

# insight

ISLAND VOICES

## Growing controversy

### GMO critics overlook facts about science, safety and pesticides

By Ken Grace

Science can easily be misunderstood and misused in the debate over potential risks and benefits of genetically modified (GM) crops. Concerns over farm pesticide applications or corporate business practices may be valid, but they have nothing to do with the science of GM crops to protect yields, add nutrients, or reduce pesticide applications.

Critics of "Roundup Ready" corn or soybeans overlook the fact that these herbicide-resistant crops were developed to reduce pesticide use by allowing farmers to apply the single broad-spectrum weed killer Roundup (the same product we use in our yards), rather than multiple applications of "harder" herbicides.

Regarding labeling of supposed GM foods, processed grocery products like soybean or corn oil and corn syrup do not contain DNA. These are identical to oils and syrups refined from non-GM crops. So, labeling products containing them as "GM" or "non-GM" just doesn't provide any useful in-



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formation.

The recent commentary by Hector Valenzuela ("Controversy about GM crops has a silver lining," Star-Advertiser, Island Voices, July 3) cited health concerns about a pesticide called Bt incorporated into cotton, corn, soy and potatoes. Bt is an insect-killing protein produced by naturally occurring bacteria in the soil. This natural pesticide has been used by organic farmers for decades as a safer alternative to synthetic pesticides. Modifying plants to contain this same protein reduces the need for any spray applications. It's a combination of biotechnology and organic pest control.

Three recent studies on GM



crops mentioned by Dr. Valenzuela have significant limitations or flaws. The first study concerned a "hidden" viral gene segment found in some GM crops like Rainbow papaya. The whole papaya genome sequence has been described and published, so it isn't really hidden. As papaya researchers Richard Manshardt and Dennis Gonsalves had explained to Dr. Valenzuela, a "segment" is an incomplete piece of a gene that cannot be used by

the plant to produce anything. Moreover, the study pointed out that even if the whole gene were present, it does not produce any allergens or toxins. So, no health issues exist.

This is an example of good science exaggerated to sound threatening when there really is no threat. Two other recent studies mentioned in the earlier commentary are not such good science, though, and have been widely crit-

icized.

The first of these two problematic studies reported tumors and other damage to rats fed GM corn for two years. These researchers used the same strain of rats commonly used in short-term GM crop safety studies. But, these rats are especially susceptible to cancer, and will all develop tumors naturally and die within two years. The small number of naturally sick rats and the unusual statistical analysis used in this study make the results pretty meaningless. The researchers declined to share their data, but analyses by other scientists of the information in their paper have failed to find any significant effects from the GM corn.

The second questionable study was of pigs fed GM or non-GM animal feed. The researchers reported that the GM-fed group had more severe stomach inflammations, but this seems to be a statistical error created by analyzing the same pigs over and over again for any differences. Critics have pointed out that the GM-fed pigs actually had fewer overall stomach problems.

There certainly can be legitimate concerns about specific uses of GM technology, or about misuse of pesticides in farming. Big companies should also expect to have their business practices examined. But, these are all different issues. Let's not wrap them all up together and label the result "GM crops." And, let's take an honest look at what the science really says, not what we want it to say.