

Attention: Please route to the parties listed on the above notations.

June 22, 1998

MiteFax San Joaquin Valley Cotton

Crop Conditions:

Warm weather sure helps. Cotton finally is beginning to grow.

Questions and discussions at last week's county meetings largely centered on how to produce as much crop as the shortened season will allow.

Extension specialists continue to modify recommendations for this season's very different conditions:

■ State cotton specialist Bob Hutmacher prepared a further advisory on irrigation and nitrogen management, and we have added a third page this week to distribute it.

■ A lygus advisory is being prepared by Kern County Extension entomologist James Brazzle and state IPM specialist Pete Goodell. The advisory will cover questions about thresholds, treatment options and Temik strategies. They hope to have it finished by mid-week. As soon as it is available, we will distribute it to our e-mail readers and post it on our web site (www.agfax.com). The advisory also will be included in next weekend's regular fax broadcast.

Lygus remain a concern. Treatments are underway in parts of the valley and monitoring in wild vegetation contin-

<http://www.agfax.com>

On our internet site this week, we include reports on:

■ USDA research into the fungicidal properties of small proteins called peptides that are found in moths and other organisms. These peptides could be used to fight cotton diseases like fusarium and *Aspergillus flavus*, which produces aflatoxin. Peptides could be engineered into plants or provide the base for new fungicides.

■ Baculovirus research in Australia. The report, from *The Australian Cotton Grower*, was prepared by Andy Richards and Peter Christian, entomologists with Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO).

ues to show high populations (see "Insect Report," next page).

Mite Report:

Dan Munk, Extension farm advisor, Fresno County: "I'm hearing about more mite treatments. Some Kelthane is going out and a fair amount of Zephyr. I think we're going to see more systemics going out this year due

to the short nature of this season and the concern about protecting those early squares. The main question there will be whether to put it out before the first or second irrigation."

Sara Savary, PCA, Crop Care Associates, Fresno: "Most of the mites in my fields are under control or heading that way. A lot of early treatments are going on, and we're treating some hot spots to make sure plants have minimal stress as weather warms. Hot spots are in the Dos Palos and Los Banos areas, and we'll probably treat everything there for mites. From Mendota south, we're mainly spot treating next to cut alfalfa."

Miguel Romero, PCA, Britz Fertilizer Co., Tulare: "I'm picking up quite a bit of mite and have started spraying. We will treat everything for mite the way it looks. Fields that didn't have Temik preplant have been treated, and we're moving into fields that did have Temik."

Jim Hall, independent PCA, Fresno: "We've treated all the Acala that didn't receive Thimet. We've treated strawberry mite up to this point with Kelthane, and control was good. On lighter ground, we're starting first

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Early Mite Control Pays Dividends

More and more research supports early miticide treatments to help prevent costly yield reductions. In fact, studies show that early mite infestations cause the greatest reductions in yield, fiber quality and seed viability.* An early application of Zephyr® miticide/insecticide will deliver a quick strike against current mite generations, then provide up to four full weeks of residual control. (*Data on file.) -- Sponsored message.

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irrigation and have sprayed a little aphid with Provado and used Kelthane or Zephyr ahead of watering. On some fields with early aphid, we've sidedressed before first irrigation. Thrip pressure has moderated, and it's holding down mite pressure on Pima and Acala. On cotton that had Thimet at planting, we'll probably treat mites behind first irrigation and continue watching aphids."

Steve Lenander, PCA/plant physiologist, Technicare, Bakersfield: "Mite treatments are generalized, and every acre will be treated. It's just a question of whether to spray before or after first irrigation. Lygus are blowing in pretty well, and our growers are treating aphids and mites at the same time in some cases. Mostly Zephyr is going out, and I know of one Kelthane treatment. Worst lygus pressure for our clients is in the Buttonwillow and Semitropic areas. I'm hearing about Vydate, Capture and dimethoate treatments for lygus."

Chris Morgner, PCA, Agri-Valley Consulting, Merced: "This week, we've treated 10-15% of the acreage for mites, and I expect another 25% will be ready for treatment next week. Fields without Temik have been reaching treatable levels. Where we used Temik, populations are developing but aren't extreme. We're trying to see what happens with lygus and want to see if a tank mix will be necessary in some fields for mites and lygus. About 30% of our acreage will have sidedressed Temik."

Ron Avila, PCA, Western Farm Service, Five Points: "We're treating some Acala ahead of first irrigation with Zephyr at the 4-ounce rate, and we're also treating one Pima field before first irrigation where mites are running 20-40%. In general, though, Pima can wait until after first irrigation. Thrip activity is helping hold down mites now."

Vern Crawford, PCA, Wilbur-Ellis Co., Shafter: "Mites are omnipresent. If we've got squares in a field, we've

also got lygus. I'm spraying everything with Zephyr and either Orthene or dimethoate before the Temik sidedress."

