

## **California Avocado Society 2000 Yearbook 84: 39-57**

### **Annual Meeting 2000 Morning Session**

#### **Panel Discussions:**

#### **Lamb Hass Avocado Variety**

#### **Entomology**

#### **Water Issues**

### **PANEL ON THE LAMB HASS AVOCADO VARIETY**

Dave Pommer:

It is indeed my pleasure to moderate this panel discussion of the Lamb Hass variety. This is the first variety in a while to make a serious stab at getting established. To talk about that today on our panel, we have John Lamb, who has a familial connection with this new variety. We also have a distinguished marketer from Calavo, Rob Wedin, the Vice President of fresh marketing. In addition we have a grove manager who is growing more Lamb Hass than anybody else — Tom Palmer.

I would like to start with John to give us some of the history of this variety. The Lamb Ranch in Camarillo has been instrumental in the progress of the avocado breeding program. John's father was given the Avocado Society's Award of Honor in recognition of this family's role in the avocado breeding program.

John Lamb:

This project started in the late 1970's. Bob Berg contacted my father and asked if we would have any ground available to do a varieties trial. That led to planting, ultimately, about 20,000 trees from seedlings on a 4' X 4' spacing. As the trees grew and started to bear fruit we had avocados that looked like bananas, and avocados that grew in odd shapes, sizes, flavors and tastes. Most of them were ultimately removed or grafted to a more useful variety. We ended up with the Lamb Hass variety, which had been identified as promising fairly early in the program.

In addition to Dr. Berg, Gray Martin was a key part of this process. Gray spent countless hours out there cataloguing and checking out all the different trees, and making selections. From these plantings we ultimately ended up with the Lamb Hass being patented. In addition, the Surprise has been patented. Additional promising varieties include BL667, BL512, the Gem and Harvest — all from that planting. I can honestly say it was quite an expensive endeavor that involved a lot of labor. We were a little reluctant to allow the use of our name because other varieties, like the Gwen and the Whitsell, have not worked out well.

So far, it looks promising for the Lamb Hass variety. It has the characteristics that we are looking for in new varieties — Hass-like, and not so alternate bearing. Something with a strong stem so that maybe they could withstand a little more wind than a Hass would, and something that would be readily marketable in the Hass dominated market if you will. This fruit fits a variety of those criteria. There were a lot of taste tests.

Culturally, the tree is different from Hass. We are growing them with a tighter spacing of 15' x 18'. We would go tighter except we want to get spray equipment through there. The trees are a little alternate bearing, there is no question about that. The fruit definitely matures later than a Hass. If you end up with any in your grove, you had better segregate them so that when your pickers go through to harvest Hass, they won't pick Lamb Hass early. Lamb Hass is not ready until probably May. The trees are rather vigorous. They are more resistant to persea mite than Hass. We don't seem to see as much problem with avocado thrips, although they are out there. The trees protect their fruit well.

Dave Pommer:

Why do I plant Lamb Hass? The tree is resistant to Persea mite and I can plant in a high density pattern. I have plantings from 10' x 10' to 15' x 15'. Tolerance to wind is another reason. I prefer to take the fruit off the trees as opposed to watching them roll down the hills. I like the idea that if you have Hass and Lamb Hass you are going to have production over a longer period of the season. It is a tougher tree than Hass and it is just easier to plant. It is also great on the hillsides because it is a small tree. I haven't planted a Hass tree for the last six years. It is just an easy tree to work with. I've managed groves for a number of growers and it's just a very, very different tree. I really don't see any drawbacks with the tree. It does alternate bear, but I think with some training practices we may be able to change that. I think it is a great tree and right now it is out producing Hass.

This question is for Rob Wedin. You have a very different task than does the grower. It can be difficult getting the growers to understand what it is that makes your job easy or difficult. This is particularly so concerning new varieties. Please talk a bit about what it is that you need to have in order to do what you need to do with new varieties such as Lamb Hass.

