

Industry News

Ag Biotech Targets Big League---Part 1. Larry Waterfield, Washington, DC

Agricultural biotechnology is genuinely a new industry. Today, ag biotech is at last poised to create real products rather than just test-tube experiments and science-fiction speculations. Here is a rundown of some plant biotech companies.

ADVANCED GENETIC SCIENCES INC.---AGS, based in Oakland, CA, is most famous for its Ice Minus frost protection product, Frostban. Frostban uses genetically altered natural bacteria to fight frost formation on plants. Initial target markets for Frostban are pears, peaches, strawberries, and almonds; the product could be commercially available by 1990. The company is also working on biological pesticides, herbicide resistance, hybrid breeding systems, and genetically altered cut and pot flowers that could have unique color genes and built-in insect and disease resistance. AGS will merge with DNA Plant Technology Corporation, Cinnaminson, NJ, (see below) this year.

ASGROW SEED CO., UPJOHN CO.---This firm uses cell fusion, cell culture, and genetic manipulation to improve plant breeding. The company is using biotechnology to improve the quality of vegetable hybrids, including tomato, carrot, broccoli, and cabbage. It is also working on herbicide resistance in plants. In 1987, Asgrow opened a state-of-the-art plant biotechnology laboratory near Upjohn headquarters in Kalamazoo, MI.

BIOTECHNICA INTERNATIONAL INC.---This company, founded in 1981 in Cambridge, MA, seeks to genetically improve crops such as potatoes, tomatoes, corn, wheat, and soybeans. Plus, it is working on nitrogen fixation in plants, has moved into the seed business, and is developing a detection test for gum disease in humans.

CALGENE INC.---Founded in 1981, this company, based in Davis, CA, is developing disease-resistant crops that tolerate herbicides and hold up under environmental stresses such as heat, drought, and salinity. The company wants to improve such plant characteristics as shelf life, color, and nutrient content. It has received permission to conduct field trials on two genetically engineered tomato breeding lines that are tolerant to two kinds of herbicides.

CROP GENETICS INTERNATIONAL---CGI, founded in 1981 in Hanover, MD, is pioneering "incide" technology, the building of genetic resistance to pests directly into plants. Some biotechnicians have described this technology as analogous to vaccination in humans. The company hopes to field-test an incide product this year and perhaps market one by 1990. The company is currently marketing Kleentek "disease-free" seedcane to sugarcane farmers.

DNA PLANT TECHNOLOGY---DNAP was founded in 1981 in Cinnaminson, NJ. Its goal is to genetically enhance fruits, vegetables, and tropical crops by improving taste, shelf life, color, nutrition, size, and other consumer-related attributes. It is also seeking to develop branded produce items such as sweet corn and tomatoes with enhanced qualities. Its joint venture with the Koppers Co. of Pittsburgh, called AGRI-DIAGNOSTICS, develops and markets plant disease diagnostic kits. The first antibody-based kits are currently being sold for the detection of major turfgrass diseases; others are under development for horticultural and specialty row crops. DNAP will merge this year with AGS (see above).

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