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

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

1720 So. Maple
Fresno, California

Extension Service
Farm Advisor Work
Agriculture Club Work
Home Demonstration Work

October 30, 1956

CERTIFIED SEED LETTER

Dear Certified Seed Grower:

(1) FOUNDATION SEED SUPPLIES

Latest word from Frank Parsons, Calif. Crop Improvement Ass'n is, that the California share of foundation Lahontan will be about 8,000 pounds. This will be distributed within the next 2 or 3 weeks. Deadline date for filing requests was just announced as November 1. Since this is short notice we will accept memorandum agreements until November 9.

There is nothing new on the amount of foundation Vernal that will be available. Distribution will probably not be made until January. Deadline date for filing requests for all foundation alfalfa planting stock is Nov. 1. Again - we will accept requests until Friday, Nov.9.

Adequate supplies of registered planting stock of Atlantic, Buffalo, Ranger, and Caliverde are available from the trade. There is no foundation Africa alfalfa. Foundation Narragansett is available through the CCIA.

(2) ALFALFA SEED EXPERIMENTAL PLOTS

We have completed harvesting our fertilizer, date of clipping and spacing plots. Some of the results look very promising. We hope to have some definite data to present you at our seed growers meeting this winter.

In general the clipping plot showed that early clipping this year around April 15th gave a definite advantage in Buffalo over late clipping in May. Following are "in dirt" approximate yields for the different clipping dates:

No Clipping	2200 #/Ac
April 18	1875
April 25	1660
May 16	1600
May 24	1560

Plant spacing trials in third year Vernal under inadequate irrigation gave "in dirt" approximate yield responses as follows:

Plant Spacing	
Normal Stand	600 #/Ac
12"	850
18"	800
24"	925

These are only preliminary figures. No recommendations can be made until thorough analysis of the data is completed. Results of the fertilizer trials have not been summarized as yet.

(3) SPOTTED ALFALFA APHID

Some of you are wondering what to do about the spotted alfalfa aphid on regrowth this fall and winter - if populations reach the damage point, should you treat or should you wait for the parasitic fungus disease to control the aphid?

(over)

To determine what to do, each individual field must be considered separately. We can summarize the considerations as follows:

A. New Stands - Since only two or three aphids per seedling can kill the plant up to 4 or 5 inches in height, it will be necessary to carry out a regular control program on seedling stands. The fungus would probably not be effective in this case since it takes a moderate aphid population for the fungus to become established and spread.

B. Old Stands With Regrowth - In this case again each field must be considered separately. If the population builds up to damaging levels and the fungus has not become established, it will be necessary to treat. Since the fungus spreads rapidly once established in a moderate aphid population, you should check first to see if the fungus is present.

Pathologists of the Department of Biological Control report the fungus has now spread over most of Fresno County. However, we have no reports on the Westside proper except in the Firebaugh, Dos Palos and Mendota areas. It is established in the Vernon Britten and other hay fields in that area. The fungus can be introduced into your fields by introducing alfalfa hay from fields containing infected aphids. This has been done to some extent during the past month with success. However, this is dependent upon temperatures, humidity and aphid population. Pathologists do not feel a program of introducing the fungus is entirely necessary since it will spread itself in time.

C. Parasitic Fungus - The one we are interested in is the F-6 species and is specific on the spotted alfalfa aphid. Its development and spread is dependent upon high humidity, warm temperatures, wind and flight of infected winged forms of the aphid. The fungus over-winters in the aphid and in the form of spores. Insecticides do not affect it. Infected aphids swell up, turn tan or brown, then burst, spreading spores into the wind. It is not known just what effect this fungus will have on the over-all aphid problem. During this season the fungus effectively controlled the aphid in Tulare and Kings Counties. However, one season's experience is not sufficient to forecast its effectiveness into next year when conditions may be different.

(4) FALL OPERATIONS IN SEED ALFALFA.

Now is the time to insure adequate deep sub-soil moisture in established stands. This can be done by chiseling between each row with a narrow shank and small shoe to a depth of 24 to 30 inches. Then fill the root zone to field capacity down to 10 or 15 feet. On the average this will take 18 to 24 inches of water in clay loams. This practice will insure a uniform moisture supply next season, minimize the water penetration problem and the lack of adequate water supply during the summer.

This practice is not so important in sandy soils unless there is a definite water penetration problem. In the black adobe clays care must be taken not to heave the soil to the point of damaging the stand.

(5) CLOVER SEED CHALCID

Damage by this insect increased this year over previous years. In many cases damage was evident in the field before harvest or showed up in threshed seed as empty shells of seed. During threshing most of the shells are blown out with the straw.

The insect over-winters in the larvae or pupae stage inside infested seed on the grounds. They emerge in June as adults which start laying eggs in immature seed for the second generation. Populations increase toward late summer.

Control of the insect is not practical during the summer season since all stages of the insect are present. The best method is to reduce the number of adults that emerge in the spring.

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This can be done by destroying volunteer alfalfa and clover plants in the area and to prevent their going to seed. Regrowth in early harvested fields should be clipped or worked to prevent setting seed. Chaff in the field should be destroyed by discing or burning when possible to destroy as many of the over-wintering larvae as possible.

Since populations increase from spring to late summer, the amount of damage can be reduced by setting your seed crop as early as possible. Eggs are layed only in green seed.

(6) 1956 ACREAGE APPROVED FOR CERTIFICATION

Our records show the following acreages approved for certification in Fresno County:

Ranger	19,415
Atlantic	6,757
Vernal	5,892
DuPuits	2,107
Buffalo	2,702
Narragansett	1,179
Caliverde	667
African	190
Lahontan	1,489
Total	40,398
"Applied for" Acreage -	43,274
Pennscott red clover	2,241
Salina strawberry clover	50
Birdsfoot trefoil	48

Sincerely,

Armen V Sarquis

Armen V. Sarquis
Farm Advisor

AVS:go
Encl.