Rob Wedin:

What is our objective? Based on what you fellows are saying, the objective is to sell the product at Hass prices. I think that is what we are all after. I would characterize the progress as "so far, so good" but it is too early to tell how successful we will be. We are somewhere between the two. Hass is a really powerful product and so we need to accentuate the similarities of Lamb Hass and Hass as much as possible. We are not, at this point, having any problems with the product. As long as the tree behaves well and allows the growers to pick the fruit when the fruit is ready we should do well. The product needs to be mature when it is picked. It needs to meet the same standards set by Hass when it starts its season. To be clear, Lamb Hass needs to meet the same standards that Hass meets when Hass starts its season. If it does, then I think it is a good product and I have confidence in selling it.

There is the issue of volume. Right now the volumes of Lamb Hass are rather small, but growing. I suppose there are a good three million pounds available now and that begins to change the marketing picture. The users that are going to make the Lamb Hass successful are our big users. Our plan is to sell to retail when the product comes off the young trees pretty early, that is to say in the earlier part of its maturity in late May or June. Some time later in the season, and we really don't know when, at this point, it will

become a good foodservice item. Clearly it will, sometime in the middle of summer or perhaps sometime after June. There is a big retail market in that early summer period, so I have a lot of confidence that we are not going to overwhelm the market, at least not in the short term. Probably sixty percent of the avocado market is through retail anyway, so there is plenty of room there for good-sized fruit.

There are costs and risks in launching a program that is special for Lamb Hass. This is something that should be undertaken only when the trade tells me they're not going to pay me as much for Lamb Hass as for Hass. I would be reluctant to do that because of the risk related to it. I am not negative about whether we would succeed, but the investment of time and energy is substantial and there is the possibility of it getting Lamb Hass segregated at a lower value in the eyes of the market. I'm reluctant to take that step. At this point I see no reason to take it.

Dave Pommer:

Tom. We were talking a little bit earlier about how Lamb Hass might fit into the mix of the average grower. Monoculture has its disadvantages and this industry, unfortunately, has been headed in that direction for the last generation or two. Can you address how planting Lamb Hass or other varieties can help this situation?

Tom Palmer: Well, since most of the orchards I have are already Hass, Lamb Hass works in well to make a blended orchard. Right now I may have an orchard with 40% Lamb Hass and somewhere down the road I may add some of the other varieties. I just need it because it just gives you a stronger orchard. Maybe you will have higher production but it is hard to know now. I think you always have to be looking ahead. Hass is a wonderful tree to work with but the other new varieties have so much more strength. I think we are better off if we can integrate the new varieties into our groves, although it may make harvesting a nightmare.

Moderator:

Rob, as a marketer, if you could have all your Lamb Hass during one window, what would that be?

Rob Wedin:

At this point, I would keep the window open fairly wide. In my opinion, we have a lot to learn about this product. My first plan is to accentuate the similarities. I'm not ready to pull that fruit out as separate. The sizer will do a lot of that for us as a lot of the fruit will fall into, let's say, the 40's and larger category. There are retailers who need a second or a third display of avocados. One of the displays would be large Hass, to improve their avocado program. Consumption of avocados can definitely grow using methods such as a second or third display.

So I would stretch out the harvest. I know that you may want to get going in mid May or June. I'm fairly comfortable with that period of time, and then keep going as long as you want with that fruit into

## PANEL ON ENTOMOLOGY

Moderator: J. McCormac

When I was little, I used to run across what I called pill bugs and watch them open and close. I would make them close, and then get them open and watch them close again. But, I somehow outgrew the fascination with insects. In front of you, however, are gentlemen who didn't outgrow their fascination with insects. These are distinguished entomologists of a practical nature. These are not university researchers. These are guys who are out in your groves on a daily basis, walking the hills, looking at the leaves, looking at the fruit, and trying to figure out what's going on in the grove. If something is getting out of hand, these are the consultants who will help you decide what you need to do about it. They are here today to give a picture of what they are seeing in your groves. Hopefully you are aware of the insect populations in your grove, but it is surprising how many growers neglect this important aspect of growing avocados.

On your left is Matt Hand of Southern California Entomology. In the middle is Mark Nybergh of Integrated Grower Services. On the right is Jim Davis, President of American Insectaries.

