Ĩ4--Ľańcaster Parming, Saturday, December 2, 1972

Researchers Probe Alternate Methods For Insect Control

Studies supporting new pest management programs that minimize the need for conventional chemical controls will be undertaken under research agreements between the U.S. Department of Agriculture (USDA) and eight State agricultural experiment stations. The agreements, funded by

USDA's Agricultural Research Service (ARS), will provide data for a broad, continuing program to protect the environment and to improve the efficiency of agricultural production and marketing.

Scientists at the Texas Agricultural Experiment Station, College Station, will determine the economic threshold-the specific point of damage at which significant financial losses being to occur-for cotton fleahoppers, bollworms and tobacco budworms under various cotton growing conditions. In related studies, they will evaluate the effects of insecticides on natural enemies of major cotton pests as well as the effects of insect parasites, early stalk destruction and plant resistance in reducing management program that will maximize producer profits and minimize the amount of insecticide needed to protect

insect damage. Results ot this research will be used to develop a pest management program that will maximize producer profits and minimize the amount of insecticide needed to protect cotton. ARS will provide \$175,000 under 1-year cooperative agreement.

Under another agreement with similar objectives, scientists at the Mississippi Agricultural Experiment Station, State College, will determine the economic threshold of the tarnished plant bug on cotton, as well as the pest's relationship with other host plants at different times of the year. In addition, the boll weevil's synthetic sex attractant, grandlure, will be evaluated for its effectiveness in reducing population of overwintering boll weevils. In a coordinated program including the grandlure tests, scientists will evaluate different insecticidal and cropping systems for their effects on pest control. Insect disease agents and lines of cotton resistant to or tolerant of insect feeding will also be studied. ARS will provide \$125,000 under a 1-year cooperative agreement for this work.

The economic threshold of several insects pests of soybeans will be determined in another

pest management project at the Louisiana Agricultural Experiment Station, Baton Rouge. Researchers there will develop methods for obtaining representative samples of both beneficial and undesirable insects as well as samples of the damage to soybeans caused by various numbers of insects on the plants. ARS will provide \$54,000 undar an 18-month cooperative agreement.

The economic threshold of the bean leaf beetle and other leaffeeding insects on soybeans will be determined in studies by the **Illinois Agricultural Experiment** Station, Urbana. In addition, plant resistance and other principles of pest management on soybeans will be studied. ARS will provide \$22,500 under an 18month grant.

Economic thresholds of injury by the alfalfa weevil will be determined and the effectiveness of various alternative pest management techniques will be studied under an 18-month grant awarded to the Kentucky Agricultural Experiment Station, Lexington. ARS will provide \$50,000 for this research.

Development of alfalfa varieties resistant to several insect pests and plant diseases will be undertaken at the Nebraska Agricultural Experiment Station, Lincoln. ARS will provide \$50,000 for this 18month cooperative agreement.

The potential for use of beneficial mites that prey upon destructive spider mites in apple orchards will be studied at the Michigan Agricultural Experiment Station, East Lansing. Scientists will also evaluate the feasibility of introducing resistance to organophosphatetype insecticides into the beneficial mites. ARS will provide \$37,800 for this 3-year cooperative agreement.

Biological control of the Carribbean fruit fly will be studied under a 3-year cooperative agreement with the Florida Agricultural Experiment Stations, Gainesville. Scientists will study efficient ways to rear Opius longicandatus, a wasp parasite of this pest of subtropical fruit in Florida. They will determine the potential for controlling the fly by releasing large numbers of the parasite in infested areas.

Carnation Announces. \$1000 Carcass Contest

A \$1,000 Prize will be awarded to the owner of the first Carnation-sired Fleckvieh (German Simmental) or Gelbvieh to be named Grand or Reserve Grand Champion in carcass competition at a major U.S. Stock show, according to Leness Hall, General Manager, Carnation Breeding Service.

Hall explained, "For eligibility, an animal must be judged solely on carcass quality and, where applicable, growth rate. Animals must be sired by Fleckvieh or Gelbvieh semen obtained from Carnation Breeding Service or its authorized dealers. A list of the 75 major shows in 37 states that qualify is available from Carnation.

Provisions of this offer have been made known to the American Gelbvieh Association. Routel, Newkirk, Oklahoma 74647 and the American Simmental Association, P.O. Box 24. Bozeman, Montana 59715.

Contest details are available from Carnation Breeding Service, Carnation, Washington 98014 or Watertown, Wisconsin 53094.



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