COOPERATIVE EXTENSION
UNIVERSITY OF CALIFORNIA

DAVIS, CALIFORNIA 95616

REPLY TO: Entomology Extension
October 7, 1983

TO: Harold G. Alford
Oscar G. Bacon
Robert W. Sheesley

RE: Pesticide Tolerance--Alfalfa Seed

The four of us have not yet set down together to discuss the apparently impending EPA requirement for pesticide tolerances on alfalfa seed. We have had numerous separate discussions but one meeting is desirable. I have talked with each of you and Thursday, November 17 seems acceptable to everyone for our meeting. We will meet at Harold's office. The time will be set later and depends upon Bob's travel schedule from Fresno.

In my opinion our objective is to determine what we are going to do during the next six to 24 months. Harold has indicated that EPA representatives have decided that tolerances must be established but a target date has not been set. In Harold's opinion EPA will not "drop the axe" -- we will have some time to organize and perhaps provide some guidance that will benefit our seed production industry.

We have some "needs" which will make our meeting more productive. Filling these needs falls mostly to Harold. During his travels in October and early November he will be in Washington where he plans to discuss the situation further with EPA representatives. These discussions should provide us with greater understanding of EPA plans.

We need an updated list of materials -- insecticides and miticides -- that have tolerances established on alfalfa hay. It is my understanding that Mary Ferguson is compiling this list.

We need a formal list of the materials needed in alfalfa seed production in California -- all areas not just the San Joaquin Valley. Perhaps Oscar and I could get this list together.

We need all of the data compiled on residues in alfalfa seed -- chaff, regrowth, seed and sprouts. We have those data developed in Oscar's project in California plus the demeton data from Washington. Harold indicated additional data has been developed.

With all this information at hand we can formulate plans relative to development of needed residue information, determine who will do the work and where it will be done, review funding sources, and perhaps establish time tables.

University of California and the United States Department of Agriculture cooperating.

There are some confusing aspects to this alfalfa seed/tolerance situation, at least in my mind, and perhaps several of you can straighten me out. Perhaps these are points we should address during our meeting. First and foremost is the fact that alfalfa seed is produced in many areas and production practices vary from area to area. If this situation causes confusion in the minds of EPA representatives we may wish to educate EPA on production practices in California. We may want tolerances and registrations tailored to California or even San Joaquin Valley production practices. Harold mentioned that we may be able to use the 24C approach to accomplish such registration.

I am concerned over tolerances established on alfalfa hay being applied to alfalfa seed. I believe Oscar shares these concerns. Granted, we have "hay" components in seed production represented by chaff and regrowth. To date, chaff represents our problem because we have not had residues evidenced on regrowth. The chaff has residues and should not be baled and fed unless those residues would be within the tolerances established on alfalfa hay. If the tolerances can be met perhaps EPA's move would benefit the seed industry because chaff disposal is a problem. Leaving chaff in the field to be consumed in a later pasturing program with regrowth is not desirable and increases the chalcid problem. Burning is frowned upon and, as Bob points out, the air quality people may frown upon putting pesticide residues in the air through burning. Discing remains the most practical method of chaff disposal.

The sprout component should not give us problems though we do encounter residues. The residues have been very low and only with repeated applications at 2X rates. The problem is funding sources and the added work to develop residue information on sprouts.

My added concern with tolerances on hay being applied to seed is the different pest complex. Early season weevil and aphid populations are key pests on hay while these pests are virtually ignored in seed fields at the same time of year -- at least in the San Joaquin Valley. Lygus bugs and spider mites are key pests in seed production while in hay lygus bugs are not considered a problem and even encouraged to stay in hay fields. Spider mites are an occasional problem in hay production, usually brought on by earlier insecticide use, and for which we have nothing registered. Pea aphid is common to both crops but at different times of the year -- generally in spring and fall in hay fields but during the summer months associated with insecticide use patterns in seed fields. The spotted alfalfa aphid is no longer a pest in hay production due to the planting of resistant alfalfa varieties but in seed fields where non resistant varieties are grown, SAA can become a key pest.

For worm problems there is little commonality between the two alfalfa crops. Omnivorous leafroller may be a late season problem in seed but I am not aware that it has been a problem in hay. Beet armyworm and western yellow-striped armyworm can be a problem on either crop, but insecticides applied for lygus bug control usually eliminate these worms as problems in seed. Expanded use of Carzol on seed may change this situation. Alfalfa caterpillar is never a problem in seed.

Due to the difference in pest complex, insecticide/miticide use is different. In alfalfa hay the greatest insecticide use occurs from February through May directed against aphids and weevil, and again during August and September directed against alfalfa caterpillar and pea aphid. Using a rough guestimate, hay may average 0.5 to 0.75 applications per year. For alfalfa seed, intense insecticide use occurs from June through mid September directed against lygus bugs, spider mites and aphids. Alfalfa seed probably averages in the range of 3 to 5 applications per year.

These differences in pest complex, insecticide/miticide use patterns, together with different cultural production practices make the utilization of alfalfa hay tolerances somewhat impractical for alfalfa seed except as a basis from which to initiate deliberations.

In our central valley and areas such as Susanville we do not take one or two cuttings of hay prior to going for seed as they do in some production areas. Nor are we in a situation where a field may be started for seed and then switched back to hay which has the potential of happening in some production areas.

Thus, we should take steps to have tolerances and registrations tailored to our production areas.

Sincerely,

not true in many cases in Fresno Co. - clip-back in spring is often sheep feed or hay.

Vernon E. Burton
Extension Entomologist

VEB/gm

COOPERATIVE EXTENSION
UNIVERSITY OF CALIFORNIA

Pesticide Impact Assessment Program
IR-4 Program
Western Region
116 B Street
Davis, California 95616
(916) 752-7633
(916) 752-7010

October 10, 1983

To: Vern Burton
Oscar Bacon
Bob Sheesley

I have compiled a list of the IR-4 requests for alfalfa sprouts. Note that work has been completed or is in progress for all but sodium chlorate.

Sincerely,

Mary R Ferguson

Mary R. Ferguson
Assistant to Regional
Coordinator

MPF:jw
enc.

c.c. H. Alford

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Alfalfa Sprout Projects

1646	aldicarb (Temik)	have AZ residue data
1586	carbofuran (Furadan)	labeled
1754	chlorothalonil (Bravo)	project in WY in 1983 - fungicide
1603	chlorpyrifos (Lorsban)	have CA residue data
1593	demeton (Systox)	project in WA in 1982
1604	methamidophos (Monitor)	have CA residue data
1591	methidathion (Supracide)	project in WA in 1983 — 6 ppm alf.
1589	oxydemeton methyl (Meta-systox R)	have WA residue data — 11 ppm alf.
1588	propargite (Comite)	have CA residue data
1590	sodium chlorate - dessicant	--
1585	trichlorfon (Dylox)	have WA residue data

39	formetanate hydrochloride (chlordimeform ? Carzol)	have CA residue data