Matt, please begin with your analysis of insect problems in avocado groves.

Matt Hand:

This has been a tough year. We have not had much of a reprieve from avocado pest problems from the latter part of February up until now, and, depending on what kind of weather we get, I don't see it ending for another two months. If we get cool, moist weather, I think the perseia mite problems will diminish, but right now I am doing regular inspections of growth as often as once a week, or as often as I can. I've had experience this year from Orange County down into the south. It has been a blessing to me that the Irvine Ranch in Orange County has not had severe problems with perseia mite or avocado thrips. If there had been problems in Irvine, I would have been worn very thin. Luckily enough that hasn't happened. The same thing could be said of Temecula. So far, perseia mite hasn't been a problem and avocado thrips were not as much of a problem as they had been in the two years previous. In San Diego, however, thrips have been a major problem, and perseia mite continues to be a problem. I do not expect it to end unless we get some cooler, wet weather during the next two months or so.

In managing the perseia mite this year, I've done everything. I've used oil and I've tried sulfur. I have also used predaceous mites. I've had fairly good success, except with sulfur, keeping perseia mite under control. Because of the hot weather we've had this season, many people were very concerned about oil applications. I've treated at least a thousand or more acres with oil, and to date I probably have had significant burn on less than 5% of that acreage. We have been fairly successful with predacious mites to control perseia mite if their releases were made early enough. In some groves where I had released predacious mites and still had to treat, the results were compatible. In my experience, you get a far greater kill of your perseia mite with aerial applications of oil than you do with predacious mite. During the time of day we are treating for perseia mite, the predacious mites tend to move to the interior of the tree and they are less likely to be affected by the oil. Therefore, you are getting a higher percentage of kill of

the perseia mite verses predacious mite. From the time of oil treatment, it seems that the predaceous mites build up more quickly than the perseia mites and continue to provide some measure of control.

Mark Nybergh:

Well, that was a pretty thorough discussion. My experience in the north brings up the issue of coverage and who is doing the application. In one grove that I scout, perseia mite problems have been persistent. The grower does his own application, and the reason we've been in there three times is because I don't think he knows quite what he's doing. Matt and I have been out there to calibrate his equipment but with only modest success. Thorough coverage is essential in treating for perseia mite, brown mite, and also avocado thrips. We are lucky in San Diego County because we have great helicopter operators and we are getting through coverage. Really, the only thing different between the effectiveness of treatments down here and up in San Luis Obispo County is, I think, just the quality of the applications.

Concerning avocado thrips, the materials that we have been using — sabadilla, Agri-Mek and Success — have provided mixed success. In my view, we have had great results from sabadilla and Agri-Mek and to a lesser extent with treatments using Success.

Jim Davis:

I agree with what Mark and Matt have said. It has been a very tough year. This season has been economically painful and also difficult from a management point of view. Getting helicopters lined up and to take on a whole new control program during a drought, well we haven't had to do that before. We are hoping that this type of year won't occur again or will be very infrequent. From what we have seen of the perseia mite over the last few years, it has been only an occasional pest. It hasn't really been in every grove when conditions are right. If we get conditions where the winter drought cuts its population down, it takes a very long time to establish and build it up to the levels we have seen in the last few years. Perseia mite normally comes out in September and October and never really gets a chance to build up before the next cool weather period knocks it down. I think it's going to be just a sporadic pest. Only every now and again will we see the same kind of problems that we have seen this season. Occasionally, the winter is going to be mild and conditions will be favorable for a build up of perseia mite that is severe.

