

**“ASCOCHYTA AND POWDERY MILDEW DISEASES OF PEA
PLANTS IN KASHKADARYA REGION AND MEASURES TO CONTROL
THEM”**

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ABSTRACT. Leguminous grain crops are considered one of the most important crops in world agriculture and are planted on an area of 135 million hectares every year. Of this, the area planted with legumes is 20-25%. In terms of cultivated area, soybeans, chickpeas, green peas and lentils are being planted in the main large areas. Today, 21,800 hectares of irrigated and dryland areas of the republic are cultivated, of which 6,500 hectares are grown in the southern regions. In recent years, a number of works on agricultural reform, effective use of land and water resources have been carried out in the regions of the republic [7]. Including diversifying production, improving land and water relations, creating a favorable agribusiness environment and a high value-added chain, supporting the development of cooperative relations, wide introduction of market mechanisms, information and communication technologies in the field, as well as effective use of scientific achievements. and in order to increase the potential of personnel, several works are being carried out in our country. Taking into account the above, it is an urgent task to develop measures to combat diseases based on the study of the species composition and bioecology of diseases occurring in pea and lentil crops.[8]

KEY WORDS. Beans, fusarium, askachitosis, powdery mildew, nematode, releft, fungus, vitamins, fodder, thermostat.

INTRODUCTION. Pea plant - *Cicer arietinum L.*, is one of the most common ancient crops in the world. Peas were cultivated in India in the 1st century, and in the

countries of the near east, they were used in the preparation of food products 7500 years ago.[2,6,8]

Among leguminous grain crops, the pea plant has the most diseases, and ultimately causes significant damage to the plant's growth and productivity [6].

Pea is an annual plant and belongs to the family of legumes (*Fabaceae*) and belongs to the genus *Sicer*. Currently, there are 27 species of chickpea, and only one, *Cicer arietinum L.*, is cultivated as a cultivated crop. Pea grain contains 19-30% protein, 4-7% oil, 47-60% nitrogen free extractives, 2.4-12.8% fiber, 0.2-4.0% ash, and also vitamin B and mineral there will be salts. Peas are widely distributed mainly in India, Turkey, Canada, Pakistan, Australia, Spain, Mexico and other countries[9,11].

MATERIALS AND METHODS. In 2023, the time and place of collection of plants collected for mycological research in herbariums, and their systematic place were defined and determined on the basis of binary nomenclature. In mycological studies, methods of growth in different nutrient media in petri dishes were used to isolate the fungal species found in plant tissues from plant parts.

In order to determine the fusarium infection of seedlings grown from seeds, healthy seedlings, diseased and withered seedlings were counted separately in 1 m². such sites made up 10% of the studied fields.

Xoxryakov, Polozova and Vaxrusheva methods were used to determine the types of diseases occurring in pea plants, taking samples from infected plants from the growing period to harvesting. The samples were separated from the upper, lower and middle parts of the plant during flowering, pod bearing and ripening and kept in a special environment and at low temperature.

Modern microscopes available in our laboratory were used to isolate fungi that cause disease in plants, identify their types, study their structure and development. Temporary or permanent preparations were prepared from the studied fungi, and we used a simple method of taking pictures under a microscope to take their microphotographs. In mycological studies, various dyes were used: methyl blue, methyl

violet, Lugol's solution to improve the appearance of fungal mycelium, conidia, cells, septa, and chlamyds spores. Hasanov's method is used to isolate fungi from diseased plants taken for phytopathological examination.

For this, the samples taken from the part of the plant under examination are washed for 30 seconds in sterile water, then kept in a solution of surfactant tween for 30 seconds. After that, these samples are kept in 0.5% NaCl solution to remove external mycoflora, and then they are washed in sterile water for 1 minute. thrown away, in order to isolate the fungi from them, they are planted in potato glucose agar nutrient medium, and the release of fungi is monitored from 48 hours. The emerging fungi were planted in a nutrient medium in a test tube, and monospored cultures were obtained to determine their systematic position.

RESULTS AND DISCUSSION. Diluted nutrient media or synthetic nutrient medium were used for the experiments. The ability of fungi to produce phytotoxins was determined after 10-15 days of cultivation in liquid nutrient medium. The toxic substances produced in the media where the fungus was grown were separated by filtration from the conidia and mycelium. Biological, chemical and physical methods were used to study phytotoxins. Using chemical methods, it is possible to isolate some toxic substances and study their individual effects. However, its biological importance was fully revealed when many toxic substances interacted in nature. Therefore, the use of the biological method in the study of phytotoxins gave the correct result. In recent years, many diseases seriously damage the pea plant, as well as most other plants. This requires further improvement of plant protection measures, proper identification of disease-causing fungi, development of scientific control measures by studying their spread, development and bioecology.

CONCLUSION. Therefore, in order to isolate pathogens, in 2023, plants with symptoms of Fusarium disease were selected, and fungi were isolated in laboratory conditions. For this purpose, 3-5 cm long fragments were cut from the stem with spots and washed in plain water. Then, the upper part of the fragments was sterilized in 70%

ethyl alcohol solution, washed 3 times in sterile distilled water, dried in sterile filter paper, and then inoculated on potato-dextrose agar medium supplemented with 300 mg/l streptomycin. Fungal cultures were grown at 20-24°C for 2 weeks. According to the monitoring results, it was observed that there were few diseases in the pea plant this year. This was caused by a number of factors, including the high temperature due to the lack of precipitation in April. As a result, the development of disease-causing fungi was negatively affected. In the monitored areas, almost no diseases of powdery mildew and ascochytirosis were recorded. However, in 10 hectares belonging to "Farangiz-Marjona Fruits" MFY in Yakkabog District, Pakhtakor MFY, root rot disease in Yulduz variety of peas is 7.5% and fusarium is up to 2.0%. spread was observed. In Hisar MFY of this district "Mukhammadiyev Gofur Bobo" f/x (10 ha) and "Begimkul Sher" MFY (12 ha) it was noted that 5.5% of root rot disease and 15.2% of fusarium were spread in the Istiklal variety of peas. Also, in the fields of "Kamal Jaloliddin" f/x (8 ha) and "Akmal Adkham oglu" f/x (13 ha) located in J.Turdiyev MFY, Kitab district, root rot disease in Yulduz variety of peas is 6.3% to 7.8 % was observed, and fusarium was up to 14.5%.

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