

VALLEY VEGETABLE NOTES

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COMING EVENTS

Don't forget, the Texas Pepper Conference will be in Weslaco, Texas on June 1st and 2nd, 1995. Contact Dr. Ben Villalon at (210) 968-5585 or write to Dr. Ben Villalon at the Texas A&M Research and Extension Center, 2415 East Hwy. 83, Weslaco, Texas 78596 for registration information.

WHY NITROGEN COST IS RISING MERRITT J. TAYLOR

As all producers know, nitrogen fertilizer prices have risen by fifty (50%) percent since the last season. Nitrogen based fertilizers jumped from \$200 to \$300 per ton. It seems that there are several factors that have caused the rise in nitrogen prices:

1. There is a world-wide shortage of both Anhydrous and N_{32}
2. The Terra plant that blew up in Iowa contained 300,000 tons of fertilizer that was destroyed as well as the equipment to

produce nitrogen fertilizer. This resulted in local shortages of fertilizer in the corn belt. The corn growers in the mid-west appear to be responding to a lack of available nitrogen and may be driving our costs up as they bid up fertilizer prices for this year's crop from distant sources.

3. There are not many plants in the U.S. capable of producing nitrogen fertilizer, that could take up the slack.
4. The construction time for new plants is quite long.
5. New plant costs are quiet high.
6. Interest rates have risen in the last year.

Current prices should encourage long-term investment in increased manufacturing capacity, with an expected reduction of prices, but this may two or three years in the future. The last two items in the above list

reinforce expectations for a continuation of nitrogen shortages in
Regardless ... There has been an increase from \$200 to \$300 per ton for nitrogen fertilizers here in the Rio Grande Valley over the last year (a 50% increase in price). Industry wisdom is telling the chemical representatives to expect prices to reach \$400 per ton by year end. This may be a good time to get out the old spread sheet and evaluate the " what - if " scenarios concerning purchasing and storage of fertilizers for the future versus waiting until they are needed. Other scenarios to re-evaluate include the amount of nitrogen fertilizer to be used for specific crops as well as the possibility of a different crop mix. Forward contracting of both fertilizer purchases and sale of the crop could also be alternatives to consider in your management alternatives.

COMMON SENSE CAN PAY BIG DIVIDENDS LYNN BRANDENBERGER

Every production season brings to light new examples of the "oh oh, maybe I should have read and followed the instructions syndrome". This syndrome is not unique to any particular area of the country or in fact any specific area of the world for that matter, but it does usually have a specific effect upon the producer and operation, i.e. the loss of profit. Profit which is needed to pay our production costs and to provide us a living. Unfortunately, vegetable crops have a very small margin of error for mistakes which might go unnoticed in other less intensively managed crops, as a result, most vegetable producers don't have the luxury of making very many big mistakes.

So, what should we do about this nasty

the short-term (the next year or two).

syndrome? First and foremost, let's use some common sense when it comes to production basics, for example: If we're going to utilize some type of pesticide, read the label and follow what it says to do, this information if followed can reduce drastically the amount of problems that will occur from misuse and will greatly increase the chance of the material being effective; When considering crop fertilization, don't increase fertilizer rates 200 to 300% from the recommended rates, not only is over fertilization more expensive, it can often result in reduced quality and yields; If you're interested in a new production practice, great, but be conservative try it on a small scale first and then increase its use as you become familiar with it.

These are just a few examples of how we can reduce losses in commercial vegetable production, but the common idea here is to follow that most important sense we all possess, common sense.

ADMIRE/PREVIEWED UPDATE STORMY SPARKS

Admire/Previewed recently received several new federal registrations for use on a variety of vegetables. These registrations are targeted primarily for whitefly and aphid control. The registrations include direct-seed or transplant crops and include eggplant, peppers (bell, chili, cooking, pimentos and sweet), tomato, ground cherry, pepinos, tomatillo, broccoli, brussle sprouts, cabbage cauliflower, Chinese broccoli (gai lon), broccoli raab (rapini), Chinese cabbage (bok choy, napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mustard

greens, rape greens, and lettuce (head and leaf).

Both soil (Admire) and foliar (Previewed) applications are registered. A word of caution for those of you who have experience with the soil application - do not expect the same performance with the foliar application. With the foliar application you apply much less material and the product is exposed to a less hospitable environment (light, etc.). Other restrictions are listed on the labels. One caution for double cropping, the restriction for total use per year includes both products (ie. if you use .25 lb. of admire at planting on both crops, you can not use previewed).