I also have been treating a lot of groves for the perseia mite this year. Perhaps a little over a third of the 2,000 acres that I have looked at have been treated, principally with oil by helicopter. I also tried sulfur in mid summer when we thought that the conditions were too hot for the oil. There are some good reasons to use sulfur. When it is sprayed in really hot weather, the sulfur volatilizes and really penetrates the canopy. We didn't have very good success with sulfur even when conditions were ideal for a sulfur treatment. Even after two treatments the control was not very good. A drawback of sulfur is that once you treat with it, you cannot put oil on top of it. The combination creates a toxicity to the tree and foliage. If you use sulfur you are locked into it and that's one of the main reasons I don't favor its use. Oil treatment is much better and more effective. Matt mentioned oil treatments burning trees on hot days. Some of the

trees that I treated also got burned by oil on days with high temperatures or a couple days after the application. But even then the amount of damage to the tree caused by oil is very little when compared to the damage caused by pests. It is a tradeoff between those two things. I think you are much better off treating with the oil even if you risk a little burning of the trees, rather than letting the pest continue feeding on your tree.

Regarding the control of avocado thrips, I think that the AgriMek is just a little more effective at killing those pupae and eggs than Success has been. The first time that I used Success under high pressure conditions, it didn't seem to get a very good kill at all. It took about three weeks for the population to come down. After those eggs hatch, and after they had a long chance to feed on it, the material did work. I think that a management strategy using Success means that we need to lower the threshold of the thrips population to allow more time for the pesticide to take hold.

Before I give up this microphone I want to plug my website for avocado pest management — [www.betterbug.com](http://www.betterbug.com). Every week or two I update this website with observations of what is going on in the field concerning avocado pests. I give the general trends and what considerations the growers should be aware of. It is a resource for people that have small groves or are unable to afford the services of a professional entomologist. The web site is a way for them to get some good information on avocado pest management. Thank you.

Moderator:

Wouldn't it be nice if we could get in a time machine and go back about fifteen years when a flare up of insects was more an aberration than a pandemic. Please expand a bit on the use of beneficial insects in avocado groves.

Mark Nybergh:

In regard to the avocado thrips, I take exception to the University's statements that green lacewings do not work, and they're not economical in the control of the avocado thrips. Last year I used them on about 500 acres. I was moderately happy about how they worked for me. We need to look at green lace wings as being a part of the solution, but not the whole solution. It's not going to correct your problems. We may have to spray while utilizing green lacewings. This year I used them less because of the statements the University was making, and I think I required more management practices for those growers. The way I see the green lacewings working for me is that they keep that thrips population down longer into the season, and they either allow me to reduce the number of treatments or they'll widen the window in which I can treat for the avocado thrips. I don't have to treat within that one period of time. Down south, of course, you know we are limited with only two helicopter operators and sometimes, well, this year they got three weeks behind at times. By opening that window you allow yourself a wider period of time to treat. I think that's what the release of green lacewings can give you. I think they are paying for themselves, and green lacewings are fairly economical. With three or four releases a year, at the rate that I am putting them out, it is less than the cost of one Veritran treatment. If I'm again saving a treatment for the grower, then they (lace wings) are definitely paying for themselves. They also have a benefit in terms of being predacious on perseia mite. Right now you find the green lacewings feeding on the perseia mite. The first year that I put out green lacewings, it

was a bad brown mite year for me. In those groves that were side by side, the groves where I did not release beneficials, the brown mite was not a problem, for some reason. That's only one of three years where I've seen that benefit. And, in regards to predacious mite, I'm very happy in terms of predacious mites this year. I've increased the amount that I'm releasing at a rate of 7,000 to 8,000 per acre, trying to keep it economical for growers. I've had good success with both green lacewings and predacious mites this year.

Question from audience:

What predacious mites did you use, and what was the effect of the use of Agri-Mek with or without the release of predacious mites?

Mark Nyberg:

What predaceous mites do I use? I prefer *helviolus*. They have been limited in availability, so I've been doing a 50/50 percent release of *californicus* and *helviolus*. Any time I've seen a cleanup of a perseas mite problem in a grove, and I've taken the samples into Biotactics, it usually comes back that *helviolus* has been doing the work. In terms of Agri-Mek and oil, I really haven't seen an upset. I do recover predacious mites from Agri-Mek treated plots. Persea mite just has not been as significant a problem in the Agri-Mek treated blocks.

I believe that predatory mites are compatible with chemical treatments as long as you are not treating right on top of a release. I recognize your concern, but I think we have pretty good evidence that they (predacious mites) remain in groves. I was in Goleta in a grove that hasn't had beneficials released in the last seven years, and recovered good numbers of *helviolus*. They do maintain a population.

