ANALYSIS

USDA asks "Can organic foods be recombinant?"

US Secretary of Agriculture Dan Glickman and other officials at the US Department of Agriculture (USDA; Washington, DC) are proposing for the first time US-wide standards for defining organic foods and other agricultural products. Although the proposals do not specifically address uses of genetically modified organisms (GMOs), organic farmers and activists who support the proposals are vowing to exclude GMOs—along with such practices as food irradiation and fertilizing with reclaimed urban sludge. USDA officials are seeking public comment on these issues before the proposals become final rules later this year.

Congress mandated standards for organic agriculture as part of the Organic Foods Production Act, which was incorporated into the 1990 Farm Bill. "These proposed regulations are the basis for the toughest, strongest, and most protective standards for organic products in the world," says US Senator Patrick Leahy (D-VT), who authored that bill and subsequently lobbied the administration to develop comprehensive standards. He predicts the rules that the USDA adopts will "become the global model" for organic agriculture.

US organic foods now command annual sales in excess of \$3.5 billion, reflecting a remarkable 40-fold increase during the past decade, but still representing a small percentage of total US food sales (\$350 billion), Glickman says. However, this growth occurred while products could be "labeled organic without meeting any standards whatsoever." Not only will the new standards bring sought-after integrity to this branch of agriculture, he says, "the rules are going to clear up the confusion that sometimes exists in the minds of consumers, processors, and merchandisers."

USDA officials say the rules on organic foods will be important at both the national and international levels. "These new rules, by setting a uniform national standard and leveling the playing field, will open the door to this tremendously exiting new market and new economic opportunities for our farmers," Glickman says. "The European Union is the biggest customer of US organic

products. These national standards allow us to meet theirs, and we can hold imports to our standards."

Perhaps the most relevant aspect of the European standards on organic produce is that recombinant products will almost certainly not be allowed to be designated organic. In the European Union, controls over the definition of organic produce are regulated by a European Council Regulation that came into force in June 1991. Under the regulation, the use of sewage sludge as fertilizer is currently prohibited, as is irradiation during food processing, but the use of recombinant pesticides (such as killed *Bacillus thuringiensis*)

and genetically modified organisms is not prohibited. However, amendments to the 1991 regulation, which would exclude both, are currently under discussion and are almost certain to pass into law, European officials say.

With this European precedent, it is unsurprising that the application of the proposed USDA rules to biotechnology struck an instant note of controversy. Members of the

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private-sector National Organic Standards Board (NOSB) had recommended to the USDA that GMO-derived products should not be labeled as organically produced. But high-level federal officials decided shortly before the USDA released its proposals to sidestep this recommendation and seek "public input" on whether GMOs or their products should be prohibited, broadly permitted, or allowed on a case-by-case basis in organic farming. Officials are also seeking similar public comment on other matters that NOSB members oppose, including food irradiation and agricultural use of sewage sludge.

Organic or recombinant? USDA invites public comment but Europe has already decided.

USDA officials also overruled NOSB on several specific biotechnology-related issues. For example, killed microbial pesticides (e.g., insecticidal *B. thuringiensis* protein toxins derived from genetically engineered microorganisms) are included on the USDA proposed "national list" of materials and practices compatible with organic farming and foods. The list also includes chymosin, the rennet cheese-making enzyme that is now being obtained from genetically modified microorganisms.

Katherine DiMatteo, executive director of the Organic Trade Association (OTA; Greenfield, MA), is disappointed by the USDA decision not to rule out the use of GMOs and these other practices. "We think USDA and other agencies do not understand that organic production methods may not follow all the scientific prescriptions they are comfortable with. We're pretty conservative, and we don't want to adopt GMOs and irradiation." She says the OTA will fight against the inclusion of such practices in the USDA rules.

"GMOs and irradiation are not tools that we need for organic production," agrees NOSB chairman Robert Anderson, who runs Walnut Acres Organic Farms (Penns Creek, PA). "Our board worked to develop the highest standards, and we made clear to USDA where we stood. We're not sure why these issues are still on the table."

"USDA has come a long way, but the culture shift is not completed and they still have some more work to do on these proposed standards," adds Kenneth Cook of the Environmental Working Group (Washington, DC). "Organic farming is about a production process that's different from conventional agriculture. If you want irradiated food or GMOs, they shouldn't be labeled organic."

Although some in biotechnology are said to sympathize with this view, many more argue that genetically engineered products are perfectly compatible with organic practices. "There is no compelling argument to exclude GMOs, and they could make an enormous positive contribution to organic agriculture," says Val Giddings, vice president for food and agriculture at the Biotechnology Industry Organization (Washington, DC).

"We see no conflict between the organic world view and the use of recombinant DNA technology to produce improved crops," Giddings says. "There's a lot about biotechnology that could allow farmers to tread more gently on the land."

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