Small Broomrape, *Orobanche minor* Survey of Oregon Clover Fields
Final Report 2000

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Introduction

Small broomrape, *Orobanche minor*, is a parasitic weed that attaches to the roots of host plants where it receives it water and nutrients.

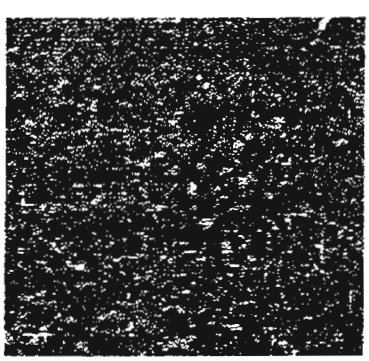
In 1999 small broomrape was detected in a certified red clover seed field in Clackamas County, Oregon. Small broomrape is a federally listed noxious that has quarantine significance to many of Oregon's trading partners. An initial survey revealed no other broomrape sites and it was believed to be confined to the one Clackamas County farm. To protect Oregon's Agricultural Industry the Oregon Department of Agriculture (ODA) established an emergency quarantine on 40 acres of red clover in September 1999. To prevent possible movement of small broomrape seed from this site the red clover crop was destroyed.

This noxious weed is of concern to the agricultural industry in Oregon. Small broomrape appears to have the potential to impact many other crops other than red clover. There is a concern about it impacting alfalfa, peas, beans and other legume and composite crops. ODA applied to the Interstate Pest Control Compact (IPCC) in April of 2000 for funds to assist in a comprehensive survey of the area to determine the extent of the problem with small broomrape.

2000 Survey

Methods:

The priority for the survey was examining fields in concentric circles moving out from the known site detected in 1999.



Time was spent initially making contacts with farmers to establish that they were currently growing red clover, to ask for permission to survey, and get specific locations and directions to fields. All of this information was entered into a database to allow for easy tracking.

Survey forms were developed for the survey crews to record field data that was later entered into the database. Precautions were taken to ensure that surveyors were not spreading small broomrape seed from field to field. All surveyors wore rubber overshoes that were sanitized with a quantinery amonia product before moving to another field.

Survey crews used GPS units to take field location information that was later entered into the database. This data was used to develop GIS maps of both positive and negative field locations.

Results:

Overall during the 2000 season nearly 4,500 acres of red clover fields were surveyed by ODA personnel. This makes up approximately 1/3 of the red clover production in Western Oregon. The survey detected 13 new infested fields in Clackamas, Marion, Washington and Multnomah counties.

After the survey was completed, ODA consulted with the industry and USDA and established a statewide emergency quarantine. This quarantine included the 13 infested fields and had specific provisions for harvest. All red clover seed lots harvested west of the Cascade Mountains must be sampled and tested for small broomrape to insure that the lots are free from small broomrape before they can be sold or transported out of state.

Conclusion

The results of the survey highlighted the magnitude of the problem with small broomrape and the potential impacts it could have on the Oregon agricultural industry. As part of this process a letter sent from Oregon Governor, John Kitzhaber to Secretary of Agriculture, Dan Glickman, requesting emergency funds from USDA to assist in this problem. It November 2000 Deputy Secretary Richard Romiger, presented $410,000 to Oregon to assist in dealing with the small broomrape problem. These funds will be used during the 2001 season for ongoing survey, research and education and to pay for seed sampling and testing.

ODA is continuing to work with the Oregon Clover Commission, USDA-APHIS, Oregon State University, and other cooperators to develop the best long term management guidelines based on future survey and research results.

The grant from the Interstate Pest Control Compact, which funded the initial survey, was extremely important to the success of this program.

Fields Surveyed for Broomrape