Ron Vargas, Extension farm advisor, Madera County: "We're in kind of a lull. Mites have been treated, and people are now considering whether or when to sidedress Temik. Our main concern now is lygus."

James Brazzle, Extension entomology advisor, Kern County: "Populations are increasing, and quite a few applications are going on. It's a good idea to make sure these populations are cleaned up before dealing with lygus too much. Tankmixes may be appropriate in some cases, but if we have to aggressively fight lygus and expect to disrupt the system, we need to have mites cleaned up to begin with."

Other Insects:

Lygus: Treatments were being made

in the southern SJV, notably on the western side of Kern County. Vern Crawford, Shafter, swept vegetation in the Lost Hills area late last week and found "lygus in all stages, and we're seeing the first wave."

Ron Vargas says lygus counts were "appalling" in sweeping that he and Merced farm advisor Bill Weir did Friday along waterways. "They're poised to move into cotton," Vargas says.

Extension personnel are preparing a special advisory about lygus management and Temik issues and expect to have it completed by mid-week. As soon as it is available, we will distribute it to our e-mail readers and post it on our web site (www.agfax.com) and include it in next week's full fax report.

Aphids: Sporadic treatments reported.



San Joaquin Valley Cotton Degree-day Report: 6/18/98

Degree days above since:						
	4/20/98			5/13/98		
Location	1998	1995	30 year	1998	1995	30 year
Arvin	404	463	731	258	337	549
Shafter	450	520	731	286	366	549
Visalia	387	447	618	254	335	463
Stratford	397	482	732	260	348	522
Kettleman	430	509	732	283	369	522
FivePts	401	475	609	258	340	451
Tranquility	393	397	609	257	291	451
Firebaugh	371	496	609	235	366	451
Los Banos	348	361	564	225	265	415
Single sine calculation 60° F						

Advisory on irrigation and nitrogen management

By Bob Hutmacher, Extension Cotton Specialist
May 19, 1998

As you go from the earliest plantings of Pima and Acala to the last as I have in the past four days, you can find everything from 8 to 10 node cotton (from many of the April plantings) to 4 to 6 node cotton (from many of the mid-May plantings), all the way down to cotton with cotyledons and the first true leaf (in some of the early June plantings in the Dos Palos area of Merced County).

Irrigations have started in many of the fields in the coarse and medium-textured soils, while irrigations may start mid- to late next week or the week after in fine-textured soils. Some of these irrigations are probably still earlier than needed based upon soil water content, but many are associated with following a fertilizer or Temik application.

Just as was mentioned last week, it will be very important for growers to look at the root system a week or two down the line to see just how they need to spread out irrigations this year. Many of the plants with seedling root injury from *Thielaviopsis* (black root) or other diseases may need more frequent irrigation (where possible) once you start in with irrigation. Injured root systems where tap roots were lost or weakened are more likely to spread laterally and be more shallow.

As has been recommended in our production meetings this past week, if you haven't already put on all sidedress N, reduce nitrogen fertilizer applications according to estimated yield potential (55 lbs N per bale of estimated yield/acre) to avoid excess soil N and the excessive growth it could encourage.

Irrigation practices will probably need to be handled quite differently for your Pima versus your Acala crops, or for really late plantings of either cotton. For Acala with plantings through mid-May, you can still probably work with the concept that you don't want to stress the

plant much between the 8th node on into mid-flowering, since you both want to build an adequate size plant (with enough fruiting sites) and promote a compressed, successful flowering period.

Definitely plan on using some measure of plant vigor (height:node ratio or internode length between the 4th and 5th leaves from the terminal) and square retention to help clue in on how the plants are doing (low vigor with plants you need to encourage, or low retention and tendency toward rank growth).

If fields are developing a tendency toward too high a vigor as you go toward flowering, or were planted after mid-May, you may want to delay irrigations moderately (1 to 2 bars beyond normal irrigation thresholds) for each irrigation if you need help in "throttling" back the plants.

In Pima, the same type of monitoring will be critical, but it will be more important than in Acala to plan on using delays in irrigation (even in early to mid-flowering if necessary) to help keep the plants under control if vigor seems to be too high and/or retention is low.

For the first irrigation, I wouldn't recommend going much past -17 to -19 bars unless the root system looks very good, but for subsequent irrigations, you may consider going as high as -21 to -22 bars where vigor is high.

Growth regulator applications alone will not hold back Pima plants from excess vegetative growth this year, particularly if retention isn't high. Water stress, reduced N and mepiquat chloride (PIX) will be needed in concert to bring in the Pima crop for a timely harvest.

There are a number of cooperator fields we have looked at, and a number of them are heating up just a bit in terms of mites. Some fields have been sprayed for both lygus and mites at this point, and some growers who have done these relatively early applications are also considering Temik side-dress for perhaps some activity against lygus, followed by some activity for mid-season aphids.