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Winter Garden Spinach Referendum Vote
Frank Dainello

"Public research, the biggest research sector, (in U.S. agriculture), has fallen on hard times. Budget cuts threaten to cut out research, or cut deeply into it. Federal researchers are told they must work on produce industry problems. But they cannot travel; they cannot make long distance phone calls; they cannot buy products to test. The money is not there." This quote from an article by Larry Waterfield appearing in the Packer (September 29, 1990). If you would substitute "Texas" for "Federal," you will have an accurate assessment of the situation in our state. The budget cuts are especially severe on minor crops such as spinach because they impact the fewest number of people.

Fortunately, several concerned Winter Garden spinach growers are attempting to do something about the dilemma facing their industry. With the assistance of the Texas Vegetable Association, they were able to obtain permission from the Texas Department of Agriculture to conduct a commodity referendum on September 14. The purpose of the referendum is to develop a funding mechanism to support Research and Extension programs vital to the well-being of their industry. If passed, the referendum will be the first in Texas conducted to support a vegetable crop.

The concerned spinach growers should be commended for their desire to help their industry survive. Hopefully their colleagues will support their efforts and vote in favor of the proposed check-off program. Self funding of Research and Extension programs by users of the information is the direction the Experiment Station and the Extension Service are being forced to take. If the Winter Garden spinach growers fail to pass the referendum, I am afraid they will not be given any help in the future from the State to solve their production problems.

Evaluation of Pink Root Controls for Onion
Tom Isakeit and Marvin Miller

In the fall of 1994, we tested two commercial products for control of pink root of onion, both applied as seed treatments and at transplanting. The products, composed of different types of bacteria, were Blue Circle Inoculum (also known as Deny) and Actinovate (formulations 108 and YCED 9). The Actinovate seed treatments were encrusted on

'Explorer', 'Rio Bravo', 'Early Supreme', and 'Red Granex'. The Blue Circle Inoculum and Actinovate were also tested as in-furrow treatments with 'Red Granex' seed and 'TG 1015' transplants. These products were tested in an area of the Weslaco research station with a history of pink root, using a replicated, randomized experimental design.

Neither product reduced symptoms of pink root or improved the quantity of roots when used as a seed or transplant treatment. The yield of all grades was not greater than that of the respective controls for all treatments. A detailed report of this work is available.

Australian Research on Control of Gummy Stem Blight of Cantaloupe:
Tom Isakeit

A recent report by L. Vawdrey of the Queensland Department of Primary Industries discussed fungicides and resistance for control of gummy stem blight of cantaloupe (Australian Journal of Experimental Agriculture 34:1191, 1994). Ten commercial fungicides were evaluated. Only three of these (mancozeb [Dithane], benomyl [Benlate], chlorothalonil [Bravo]) are labeled for use on melons in the United States. In summary, the use of all fungicides reduced disease in comparison with the control and increased marketable yields by 13-55%. Fruit quality was also improved with fungicides, as measured by an increase in total soluble solids. A systemic, tebuconazole, was found to be the best fungicide, followed by fentin hydroxide and prochloraz Mn. Phytotoxicity with two of these fungicides were reported: higher rates of tebuconazole caused shortening of internodes and delayed flowering, while fentin hydroxide burned older foliage. Of the fungicides labeled (i.e. legal) for use on melons in the United States, benomyl was the best (surprise, surprise). The use of mineral oil as an adjuvant with benomyl was no better than benomyl used alone. Similarly, the use of phosphonic acid did not improve the activity of mancozeb.

It may be possible to use plant resistance to manage this disease. This study confirmed other reports of resistance in two breeding lines obtained from the USDA. There were also differences found in some of the commercial cultivars tested; 'Topstar' and 'Eastern Star' yielded more than 'Tasty Sweet', 'Argyle' and 'Hiline' when grown under disease pressure.

Vawdrey concludes that systemic fungicides should be used during severe disease pressure, especially when vine cover is dense. This means that, for us, benomyl (Benlate) or thiophanate methyl (Topsin M) are the fungicides of choice for severe gummy stem blight pressure. Chlorothalonil (Bravo) and mancozeb (Dithane) have their place in a gummy stem management program because, when they are used in alternation with benomyl, they can help to prevent the development of resistance to benomyl. Furthermore, unlike benomyl, they also have activity against Alternaria leaf spot and downy mildew. Since tebuconazole also has activity against powdery mildew, it would be a good fungicide in a program alternating with benomyl or thiophanate methyl. A current IR-4 project to get tebuconazole labeled on melons may make
this a reality.

Truth-in-Packaging
Tom Isakeit

There are several products for biological control of diseases on the market today that use peat or some other material as an "inert" carrier. It has been my experience that some of these products contain, in addition to the active microbe, other microbes. The effect that these other microbes have on the effectiveness of the product must be considered. A recent report by P.E. Olsen and others with Agriculture and Agri-Food Canada (published in Soil Biology and Biochemistry 27:699, 1994) might be illustrative of potential problems. They surveyed microbial contamination in 40 commercial rhizobial inoculants, which used non-sterile peat as a carrier. Rhizobia are symbiotic bacteria that grow in legume roots and provide the plants with nitrogen. In 39 of the samples, they found that the number of contaminating bacteria and fungi exceeded that of rhizobia present; in some cases, by more than 1000 times. Many samples contained microbes that could inhibit the activity of rhizobia. Clearly, it can not be taken for granted that organic carriers such as peat are biologically inert. The presence of microbial contaminants in biological control formulations can not be ignored, since there is the potential that some of these contaminants may inactivate the antagonist, or even be pathogenic to plants.

LYNN BRANDENBERGER, Ph.D.
Associate Professor and Extension Specialist

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