Moderator:

I would like a show of hands. How many of you own an eyeloup? Raise your hand. How many do not? If you don't, is it because you have a grove manager who does? One of the major changes in avocado farming is the necessity of growers to become very familiar with the insects in their groves and the need to have tools to do that well. As a backup to what these three gentlemen do, or if you are a four or five acre grower who doesn't want to afford their services, it is your responsibility. It's a necessity to know what's going on with the bugs in your grove if you are going to stay in the hunt.

Jim Davis:

I agree. If you look at the value of the crop, and the cost of pest control advisor services, at about \$25 to \$30 an acre per year, compared to the risk that you take in damage to the value of that crop, the cost of our services are very small.

I want to make a comment about lacewings, also. I sold a lot of lacewings the last couple of years to control avocado thrips, and I think, for the most part, that they have served growers well. I recommend multiple releases over the course of the season and to start early because, as Matt said, it seems like one of their best effects is to keep the

population from growing quickly when it does start to grow. If the beneficials can't keep the pests under treatment threshold, at least they give you a lot of time to get the tools in place so that you can get control with a chemical and not lose your whole crop while you're waiting. In the grove that I most closely monitor, we released lacewings in 180 acres. We sprayed about ten acres of it with Agri-Mek last year. This year we sprayed about a 60 acre block that had been covered with fruit the year before and had a lot of flush growth where the pests just built up too much on that foliage for us to be able to control with lacewings alone. But because we were as successful in the rest of the grove as we have been in recent years, I think that they have served very well. Definitely, beneficial insects have their place as pest management tools.

The main treatment trial that has had a lot of attention is one that Joe Morse did where lacewings were used in the same manner as a pesticide. The thrips built up to treatment levels and then were either treated chemically or had a large number of lacewings released all at once. We spoke to him about this, and he said that he thought that this was a trial in which the lacewings would not be able to succeed; that they wouldn't be able to perform as pesticide would, instead of as a preventative. One of the things that we want Mark Huddle to work on in this upcoming thrip season is to release the lace wings in a program similar to what Mark and I use. This is where the lace wings are released several times early in the season to try to get them established in the trees and then becoming an ongoing control agent of the thrips. In other words, to simulate more realistic conditions where they could actually provide control. Hopefully, we'll get some answers from the University on how effective that is going to be.

If I may make one last point, there is another beneficial insect out there on the horizon for the control of the avocado thrips. It is a small black predacious thrips, called Franklinothrips. I don't think it's indigenous to California, but it's been here for a long time. We didn't see very many of them because we didn't have a really good host for them. Now that the avocado thrips have been building up, we starting to see this beneficial quite commonly. I think that if we release it early in the season, so that it can become established in the avocado trees, then we will be able to get good control. We are going to be running trials this next year and, hopefully, we will be able to have it (Franklinothrips) in our management toolbox.

## **WATER ISSUES**

Bob Coleman:

A vital issue of the day is water. This is a subject that is near and dear to most of us. We all support the water districts by paying those enormous water bills, especially at this time of year. Helping us today is a gentleman who is not only intimately involved in the Avocado Commission's water team, but he is a grower as well. Ken Roth is going to give a short presentation on what's going on with water in this area.

Ken Roth:

Good morning. As Bob mentioned, I am a founding member and contributor to the California Avocado Commission's Water Task Force Team. This part of my presentation, as Bob mentioned, is just to present some of the issues that we have

been working on, and I have some prepared remarks.

One of the most important issues on the issues management radar screen of the Avocado Commission is water. As you know, the Commission's Southern California Water Team has been working since the 1990's to encourage the development of state, regional and local programs to provide affordable and acceptable quality water supplies for agriculture. In 1991 the Commission founded the Southern California Agricultural Water Team, informally known as SCWAT (pronounced "squat"), to develop and implement a multifaceted information and education campaign aimed at water distributors. SCWAT worked for three years providing information to, and educating various agencies with the aim of obtaining an appropriate water rate for services the agencies provided. Our successes, to date, have been staggering — \$ 127 million in water savings for agriculture alone.

