

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

Extension Service
Farm Advisor Work
Agriculture Club Work
Home Demonstration Work

May 5, 1961

SEED CROP NOTES

Dear Seed Grower:

1. 1961 PEST CONTROL SCHEDULE

Enclosed is your copy of the 1961 pest control schedule for seed alfalfa.

2. APPLICATION DEADLINE REMINDERS

A. Applications to certify cereals, grasses, vetch, rose clover, safflower and flax can no longer be accepted.

B. Alfalfa applications are now overdue and will still be accepted.

C. Deadline for beans, rice, sudan and other sorghums is June 30.

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
+	<u>IN THIS ISSUE</u>																		+
+	1.	1961 Pest Control Schedule																	+
+	2.	Deadline Reminders																	+
+	3.	Field Inspections																	+
+	4.	1961 Applied-For Acreage																	+
+	5.	Pollination																	+
+	6.	Certified Seed Council Meeting																	+
+	7.	Control of Summer Weeds																	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

3. FIELD INSPECTIONS

Certified grain, vetch and grass seed fields in the county will be inspected May 11 and 12. You are reminded to do any necessary rogueing and working of borders by May 10 in order to have the fields ready for inspection. Growers will be notified later as to the schedule of inspections.

4. 1961 APPLIED-FOR ACREAGE

To date applications have been received to certify the following seed crop acreages. All can be regarded as final except those for alfalfa, applications for which may still be received.

Variety	Applied-For Acreage 1961			Applied-For 1960
	New	Old	Total	
Atlantic	250	435	685	565
Altfranken Schmidt	230	30	260	30
Altfranken Steinbach	100	102	202	152
Arnim	475	281	756	433
Buffalo	-	600	600	860
Cardinal	625	-	625	-
Cody	1,203	-	1,203	-
Culver	1,027	171	1,198	181
DuPuits	1,273	2,301	3,574	3,882
Eynsford	240	195	435	195
FD 100	400	485	885	485
Flandria	140	90	230	169
Frank's Langmeiler	165	66	231	66
Jokioinen	-	50	50	50
Lahontan	2,305	6,013	8,318	7,359
Moapa	4,284	2,553	6,837	3,851
Narragansett	437	1,235	1,672	2,389
Nomad	157	-	157	-
Orchies	60	196	256	196
Ranger	406	19,700	20,106	30,778
Schlesische	22	-	22	-
Triesdorfer	15	-	15	-
Tuna	-	208	208	208
Vernal	201	4,611	4,812	13,001
Williamsburg	<u>604</u>	<u>335</u>	<u>939</u>	<u>630</u>
	14,619	39,657	54,276	65,550

Total approved 1960, 62,123

Other Crops:

California Mariout barley	1,115
Ariyat barley	30
Blanco Mariout barley	44
Ramona 50 wheat	22
Onas 53 wheat	30
Curt oats	112
Blando brome	130
Rose clover	15
Lana vetch	6
Safflower - U.S. 10	486

5. POLLINATION OF SEED ALFALFA

In pollination a number of points should be kept in mind.

First, bees should not be placed in a field until it is in 25 to 50% bloom so they will stay in the field. With less blossom present, bees will seek other areas in which to forage and will continue to do so. If it can be arranged place 1 colony per acre at this time and $1\frac{1}{2}$ to 2 more per acre 2 to 3 weeks later.

Studies have shown best placement is in the field in rows about 600 feet apart with groups of hives about 300 feet apart in the row.

Although $2\frac{1}{2}$ to 3 colonies per acre are recommended, strength of colony is the important thing. Actually, five weak colonies, for example, is not as good as 2 standard strength colonies at a higher price.

By standard strength is meant around 1,000 square inches of brood in 6 to 8 frames and a population of bees to cover about 10 to 15 frames. This is necessary to maintain the field force since a bee lives only 6 to 8 weeks. And young bees are the better pollinators. Also a strong, healthy queen is essential to maintain brood strength.

Another point to insist on is that your beekeeper examine the hives within 10 to 14 days after placement to see if supers are needed. A colony can become honey-bound within this time under good nectar flow conditions. When this happens honey production as well as pollination come to a near standstill.

Bees are at their peak of activity during the first week or two at a new location and this is the most profitable period with respect to blossom tripping and nectar collection.

Optimum temperatures for bee activity are 85 to 100° F. Activity will start at 55 degrees and practically stops at 105 degrees.

Most of us do not like to go near hives, but remember it's not those white boxes in the field that count -- it's what's in them, and only inspection will tell.

Seed growers also have certain responsibilities in pollination. One is to keep the alfalfa plant in the proper physiological condition so that blossoms, pollen and nectar are produced. The other is use of only recommended insecticides with properly timed applications.

Following is an excerpt from an article by Dr. J. E. Eckert, U. C. Apiculturist:

Need for cooperation and understanding.

"It would seem desirable for the seed growers and beekeepers to understand the problems and difficulties of the other and to cooperate in a solution of their problems.

