

THE CALIFORNIA tomato GROWER



Mold Assay Project Nearing Completion

A *new mold assay test that promises to be a more accurate indicator of the condition of processed tomatoes has moved into the testing phase and may soon be available on a widescale basis.*

At the 54th Annual Meeting of the California Tomato Growers Association in Sacramento on February 6, Jim Cary, national sales manager of VICAM, discussed the new test, including how it works and the background behind it.

VICAM, based in Watertown, Mass., is a world leader in separation and diagnostic techniques for the food and grain industries, according to Cary. The company markets numerous products that test for mold, aflatoxins and other concerns within the food industry. In fact, Cary said since the firm's inception in 1983, the goal has been to come out with a new prod-

uct every year. "And in the last five years, we have averaged a new product launch every six months."

As such, VICAM researchers began looking at the processed tomato industry and the test used to determine the mold count in tomato products. Of course, that test is the Howard Mold Count, which has served the industry well for many years, but also has questionable accuracy in this time of highly sophisticated technology. The Howard Mold Count basically relies on a hand count under microscopic conditions.

The new mold assay project relies on research begun at the University of California at Davis. University researchers developed the test and took it to a certain level, but VICAM is refining it into a marketable product. Cary said the UC test took 25 minutes, which is too long for commercial use. VICAM's goal is to create a quick and reliable test that has consistency at all levels. Cary said the test is designed to offer consistency and accuracy at all three levels where testing is advantageous — grower, processor and final buyer. "We have strived to develop a test that will offer consistency at all three levels — same test...same measuring stick...same numbers."

Cary explained that VICAM mold assay test has been designed to give an exact number which will be associated with the quality of the product. He said the Howard Mold Test can result in different numbers

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when the same product is tested by two different people.

Cary listed the test's advantages as being easy to use, consistent between operators, fast, rugged and affordable. While the exact price has not been determined, Cary estimated a cost factor of \$4.50-\$6.25 per test. While that is quite a bit more expensive than the Howard Mold Test, Cary believes those costs are well within reason "and nobody we have shared that with has even asked us about it."

VICAM executive Barbara Cohen is largely responsible for refining the test so that it meets the company's criteria and has been involved since the beginning. Cary said she has worked closely with California growers, processors and the California Tomato Growers Association to design a test that meets the industry's needs. He indicated that she would be better suited explaining how the test exactly works but he took a stab at it.

Cary explained that the test takes tomato product — it has been tested successfully with both paste and raw juice — and combines that product with a glowing substance that binds to mold. A filter system

is then used to isolate the mold. A fluorometer can then read the mold and give a number reading. "The substance makes the mold glow and it gives an accurate number every time."

Cary said the entire test takes about seven minutes. As of early February, lab testing had proved very successful and VICAM was ready to take the product out into the field. "We are going to take the unit into Morningstar within the next few weeks and iron out any problems we find. We want to make sure it is accurate and precise under field conditions. When we leave there, it should be ready to run."

If all goes as planned, there should be prototypes in the field for the 2001 harvest. Full scale use could be available for the 2002 season.

Of course for the industry, Cary said the main advantage is the accuracy of the test. Payment for product is based on the quality of the tomato product and the more accurately that can be determined the better it is for all involved. Growers can be more accurately rewarded for the quality of their tomatoes and processors and end users can be sure that they are getting what they paid for.



MoldQuant-T, VICAM's new quantitative test for tomato mold, gives fast, accurate results using a VICAM fluorometer.

With compliments

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