THE INTEGRATED PEST MANAGEMENT MANUAL FOR ALFALFA HAY

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As part of its efforts to assist in the delivery of integrated pest management information to pest control advisors and growers, the University of California Statewide Pest Management Project is sponsoring the production of pest management manuals in a number of major crops. The first of this series, Integrated Pest Management for Alfalfa Hay, was released in August of this year.

To produce this book, we have drawn upon the expertise of over 25 of the University's top alfalfa pest and agronomy research and extension specialists, many of them long time participants in this conference. We also solicited help from growers, pest control advisors and others involved in the alfalfa hay industry. Our intent has been to present the most up-to-date information possible in the most useful and practical format.

Integrated pest management treats pests as part of the total hay production system, which includes not only the crop and its pests, but also the physical and biological environment in which the crop is grown. A good IPM program coordinates pest management activities with all production practices to achieve economical and long-lasting solutions. The emphasis is on anticipating and preventing problems whenever possible. The manual provides methods to use to monitor pests, natural enemies and weather, sample forms for keeping field records, and guidelines to help you make management decisions based on your sampling results. We have also included a basic discussion of how general crop management practices such as irrigating, fertilizing, planting and harvesting affect pests and how you can modify these practices to improve your pest control. The book contains chapters on vertebrate, insect, disease, nematode and weed pests. All are extensively illustrated. Life histories, descriptions and management guidelines are given for over 50 individual alfalfa hay pests.

Proper identification of pests is essential for good pest management, and the manual provides tips to make this task easier. For instance, as most of you know, the two major aphid pests of alfalfa hay, the pea aphid and the blue alfalfa aphid are very difficult to distinguish. Yet damage thresholds and management recommendations for the two species are different. The manual shows you how to quickly separate the aphids by checking their antennae under a hand lens. Two other similar-looking insects in the alfalfa field are the alfalfa weevil and the clover root curculio weevil. The clover root curculio is only about 2/3 the size of the alfalfa weevil; the manual emphasizes these differences by providing "bug boxes" showing the size of each major insect pest.

Identification of weed seedlings is especially important in choosing herbicides, and seedlings of 8 major species are pictured to help you recognize the most important ones in your fields. Likewise, the book contains excellent photographs of disease and nutrient symptoms and of vertebrates and their typical mounds. In all, there are about 200 color photographs in the book. A unique feature is a color index or key in the back of the manual. By comparing damage symptoms on your plants with those in the key you can find out where in the book to look for further information on biology and control.

We hope that this manual will help satisfy growers' and pest control advisors' needs for practical information on IPM. Over the next year Area IPM Specialists and Farm Advisors will be sponsoring workshops using this manual and other materials. Researchers at the University of California and elsewhere are continuing work to develop a more comprehensive IPM program for alfalfa hay production. As this program evolves, we will revise the manual, probably in 4 to 5 years, to keep you up to date.

The manual is available for $10.00 (plus 6% sales tax in California) from Agricultural Sciences Publications, University of California, 1420 Harbour Way South, Richmond, California, 94804. Ask for publication #4104.