

## **AS04-01** Developing a regional approach to noxious weed management

Eric Lane, Chairman

Western Weed Coordinating Committee, Lakewood, Colorado

\$7,800

(awarded 2001)

### **Proposal**

The goal of the proposed project was to refine two maps developed in 2001 by western state weed coordinators that depicted the relative abundance and distribution of leafy spurge (*Euphorbia esula*) and yellow starthistle (*Centaurea solstitialis*) by county. The utility of these maps is limited by the coarseness of the acquired data. The Western Weed Coordinating Committee (WWCC) proposed to refine each map by further defining the distribution of each species, particularly in newly invaded areas where incipient infestations are isolated and distinct.

### **Results**

WWCC developed two maps depicting the distribution and abundance of leafy spurge and yellow starthistle by surveying county weed supervisors and state weed coordinators in 15 western states. We determined the number of acres infested per quarterquad (one fourth of a USGS topographic quadrangle) for approximately 90% of the West, representing about 90% of the western counties. These maps are posted at <http://weedcenter.org/wwcc/docs/projects.html>.

### **Publications**

These results were presented at the 2002 Western Society for Weed Science annual conference in Salt Lake City in a poster presentation and the abstract appeared in conference proceedings.

### **Products**

The maps from the 2001 and 2002 surveys are posted at <http://weedcenter.org/wwcc/docs/projects.html>. The full datafile is also available and will be posted on the web for the use of researchers.

### **Long-term goal and continuing progress of research**

WWCC met in 2002 and agreed to work to complete the map and approach 100% coverage. In addition, at the 2003 annual meeting, WWCC agreed to initiate the development of a similar map for tamarisk (*Tamarix parviflora*).

### **Other benefits of seed money**

In order to develop the map products, WWCC developed a mapping protocol and demonstrated that very few resources are necessary to develop extremely useful mapping products that span an entire region. These products have been used to develop a strategic plan to stop the spread of leafy spurge and yellow starthistle and WWCC is beginning the process of refining and implementing this plan. WWCC hopes to utilize this plan to obtain new federal resources and better direct existing public and private funds to implement a coordinated, cooperative approach to managing two pervasive noxious weeds in the West.

### **Further assistance in advancing this research**

CIPM may be helpful in providing a facilitation and coordinating role in refining and implementing the strategic plans developed in 2002. In addition, as we prepare to shop this idea to leaders of the federal government, assistance in preparing marketing materials may be helpful.

### **Web sites (especially one with research results) to which we could link?**

Results from this project are already posted on the Center's website and we will continue to update the postings as new information becomes available.

### **Questions from grants panel**

*How will maps be developed using a variety of software system (or by hand) actually be put into a single system?*

All data submitted were prepared by hand by respondents on a standard form prepared by the PI. These forms were then transcribed directly into ArcInfo or Microsoft Excel and integrated into the database. The respondents took the best available information at their disposal (usually not written down or captured on paper or electronically) and put it into the format requested.

*Land managers cannot and many will not re-draw their maps by hand onto the one provided by the PI, so how will non-respondents be handled?*

This project did not ask respondents to re-draw their maps. They simply took what they know and put it into the simple format we requested. I think most researchers would be pleased with a response rate of close to 90%. Non-respondents are simply badgered with repeated requests to provide the data.

*What scale will be used on the final map(s) produced by the PI? Can the map be broken down by county or watershed if a weed manager just wants a printout of his/her assigned area?*

The scale is a quarterquad which is a standard unit provide by USGS. Once the dataset is posted, anyone with an ArcInfo or ArcView product should be able to select their data and reprint just their county, or perhaps a larger geographic area in which their jurisdiction resides.

*Please clarify methodology and details on the final product.*

We sent a map of each county to every respective county weed supervisor and state weed coordinator in the West. This map was overlaid with the quarterquad grid. Each county weed supervisor, or state weed coordinator in some cases, then entered the number of infested acres (NAWMA definition) of leafy spurge and yellow starthistle into each quarterquad. These data were collected and assembled into one ArcInfo database for projections.

*It would be a great contribution to field assess (and report) what's needed as far as mapping and to identify constraints in multi-state/multi-agency mapping projects—whether or not the leafy spurge and yellow starthistle maps were completed at the end of the 18-month period.*

I agree but this was not within the scope of our time and budget for the project. Our goal was to simply gather data about the species, not local weed management program's capacity to capture such data.