

## COMMENTARY ON AGBIOTECH

# Agracetus' cotton patent draws opposition

As Calgene's (Davis, CA) newly released Flavr Savr tomato now simmers in the spotlight of consumer scrutiny, a quieter controversy is bubbling in the agbiotech industry. For certain, this subject will be less public, but probably as profound in its implications, as Calgene's genetically engineered tomato. In October 1992, Agracetus (Middleton, WI), a division of W.R. Grace & Co. (Boca Raton, FL), was awarded a U.S. patent, number 5,159,135, covering all genetically engineered cotton. Because this patent is the first to cover an entire species, opponents fear that Agracetus, and its licensees, have been given the green light to monopolize all genetic improvements in cotton. These opponents have now geared up to fight the patent.

Indeed, the patent has presented some adversaries an opportunity to resurrect ensconced issues about patenting life. Yet a review of now-ancient history quickly exposes these efforts as tired and fruitless. First, even though the Agracetus patent is species wide, patents with even-broader coverage have existed in many industries and been accepted for years. For instance, the Cohen-Boyer patent, which claims the invention of recombinant DNA, applies to the entire life-sciences industry. Second, and more specifically, in 1985 the Patent and Trademark Office's (Arlington, VA) Board of Patent Appeals and Interferences ruled in the *ex parte Hibberd* decision that plants, and their parts, are patentable subject matter and are protected under Section 101 of the patent code. Finally, hundreds of patent applications and patents covering genetically altered crops are issued or in process.

Activists, such as the Rural Advancement Foundation International (RAFI, Pittsboro, NC), have taken the lead in framing the opposition's terms in this debate. Since the 1970s, Pat Mooney of RAFI has advocated that improved crops are resources of common heritage and are therefore unsuitable for any form of exclusive control, including patents. A perpetual irritant to the seed industry, Mooney argues that the con-

centration of genetic research within multinationals may diminish the genetic diversity of crops over the long haul. Industry insiders say that several of Mooney's contentions have little basis in fact. Despite the hundreds of seed companies lost through industry consolidation in the past two decades, over 4,000 seed companies still populate the globe, over a third of which conduct their own breeding, testing, or evaluation. Genetic diversity is a top objective among multinationals in their crop-improvement programs. In fact, claims of proper genetic diversity now serve to distinguish competitors' seed offerings.

While some may discount Mooney's apprehensions, none can deny the concerns now being expressed about Agracetus' patent. Government officials in India—the world's third-largest cotton-producing nation—are aware of the potential negative implications of this patent and are reviewing the situation. In January, an unidentified company filed a reexamination request on the patent, contending that Agracetus overlooked meaningful facts on transformed cotton that appeared earlier in a European patent application. Lawyers for the Department of Agriculture (Washington, D. C.) are considering pursuit of their own reexamination request on the patent.

On the other side of the issue, the cotton industry has aligned firmly with Agracetus. A recent industry position paper—authored by Calgene, Delta & Pine Land (Scott, MS), and Monsanto (St. Louis, MO)—points out that strong patent protection is essential for future competitiveness. Unless this incentive is in place, they assert, companies like Agracetus cannot rationally invest in technology development. David Anderson of Phytogen (Pasadena, CA) adds, "Activists have the effect of increasing the costs of defending patents. Ultimately, rising costs may prevent smaller companies from competing and may channel seed development into larger companies, which have the financial resources to defend their technical positions. Ironically,

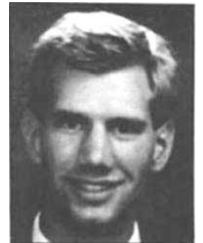
activists may be accelerating the decline of the small seed companies that they hoped to defend."

As evidence of its practical management of the patent, and to diffuse critics who have highlighted its monopolistic ambitions, Agracetus has offered free research licenses to academic and government researchers. The company has granted nonexclusive commercial licenses to Calgene and Monsanto, and it is open to exploring licenses with others. Agracetus has also indicated that it has moved away from direct commercial involvement in improving agronomic traits for cotton, as it intends to work through others to improve cotton's yield, pest resistance, and tolerance to agchemicals. These actions legibly counteract claims that Agracetus is intentionally hoarding all of the patent's benefits.

Several have speculated about how Agracetus might manage this asset. Perhaps a Cohen-Boyer licensing arrangement, perfected by Stanford University (Palo Alto, CA) in the early 1980s, is appropriate. This approach involved a low, no-hassle annual licensing fee plus minimal royalties on products. However, the universe of companies commercializing innovations in cotton is finite, and the agronomic advantages from the technology could take years to develop. The risk of immaterial return for Agracetus renders this strategy less plausible. At the other end of the spectrum, W.R. Grace or Agracetus might recycle some portion of their gains from their patent to agbiotech researchers in developing countries. Some industry experts assert that this might turn the opposition on its ear and realign their interests with Agracetus'. A display of leadership would not be uncharacteristic of Agracetus. Finally, if interference disputes arise, they will likely be resolved by cross-licensing. Whatever happens, Agracetus, as well as other companies in agbiotech, can rightfully argue that agbiotech inventors must be protected to the fullest extent of their discoveries, no matter how broad, or there will be little incentive to continue. ///



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