CO-OPERATIVE EXTENSION WORK
in
AGRICULTURE AND HOME ECONOMICS
State of California

University of California
College of Agriculture &
U.S. Dept. of Agriculture
Co-operating

1720 So. Maple
Fresno, California

Extension Service
Farm Advisor Work
Agriculture Club Work
Home Demonstration Work

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CERTIFIED SEED LETTER

Dear Certified Seed Grower:

(1) EFFECT OF DEFOLIANTS ON SEED ALFALFA

This subject was discussed in our last letter but we would like to clarify a couple of points.

In the tests made by Luther Jones, endothal reduced germination only when it was applied directly onto the seed. Of the total seed treated with endothal, 60 to 90% were damaged.

What does this mean under field conditions? Luther states that a highly rain-damaged field would have about 6 to 10% of its seed exposed in the pod. Of these, because of position in the pod and position of the pod, only about 50% would be hit by the defoliant. Roughly speaking then about 2 to 5% of the seed in field would be subject to damage by the defoliant.

This may seem like a small percentage, but added to reduction in germination for other reasons (cracked seed coat, cracked internally), it could mean the difference between meeting and not meeting germination standards for certification regardless of blending provisions.

(2) CHALCID DAMAGE SURVEY

Last month we assisted Dr. Oscar Bacon of the Department of Entomology in a start of his studies seeking a possible answer to the clover seed chalcid problem. This consisted of gathering pod seed samples from alfalfa fields selected more or less at random over the entire west side area. About 18 samples were collected.

These samples will be threshed out at Davis and counts made to determine the extent of damage and to get an idea what this insect is costing the grower and the industry. Next season Dr. Bacon plans two approaches to the problem through local field trials. One will involve trials with different insecticides varying the time of treatment; the other will involve finding a parasite that will kill the insect.

It is hoped that a systemic insecticide that would concentrate in the flower or seed parts can be found.

During the survey we noted a few points of interest. Generally, infestations were not as bad as last year, however, were more widespread. The west of Firebaugh area was only lightly hit last year; this year damage ranged from light to severe.

Light to moderate infestations were found over the entire westside. In general, first-year fields seemed to have greater damage than older fields. This can be explained by migration of adults into these late, green fields. Also, first-year fields generally are not clipped and set seed early thus allowing an early build-up of chalcid population.

This is less important, however, than the fact that chalcid will migrate to late green fields and does not nec-

essarily indicate clipping of first-year fields unless a weed problem exists.

(3) FIELD BURNING

There has been considerable discussion lately concerning the effectiveness of field burning to destroy chalcid which might otherwise over-winter in seed alfalfa fields. We are quite certain that burning is not effective in this regard for a number of reasons.

At the speed burners usually travel, the ground area does not get hot enough long enough, nor is all trash and chaff burned. No doubt a small percentage of larvae bearing seed is destroyed or at least the larvae are killed, but the largest percentage are not.

Chalcid would be killed only when burning is complete and it continues for a considerable period after the burner has passed by. The straw burns rapidly but the chalcid are not in the straw. They are in the matted chaff and seed scattered on the ground. Last fall we chceked a number of burned fields and found many chalcid bearing seed under partially burned chaff.

The advantage of burning is more in the fact that it is one method of getting rid of the straw so that discing and cultivation can be more effectively done to thoroughly bury these chalcid bearing seed. They need be buried only 1/2 to 1 inch deep to rot during the winter.

The ideal procedure for good field sanitation would be to burn or chop and scatter the straw, chisel, irrigate, bring up the volunteers, then lightly disc to destroy volunteers and bury the chalcid. The problem of eliminating volunteers in the spring could be greatly reduced if this procedure could be carried out in the fall prior to the rainy season.

(4) CALIFORNIA CERTIFIED SEED ACREAGES

The CCIA reports the following seed acreages for the state for 1958:

Alfalfa	Applied Acres	Approved Acres
Africa	1,102	395
Atlantic	5,962	5,366
Buffalo	7,142	6,598
Calif.Common 49	20	0
Caliverde	1,381	1,091
Lahontan	12,216	10,900
DuPuits	7,213	6,277
Moapa	5,068	4,362
Narragansett	5,339	4,315
Rambler	175	175
Ranger	52,908	50,105
Vernal	26,728	25,810
Williamsburg	1,026	926
Total	126,280	116,320 (92.1%)
Total of all crops grown for certification(California)	182,208	163,481 (89.7%)
Fresno County:		
Total alfalfa	59,257	57,704 (97.4%)

(5) THE STINKBUG PROBLEM

Stinkbug were a problem this year in widely scattered alfalfa fields over the westside. At this time of the year and earlier they will migrate to the greener portions of a field. If these areas now have about 2 stinkbug per 20 feet of row, chances are the population will be greater next spring.

Keep in mind that they will hibernate around alfalfa crowns and in soil cracks as deep as 6 or 8 inches. Control involves treatment of these areas or fields in early spring (March) on warm days when they come out to feed. A dieldrin spray of 8 to 12 ounces/acre at this time has been effective. For after bloom treatment, thiodan at 1 to 1½ quarts is reported to be very effective with a minimum of toxicity to bees.

Sincerely,

Armen V. Sarquis

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Farm Advisor

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