

SOYBEAN PESTS AND THEIR TROPHIC RELATIONSHIPS IN THE CONDITIONS OF CENTRAL FERGANA

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Annotation

This article provides information on the morphological structure, pests and their trophic relationships of soybeans grown in the conditions of Central Fergana.

Keywords: soybean plant, legume, oilseed, fungus, bacteria, Central Ferghana.

Abstract

Soybean (*Glycine*) is a group of annual herbaceous plants belonging to legumes, leguminous grain and oilseed. 10 species are found in Africa and South Asia, humid tropics and subtropics of East Asia, 1 wild species is found in the Far East. Homeland – China. Soy is a crop that has been cultivated for a very long time. It has been cultivated since 5 thousand BC. It is grown in the USA, RF, India, Japan, Korea, Indonesia, Ukraine, Moldova, Georgia and Uzbekistan. Soybean crop is small in the world. 73.6 mln. ha, the average grain yield is 22.1 s/ha (2000): It began to spread widely in Uzbekistan from the 60s of the 20th century. The root of the common soybean (*G.max*) species is well developed, the arrow root is thick, it penetrates the soil to a depth of 2 m, the main part is located in the arable layer (nodular bacteria develop in the root).



The stem is rough, cylindrical, grows upright, but there are also varieties that lie down. Its height is from 15 cm to 2 m, it is branched, there are 2-8 side branches. The leaf is stiff, banded, and the band is long. 8-20 cm, the length of the leaf blade. 13-15 cm. The flower is small, white or pink, collected in a small inflorescence, placed in the axil of a leaf. The fruit is a pod, yellow, black, brown, firm. Each pod contains 2-6 grains, 1000 grains weigh 40-425 g. Contains 24-45% protein, 13-37% fat, 20-32% carbohydrates, 1-2% lecithin, D. V, Ye, etc. there are vitamins. Oil, protein and lecithin are obtained from the seed. The growing season is 75-200 days. Soya is heat-loving and moisture-loving, light-loving short-day plant. It develops well at 21-23°. The seed germinates at 8-10°. Soybeans are pollinated.

The flowering period lasts 15-55 days. Soya flour and oil (q. Soya oil) are obtained from it. Grain, unripe (dumbul) pods are used for food. Soybean flour is used in the preparation of milk, cottage cheese, confectionery products. Straw, straw, blue stalks, silage are fed to livestock. Uzbekistan 2, Uzbekistan 6, and Dostlik varieties of soybeans were produced in 1981-88 at the Uzbekistan Rice Institute and were regionalized for all regions. Diseases: bacteriosis, septoriosi, ascochitosis, fusarium. Pests: aphids, spider mite, black moth. In the fight against it, mainly antibacterial and antifungal agents are used.

Several types of fungal, bacterial, and viral diseases occur in soybeans. These are manifested by signs of root rot, wilting of the plant, various spots on leaves, pods and grain.



Like other plants, diseases such as rust, powdery mildew, fusarium, ascochytosis and spider mite pest are characteristic of soybean plant. Spider mite causes severe damage to soybean plant. In all stages of development, the pest settles in clusters on the underside of the soybean leaf (usually in the pits and along the vein) and on the leaf.

The leaves, even the plant, is covered with thin gray spider webs if it is severely damaged. First, small brown spots appear on the affected leaves, then they coalesce and turn brown on the upper surface of the leaves, and they fall off. is considered an unwanted pest. Young caterpillars make holes in soybean leaves. Adults eat the leaves. White rot or sclerotinosis (*Sclerotinia liberitana* F.) disease occurs in all places where soybeans are grown. Dryness of the plant, branches, stems, or sudden wilting of the plant during pod formation is a symptom of the disease. In the development of false powdery mildew in soybeans, the grains taken from the damaged plant and the remains of this plant are the basis.

When a soybean plant is damaged in the germination phase, the leaves of the seed coat turn yellow and fall off. *Fusarium* disease (*Fusarium* L.) is present in all areas where soybeans are planted. The disease is spread by fungi. When the disease germinates, a dark spot appears on the seed coat. It then forms a pink pillowy mold. When the plant germinates, the seed coat expands, changes its shape, and dies when it germinates on the surface of the soil. When the seed germinates, a dark circular deep wound appears on the top and bottom of the seed coat. As soon as the weather becomes cool, the pink mold in the root throat damages the root of the plant. Later, during flowering and pod formation, the edges of the leaves turn yellow, twist, dry and fall off. A dark brown spot is formed at the root neck of the stem, and the plant wilts. During the ripening of seeds in humid weather, the disease is orange on the pods, the pods are shriveled, and the pods are covered with a oozing powder. Such seeds will not germinate next year. Mosaic disease (SMV) is spread by viruses. The disease is widespread in all areas where soybeans are grown. The first symptom of the disease is that the leaf veins become discolored, twisted, and a dark green bulge forms between the veins. The leaves of some varieties turn yellow, and the plant tissue does not swell weakly, while in others, the leaves turn a little yellow, fall off, and decrease in size. In some cases, the leaf surface becomes smaller. In such plants, the pod yield is low, the seeds are small and have black spots. This disease is spread by plant lice during pod formation. The leaves of soybeans infected with mosaic thicken and become scaly and break quickly. Against viruses, it is necessary to remove infected plants before budding and to fight against insects that spread soybean mosaic. Fight against diseases. Parasites that cause soybean diseases overwinter mainly in plant residues and soil.

Conclusion

Continuous planting of soybeans in the same area and the increase of diseases and insects in the soil will eventually lead to a decrease in productivity. Correctly organizing crop rotation and eliminating fungi and bacteria from the soil will ensure the reduction of diseases. Fall plowing is one of the most important measures in eliminating fungal spores and bacteria that winter in the soil. In addition, the correct determination of planting dates also reduces the damage to lawns by bacteriosis and

fusarium. Having sufficient knowledge about the methods of biological and chemical control against soybean pests and diseases and following them will get an abundant harvest. will be the basis for

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