin, quercetin, luteolin and other (combinations about 35) flavonoids, matrikarin and matricin from lactonlarynan of the group guayanolide, heterocyclic ring polyin lactons, prochamazulene, coumarins, dioxycoumarin, carotene, vitamin C and other elements.

It was defined as a result of the conducted experiments that some sucking and rodent pests damage chamomile. From them: some types of harmful beetles and earworms, cockchafer, thrips, aphids, wireworms and etc.,

are came across and damage by eating some vegetative, generative parts from the beginning until the end of the vegetation period.

Harmful beetles – like flowers of chamomile and damage highly. 5 types of bronze colour beetles: turan alenka (*Epicometis turanica* Rtt.), piebald bronze (*Oxuthyera cinctella* Schaum.), birth-marked bronze (*Stalagmosoma albellum*), blue bronze (*Potosia turkestanica* Kraatz.) and dark bronze (*Potosia agglomerata* Sols.) are considered to damage chamomile in Central Asia.

The body of bronze colour beetles is short, strong and with antenna, legs adapted to dig the land, on the two side of the front of eyes there are two holes. Winged, there is a hole in front side of wings. The front part of the back is joint with wings. Legs are situated on the above part of the body. The larva is white, all legs are at the same length and the body is covered with some long cilia.

The type thrips is the most harmful pest which damage by sucking nutritious elements from the phase when chamomile make seeds and leaves until the end of the vegetation period. Its damage is dangerous from the greening of seedlings until creating 5-8 leaves, and young leaves, growing point of plants are fully destroyed. Damaged places are like shining silver, sere leaves come out of the buds.

Cockchafer is active on the top layer of the soil in the phase of greening seedling of the plant and vegetation period, and damage by cutting seeds and roots of the plant. Also, adults gnaw seedlings and stem of the plant. As a result seedlings of the plant are destroyed, the amount and yield are decreased.

Wireworm damage plants in an early period. Worms damage root and stem, and damaged plants get dry. Damaging is low when there are 2 in each 1m², average when 3-5, and high when there are more than 5. The characteristics is that they are gathered in heavy soil, depending on the change of moisture they move straight and to side.

In order to decrease damaging degree of the mentioned types of pests, the recommended agrotechnical actions should be carried out in controlling pests of agricultural crops. In autumn, it is necessary to clean the field from plant residues, plow, irrigate. It is required to increase resistance to external factors by softening the soil, using organic and mineral fertilizers.



Convenient condition should be created to the useful insects: trichogram, golden eye, ladybird, syrphid fly, etc., which are manifolded in natural condition, when damage and first generation of pests appear. If earworms are determined in the field, it is required to distribute 200000 pieces of trichograms, that are being manifolded in biolaboratories, to each hectare and decrease the number of pests to 75,1-78,9%, if sucking pests appear in chamomile 1000-2000 pieces of golden eye should be distributed to each hectare and reach the biological effectiveness up to 71,6-82,5 %.

It is recommended to use chemical preparations Killer 5% k.e. (0,2-0,4 l/ha), BI-58 (new) 40% em.k. (1,5 l/ha), Decis 2,5 % em.k. (0,25-0,5 l/ha) and decrease the number of pests to 93,5-97,6 % when the above mentioned pests appear in the field of chamomile.

CONCLUSION

As a result of researches conducted on the plant chamomile, which is growing in the condition of the region, it was obvious that the biotope creates comfortable condition for gathering most of the pests. Chamomile is an annual, medicinal and decorative flower plant, blossom starting from May until the late autumn, mainly in the phase of giving seed the following pests can be met: harmful beetles, earworms, cockchafer, thrips, aphids, wireworm and others, and damage. In order to prevent from this kind of damage it is required to carry out agrotechnical methods taking into consideration developing bioecology of the pests. It is necessary to create convenient conditions for the spread of entomophages from the early spring and distribute the generation manifolded in biolaboratories.

In controlling the main pests of chamomile permitted chemical preparations should be chosen and it is recommended to use them with the help of handling sprayers in small fields and sprayers hanged to the tractor in industrial fields.

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