But we've not been idle since that success. SCWAT recently negotiated with the Metropolitan Water District (MWD) to provide growers in its service area a favorable position in the water agency's latest water surplus and valve management plan informally known as the wisdom plan. Under this plan, growers' allotments of water during times of drought will not decrease until the region hits a stage five alert. I'm sure many of you went through the '94 alert where many growers were threatened with irrigation water cut-backs, and some growers actually suffered water shortages.

SCWAT has also been instrumental in the MWD service area issues. Northern growers were assisted in negotiations with the Cachuma project and southern growers by negotiations with the San Diego County Water Authority to price water based on services received. Eastern growers were assisted by continuing dialogue with western water districts on ground water storage possibilities. But those are just a few of the successes of SCWAT, your Southern California Water Agricultural Team.

What is the view of the future? Our future is defined by our goals. Our goals, from the beginning, have been to achieve affordable, stable and predictable water rates, along with supply certainty, and acceptable water quality. To achieve these goals, SCWAT has positioned itself to be a cooperative, constructive player in the southern California water issues arena. By presenting factual information in the form of agricultural database information, economic modeling of agricultural impacts, and water cost demand information, we contribute to the development of intelligent and long term water programs for southern California. Our future holds the possibility of a permanent program that identifies agricultural water as interruptible, and as such, requires a different water rate. It is important to know this difference because, in the past, agricultural water users have had a discount only. We are looking to establish a separate water rate for agriculture based on interruptability. We are also seeking an agreement for the storage of water during wet years, for use during dry years.

We seek recognition of agriculture's value in the environmental picture of Southern California; this is something that I think is exceedingly important to agriculture. Finally, we offer assistance with projects that insure water reliability and sustainability in the Southern California food and fiber growing areas.

Here are some of the possibilities concerning future water supply and demand in California. We see a regional water wholesaler unwilling to develop new supplies

without financial commitments from the agencies that would use this water. We also see a total retail demand for water, under the right conditions, exceeding the available supply perhaps as early as the year 2005. This increase in demand is due, in part, to the growing population and economic expansion. Other factors which could lead to demand outstripping supply include restrictions in supplies from the state water project, the restricted use of Colorado River water, and lack of water storage capacity at the local level. We see an increased likelihood that agricultural water supplies will have to be cut back in the event of drought, and all of you can realize what that is. Place all of this against the background of changes in the water industry which include uncertainties about infrastructure replacement, deregulation, i.e. the San Diego Gas and Electric issue, water wheeling and transfers, an issue that was just rejected by the California Supreme Court, and the future of CalFed.

How do we navigate through this landscape to reach a brighter future in times of water supply uncertainty? It begins by starting today. Being early in issues management means working towards tomorrow's solutions now while there is still time to put them in play and shape our own future. That is why the Southern California Agricultural Water Team and the Commission have already been at work developing prototype models for addressing our industry's long-term needs. How will we build this future? First, by participating in local water agency agendas. Second, by participation in regional and Metropolitan Water District meetings on water rates. Third, by participation in water issues at the state level.

Who will build this future? Growers who understand the value of water will. Growers who understand the value of synergy with water purveyors. Growers who want to sustain agriculture. Where is the future? Our future is in our groves. It is in our participation with local water agencies. It is in MWD, and it is in CalFed, and agreements concerning state water and the Colorado River. Water problems, or opportunities, will not go away for anyone in southern California. If we can not see the problem, or want to solve or at least participate in the process, and want to contribute to the solutions, then others will — possibly to our detriment.

As you have already heard, changes in water policy are not impossible. As you have already heard, water regulation reform is not impossible. We can make a difference. The Southern California Agricultural Water Team is made up of growers like you and me. We utilize professional support for technical and political information, and for presentations, but the ideas and agenda come from the growers. I invite anyone who is interested in the future of agricultural water to come to the meetings of the Southern California Agricultural Water Team. Meeting notices are printed in the CAC *Greensheet*.

Thank you very much for your attention.