Seeds, Biotech, Agrochemicals: D.A.M.N.D.

A series of recent acquisitions and mergers in the seed and biotech arena suggest that it's all D.A.M.N.D. Agricultural biotechnology is intensely concentrated in the hands of four or five life industry corporations - all among the top 8 agrochemical corporations in the world. More consolidation is on the way, but here's a snapshot of five industry giants:

Global Control of Seeds, Biotechnology and Agrochemicals

DuPont 5th ranking agrochemical co.	In August, 1997 DuPont announced that it had spent \$1.7 billion to buy a 20% stake of Pioneer Hi-Bred, the world's largest seed corporation. The two companies will spend over \$400 million in agricultural research in 1998. Weeks later, DuPont purchased Protein Technologies International from Ralston Purina for \$1.5 billion. DuPont is staking a major position in soybeans and biotechnology. AgrEvo gobbled up Plant Genetic Systems, a major European plant
AgrEvo 4th ranking agrochemical co.	biotech company, in 1996 for \$725 million. Industry observers speculate that AgrEvo needs to acquire a source of proprietary germplasm to remain in the big league. In September, 1997 AgrEvo followed course with its takeover of Nunhems and Sunseeds. Nunhems ranks #4 in global vegetable seed production.
Monsanto 2nd ranking agrochemical co.	In early 1997, Monsanto took a giant bite out of the hybrid maize seed market with the (US) \$1.2 billion acquisition of Holden's Foundation Seeds and its marketing divisions. More than 35% of the maize acreage planted in the US is based on germplasm developed by Holden's. Combined with its 40% stake in Dekalb Genetics (a major maize seed company), Monsanto has become a major player in the commercial maize seed industry. In 1996, it purchased Asgrow, one of the largest soybean seed companies. According to Monsanto, its genetically engineered crops were planted on 7.8 million hectares (19.3 million acres) in the US, Canada, Mexico, Argentina and Australia in 1997.
ovartis 1st ranking agrochemical corp.	Novartis is, by far, the top agrochemical corporation in the world, and the number two seed company. It lacks neither proprietary germplasm nor financial resources. Novartis reinforced its pesticide supremacy in May, 1997 when it picked up Merck's agrochemical business for \$910 million.
Dow AgroSciences 8th ranking agrochemical co.	Previously known as DowElanco (now wholly owned by Dow), Dow AgroSciences owns 65% of Mycogen - a seed and biotech company that holds an extensive library of Bacillus thuringiensis genes for insect resistance, many strategic patents, and is a major US seed company (sunflower, sorghum, soybean, maize.)

Company 1	996 Annual Agrochemical Sales
	(US) millions
DuPont (US)	\$2,472
AgrEvo (Germany)	\$2,475
Monsanto (USA)	\$2,997
Novartis (Switzerland)	\$4,511
Dow AgroSciences (formerly Doy	wElanco) \$2.010

source: RAFI