Leafminers on vegetables:

Leafminers seem to become harder and harder to control each year (but we still can not detect resistance to Trigard in the lab), and with the expanded labeling of Trigard recently, we need to pay even more attention to resistance management. Trigard is now labelled for use on celery, lettuce (head and leaf), spinach, peppers and cucurbits. When using Trigard, it would be helpful to add something for adult control. This should (in theory) help the overall control (by killing exposed adults) and reduce the need for repeated applications, both of which will reduce the resistance selection pressure. For crops where Agri-Mek is labelled (celery, head lettuce, strawberries, tomato), the same precautions for resistance management should be observed. On crops where both products are available, a rotation between the two should be used. On peppers, Texas still has a section 18 in effect for use of Agri-mek for broad mites. If it becomes necessary to treat for broad mites, use

the Agri-mek application as a substitute for at least one Trigard application to reduce the selection pressure for resistance.

VEGETABLE DISEASE ROUND-UP TOM ISAKETT

Squash Leaf Curl Virus on Watermelon and Squash

This virus disease was confirmed in early March on watermelons in southern Starr county and squash in southern Hidalgo county. Its occurrence in these areas is two months earlier than last year and is likely related to the mild winter that allowed survival of whiteflies. The disease has not yet been seen in other watermelon growing areas of south Texas this season.

The outbreak of this disease differs from what has been seen in the fall of the last two years in that: a) incidence of infection within a field is low (e.g. less than 50%, as compared with near 100%); b) plants appear to have become infected more than a week after emergence. Although it is too early to predict the outcome, based on previous years' observations, I do not anticipate a major impact of this disease on yield of the spring crop.

Since the incidence of infected plants is relatively low and populations of whiteflies are relatively low (compared to the early fall), I anticipate that good whitefly control will reduce the spread of the virus to non-infected plants. This has been the experience in Florida with the whitefly-transmitted virus infecting tomatoes.

Although I think of the squash leaf curl virus as being a fall problem, it has always been in the back of my mind that the disease could become a

spring problem as well. Hopefully, the information that I learn this season will help improve strategies for dealing with this disease.

They're on Tomatoes, Too:

Whitefly-transmitted geminiviruses are common on tomatoes in the fall, but this spring, they were also confirmed on tomatoes growing in the Valley. The situation is similar to that of the watermelons: low incidence of disease and low populations of whiteflies in the area.

Gummy Stem Blight of Cantaloupe and Watermelon:

This disease was found in several locations in the Valley. The incidence was somewhat low in the one watermelon field where I found it and it coincided with injury to the stem at the crown which occurred earlier as a result of the vine twisting in the wind. Incidence was much higher in some cantaloupe fields. The disease is severe this season because of the cool, rainy weather that we experienced earlier.

Brown lesions occur on the main stem near the soil, with watersoaked areas surrounding them. Lesions sometimes have a brown exudate associated with them. Often, tiny, black fruiting bodies will be found in these lesions, which is diagnostic for this disease. The lesions can girdle the stem, resulting in wilting.

The pathogen is both seed-borne and soilborne. The soilborne source of the pathogen is important in fields where melons follow melons. Absence of this disease in previous seasons in fields with melon mono-culture could be explained by the absence of environmental factors in those

seasons that favored disease. For example, the optimal temperature for disease development on cantaloupes is 65 degrees, but resistance to this disease is reported to increase at higher temperatures.

For control, benomyl can be applied to the crown area. A 1' - 2 year rotation out of cucurbits will greatly reduce the amount of the fungus present. Cultivar differences in resistance have been reported.

Soft Rot of Onions:

This disease seems to be more prevalent this season. In one instance, onions from Mexico had a soft rot in the neck that was associated with the fungus, *Rhizopus*. (The disease is called "mushy rot" and is not common). I am isolating bacteria from other samples of onions, including those representing several cultivars growing in the Valley. I have not identified them at this time. However, the different species involved in bulb rots have several things in common: they are soilborne, they gain entrance into the bulb via wounds (e.g. insect or harvesting), and disease development is favored by high temperatures and free water. Control measures (which also apply to mushy rot) include harvesting at proper maturity, avoiding injury, rapid drying of bulbs, and storage at low humidity and temperatures.

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