

Grecian Foxglove Control Project

Kansas Department of Agriculture

In the spring of 1994 Mr. John Cole, Wilson County Kansas, submitted a plant specimen to the County Extension Office for identification. He noticed the plant expanding across his land and began mechanical efforts to control the plant. Kansas State University in cooperation with the Biological Survey at Kansas University identified the plant as Grecian foxglove (*Digitalis lanata* Erth.). Dr. Ron McGregor, herbarium director at KU, visited the site to determine the extent of the infestation. He also contacted the Kansas Department of Agriculture, Plant Protection and Weed Control Program, to provide assistance to the landowner on control methods. Bill Scott, KDA Weed Specialist, visited the site in 1994 and established a series of plots to determine the most effective means of control. Herbicides and cultural methods were evaluated. KDA staff assisted in a delimiting survey in 1995 and estimated a total of 22 acres of Grecian foxglove spread across approximately 250 acres of land. Although the majority of the infestation is on the Cole property, eight other landowners adjoining the Cole property have some degree of infestation. Plots were continued in 1996 with plant densities in severely infested areas as high as 65 plants per square meter. Mr. Cole hired two workers to assist him in pulling plants on his land and on adjoining properties. He purchased an ATV with a sprayer and treated plants with various herbicides. In 1998 the Kansas Department of Agriculture applied for and received \$12092 from the Interstate Pest Control Compact to help pay the cost of controlling this pest.

The budget allocated funds for survey, control and education. \$5569.95 was budgeted as reimbursement to Mr. Cole for expenses incurred in controlling Grecian foxglove. Funds were also used to pay travel expenses for KDA staff who meet at the site in early June to survey and treat blooming plants. A hand-held GPS unit was purchased to aid in locating small patches of foxglove in the dense forest and hilly terrain. A brochure was developed and printed in 1999. The brochure, featuring identification and reporting information, was distributed to adjoining landowners, federal, state and local offices in the county and to the county noxious weed departments in Kansas. The initial printing cost \$1018.25 for 750 brochures. An additional 1000 were printed with state funds in 2001. The Kansas Department of Agriculture enacted a quarantine on May 10, 2001 prohibiting the entry or movement of Grecian foxglove into or within Kansas.

With a combination of research plots and experience, the control program has been refined to spring treatment with herbicides beginning in mid April and ending with the cleanup survey in early June. Most of the treatment is accomplished early when the plants are in the rosette stage and are rapidly growing. The cleanup survey catches the blooming plants missed by earlier application and expands the survey area to look for any new infestations. When the project began in 1997 approximately 20 acres were being treated with herbicides each year. In 2001 a total of 1.2 acres were treated and in 2002 1.1 acres were treated. Treated acres are based upon the total volume of herbicides applied for the year. The Kansas Department of Agriculture has cooperated with the Minnesota Department of Transportation on an infestation of Grecian foxglove found on their right of way and adjoining property. Numerous presentations about Grecian foxglove have been given to groups ranging from local landowners to the North Central Weed Science Society. The Cooperative Extension Service in Wilson County and the Wilson County Noxious Weed Department have provided assistance through out the project. The Kansas Department of Agriculture will continue to treat and monitor the area.