

Abstract

Youth Play a Role in Biological Weed Control Program in Camas County, Idaho.
Kinder, C.A. University of Idaho, Cooperative Extension System, Fairfield, ID.
Reedy, N. Camas Biological Control Project, Fairfield, ID.

(Key words) Youth, Spotted Knapweed, Diffuse Knapweed, Biological Control, Education

Abstract:

Diffuse and spotted knapweed (*Centaurea diffusa* and *Centaurea maculosa*, respectively) are the most widespread and damaging weeds infesting Camas County, Idaho. While chemical spraying in pastures and croplands can contain it, much of the infestation is on rangeland, often in very inaccessible parts of the county where conventional control is either impractical or too expensive. The objectives of the Camas Biological Control Project are as follows: determine if available biocontrol agents can be established within the area and survive extreme weather conditions found on the Camas Prairie; determine if insects can be established with sufficient populations to reduce the amount of spotted and diffuse knapweed; and provide an opportunity for youth to participate in weed management and gain life skills. Nine knapweed-infested sites with distinct geographical features were located on privately owned land in 1998. Each year, seven students from the local school district were selected to work on the biological control project. In 1998, students released three new biocontrol agents, *Lorinus minutus*, *Cyphocleonus achates*, and *Agapeta zoegana*. *Lorinus minutus* was released in five sites, *Cyphocleonus achates*, in two sites and *Agapeta zoegana*, in two sites. Students took monthly vegetation samples and insect counts during the summer months of 1998, 2000, and 2001. Students worked an average of sixty hours per month during the summer months, and were funded by grants and donations. At the beginning of each summer students were instructed on research methods, data collection, data analysis, entomology, and plant identification. As a result of this hands-on project, students gained an understanding of the relationship between a biocontrol agent and its host. In addition, they enhanced many life skills including planning, organizing, decision-making, problem solving, developing work ethic, conducting computer data entry, public speaking and communication.

Background:

Noxious weeds are covering North America at an astronomical rate. Within Camas County Diffuse knapweed has infested approximately 20,000 acres. Chemical use is an expensive and time-consuming way to control weeds and some locations within the county are not appropriate for this control method. It is known that knapweed has a complex of effective Biocontrol agents. Long-term methods of knapweed control were needed on rangelands.

Objectives:

1. Determine if available biocontrol agents can be established within the area and survive extreme weather conditions found on the Camas Prairie.
2. Determine if insects can be established with sufficient populations to reduce the amount of spotted and diffuse knapweed.
3. Provide an opportunity for youth to participate in weed management and gain life skills.
4. Present an opportunity for students to do hands on science, have a summer job and explore careers in biology.

Value

Besides seeing a reduction in knapweed counts in 8 of the 9 sights, the Camas Biological Control Project has been a tremendous value to the youth who have participated. The following are some comments made about the program.

“I have gained a better understanding of insects, weeds and how they can affect each other.”

“I can identify knapweed and I now look for other noxious weeds.”

“I have made a choice to study entomology in college and to get my PhD because of this program.”

“This program has given me the chance to travel to parts of the United States I may not have seen, otherwise.”

“I was invited to go to college and promised a job working with insects and biocontrol methods.”

“I like sharing my knowledge with younger youth and explaining to them that bugs are not all ‘icky’ many are beneficial.”

“I have seen others in the group improve their speaking abilities.”

“There was a lot of hard work such as building fence and rebuilding fence, but it was a lot of fun also.”

“This is not just a summer job with money; it is my chance to do what I enjoy, which is study insects.”