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USDA, APHIS field insectary establishment and redistribution of leafy spurge biological control agents – How it is working on a national scale

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APHIS has been involved in the implementation of biological control of leafy spurge since 1988 with initial efforts on a minor scale in four states. Since that time, it has been a focus of APHIS activity to establish Field Insectary Site (FIS) colonies of approved biological control agents (insects) targeted against leafy spurge in several states. Between 1988 and 1992, APHIS imported agents from populations in Canada and Europe. By 1993, collectable populations from U.S. domestic sources made collection in Canada unnecessary. Only recently approved biological control agents have been collected and imported from Europe through APHIS Quarantine in Mission, TX. In 1995 release of agents occurred in 19 states. Of the 9 species of USDA approved biological control agents for leafy spurge, only 3 were imported for initiating colonization in the U.S. They were *Aphthona abdominalis*, *Chamaesphecia hungarica*, and *Oberea erythrocephala*. The other 6 species have established well, and developing populations now are providing large numbers for collection and redistribution. Biological control agents for leafy spurge have been released in 180 counties in 19 states. Based on sampling of released insects during the 1994 field season, established populations exist in 131 counties in 15 states. Collectable populations exist in 35 counties (48 locations) in 11 states. Management of these thriving field insectaries are being turned over to cooperators for their management and continued efforts in redistribution to new locations. Cooperators with APHIS include state departments of agriculture, university, county, and federal land managers with weed control responsibilities. Technology transfer from APHIS to cooperators is being accomplished by development of field manuals and actual field training of cooperators by APHIS employees at field locations across the U.S. In 1995, cooperators utilizing the resources of APHIS field insectaries will collect and redistribute in excess of 5 million biological control agents of leafy spurge. APHIS will continue its effort to establish colonies of new biological control agents of leafy spurge. Biological control of weeds has been shown to be cost-effective, is self-sustaining, and environmentally sensitive. Use of biological control as an alternative, or to be used in conjunction with other management strategies, for the control of leafy spurge is now a reality in many weed infested areas in the U.S.