A beekeeper cannot guarantee the farmer that his bees will produce a given crop of seed any more than the farmer can guarantee the beekeeper that his alfalfa will be in the proper physiological condition to set seed and to produce nectar so his blossoms will be attractive to the bees.

The most common grounds for understanding would be the provision of colonies at a standard strength that will provide an adequate number of pollinators for the blossoms available and a standard rental at which the beekeeper can provide the service.

The care of the fields will have to be left to the seed grower who understands the work better than the beekeeper and

the care of the colonies will have to be left to the beekeeper. Both should be open to suggestions from the other, particularly in relation to the application of pesticides.

Insect pests have to be controlled and if this cannot be done before the bees are moved in, or if the bees have to be moved out, there should be some agreement as to the extra cost of moving the bees. In many instances, the grower will take a greater loss by the destruction of the field force than the beekeeper, unless the hive force is also injured.

6. ALFALFA SEED COUNCIL MEETING

You are reminded of the Certified Alfalfa Seed Council meeting scheduled for Wednesday, May 10th, 4:00 p.m. at the Hacienda Motel. All growers are invited to attend.

It is known that most of the varieties of wild bees are much more efficient pollinators than the honey bee. Guest speaker at this meeting will be Dr. G. E. Bohart, USDA, Logan, Utah, who will speak on the possibilities of propagating these wild species for pollination in California. Also on the program will be Harold Stephenson, a Yakima, Washington seed grower who uses alkali bees to produce his crop.

7. CONTROL OF SUMMER WEEDS

The following article was prepared by Bill Fischer, Farm Advisor, on control of pigweed and dodder in seed alfalfa:

Dodder and pigweeds are the most serious summer weeds in seed alfalfa fields. Seeds of these weeds are very difficult and costly to remove from alfalfa seed. The least costly and most effective method of avoiding seed contamination is to prevent these weeds from going to seed.

Dodder

All of us are familiar with the methods that can be used to control dodder once it is emerged and growing, but a review may be timely.

Perhaps the most usual method is to spray the infested areas thoroughly with one of the weed oils. An emulsion consisting of 40 gallons of oil, 60 gallons of water and 1 quart of a dinitro general may be used. Spray thoroughly all the infested plants and an area several feet beyond the edge of the visible infestation. Not only the dodder, but the alfalfa also must be killed to the ground because dodder may survive the treatment within the green alfalfa stem and continue growing.

It is important to remember to flag or mark the infested area because it may be necessary to retreat surviving plants. It may be desirable to use straight oil for retreatment and burn the area immediately to kill any dodder seed that are viable.

Pigweeds

Pigweeds belong to the large Amaranth family which contain about 500 species. Fortunately, only 5 of them occur as weeds in California, but these few species can increase the cost of alfalfa seed readily if allowed to grow and produce seed in alfalfa fields.

Seeds of pigweeds are very difficult to separate from alfalfa seed. The cost of the removal is high because alfalfa seed containing seeds of pigweeds has to be re-run over cleaning equipment several times and as high as 10-15% of the alfalfa seed is lost in the process.

Three species of pigweeds commonly found in alfalfa fields are rough pigweed, prostrate pigweed and tumbling pigweed. All 3 look somewhat alike in the seedling stages, but plants differ markedly when mature.

The rough pigweed can be readily identified in the seedling stage by its reddish tap root. The seeds of the pigweeds infesting seed alfalfa fields are similar in size and shape.

Removal of the pigweed plants prior to harvest is probably the most economical way of preventing the alfalfa seed from contamination, but doing this by

hand is probably the most uneconomical way to do this.

Limited experience indicates pigweeds when young are quite susceptible to the 2,4-DB compounds. Because of our limited experience we cannot generally recommend the use of 2,4-DB for the selective control of pigweeds in seed alfalfa fields, but its use on trial basis and in heavily infested fields is warranted.

2,4-DB amine is effective at 1-2#/acre and 2,4-DB ester at $\frac{1}{2}$ -1#/acre. The pigweed should be sprayed while young in its seedling stage of development.

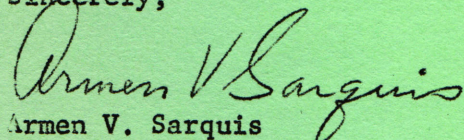
2,4-DB can be purchased and used without a permit from the Agricultural Commissioner's Office, but extreme care should be used when applying the 2,4-DB because cotton, grape, melons, tomatoes and many other broadleaf crop plants grown in Fresno County are as susceptible to 2,4-DB as to 2,4-D compounds.

2,4-DB should be applied through drop nozzles using 15-20# pressure. The spray should be directed in the manner that will provide good coverage of the weeds and minimize the amount sprayed on the foliage.

The alfalfa seed yields will not be adversely affected by the 2,4-DB sprayed on the plants.

Sprayrigs used for 2,4-DB should be thoroughly soaked and washed with sal soda or ammonia, or do not use the same sprayrig for spraying crops very susceptible to 2,4-D.

Sincerely,



Armen V. Sarquis
Farm Advisor

AVS:go

Encl. 1961 Pest Control Program for
Alfalfa Seed.