Place Your Bets: Agricultural Biotechnology and the World Trade Organization (summary)
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"Farming or the 'field of agriculture' will be replaced by the production of fibers, materials and energy at the molecular level. . . . In summary, production agriculture will be gone in 5-10 years. 'This is about life and life sciences.'" Steve Baker, vice president of Agri-Bank and CoBank (St. Paul, MN), FEEDSTUFFS, September 20, 1999. Baker is summarizing comments of Sano Shimoda of Biosciences, Inc., a biotechnology investment bank.

1. I'm a historian by training, so I am more comfortable interpreting past data than predicting the future. But by vocation I am a trade policy analyst, so I am often called upon to predict the future, though not so confidently as Mr. Baker, the St. Paul banker. After briefly reviewing the price trends of the past twenty years, I'll look at who has been making the most profit on their assets over the past fifty years and particularly in the last decade. Then we can discuss, whether planting GM seeds, such as Roundup Ready soybeans and Bt corn, will reverse the global price collapse for agricultural commodities and return farmers to prosperity.

2. Finally, I'll analyze the agricultural trade negotiations that will be launched at the World Trade Organization Ministerial November 30 to December 3 in Seattle. Will these negotiations produce anything fast enough to help you survive the price collapse that even the most optimistic of the "get big or get out" agricultural economists estimate will last at least until 2001?

3. When the Twin Cities Star Tribune repudiated Senator Paul Wellstone's "Agribusiness Merger Moratorium" bill in a November 15th editorial, the editoralist supported the Star Tribune's position by pointing to 1997 prices, the best since 1980. As you know already, but can see clearly in this first chart, income from prices paid for soy and corn by companies that promote biotechnology were below cost of production from 1981 to 1996, climbed during the Freedom to Farm debate, spiked in 1997 and then dove to their present catastrophic levels. Senator Richard Lugar, who, together with Representative Pat Roberts, translated agribusiness memos into Freedom to Farm, has announced that either farmers will farm his way or "many of us are going to find something else to do." ("Lugar says he won't allow return to old farm subsidy system: Economist says recovery not likely until 2001, 2002," AGRINEWS, November 18, 1999)

4. As you can see from this second chart, and as you know better than I, since 1981, generally speaking, your cash expenses have gone up, your yields have gone up and yet return to risk and management is below the break even point in most years.
Exports, the rationale for most U.S. agricultural policy, have, of course, also gone up. Obviously, these are overall figures and describe only trends, rather than the best and worst prices. But if you follow the USDA's advice and contract your grain under conditions, with inputs, and at a price specified by a Dupont or a Cargill, price discovery data will gradually disappear as the market orientation of agriculture is replaced by the confidential terms of contracts. The charting of price and other marketing data will become scarcer and what data the USDA can collect will depend on the interests of the traders and the processors in revealing it.

5. Ever since Congress followed the advice of agribusiness in the 1950s, and dropped the loan rate below the cost of production (parity), the farmers' share of the agricultural dollar has been declining, and rural communities have been dying. The next two charts show that the farmers' share has been shrinking while traders, processors, retailers and input suppliers have been increasing. Until the arrival of biotechnology in the fields in 1997, the input share of the agriculture dollar was starting to level out.

6. What has happened in the 1990s? As you can see from the following chart, the asset to profit ratio of all other sectors of the food and feed system is 10 to 20 times that of U.S. Agriculture Inc. U.S. Agriculture Inc. is the creation of IATP consultant Chuck Benbrook, and groups the total financial data of U.S. farmers and ranchers to compare their profitability with that of Fortune 500 agribusiness companies. Benbrook's table compares the estimated bottom line of U.S. Agriculture Inc. to that of agricultural traders, processors, inputs suppliers and retailers. The results are a logical consequence when farmgate prices remain chronically below the cost of production, while government refuses to implement policies so that U.S. Agriculture Inc, can compete with Fortune 500 agribusiness companies on a level playing field. For example, it is much easier for the government to get tough with taxpayers have have them subsidize U.S. Agriculture Inc. than to set a loan rate high enough to give U.S. Agriculture Inc. marketing leverage to compete with Fortune 500 agribusiness.

7. As farmers followed the advice of agricultural economists to get big or get out, and of input companies to adopt the latest technology or die, as a Novartis advertising last year in Agrinews put it, they have been caught on what the eminent agricultural economist, Willard Cochrane calls the "technology treadmill" (The Development of American Agriculture, 1993). The "treadmill" theory describes the very short-term profitability for the farmer of technological adoption. Bt corn and the Roundup Ready system, in the current legislative and agribusiness framework of farming, is speeding the treadmill up so fast that few, if any, are likely to profit, at least in the next two to three years.

8. But let's get back to the bottom line – your bottom line. Archer Daniels Midland's September 1999 non-Bt corn contract offers an 8 cent per bushel premium, if your corn is not contaminated with Bt corn. ADM's contract states that you bear all liability for any such contamination, e.g. from corn pollen blown across the band that is supposed to separate GM from non-GM crops. But let's leave aside, for the
moment, the costs of the liability issue, which the U.S. Department of Agriculture has yet to discuss in public. Let’s just discuss GM soy and corn and your bottom line for the next two to three years, while Freedom to Farm rules and before even optimists predict a price recovery. Let’s talk about your bottom line now, and not in 5 or ten years when the survivors, we are told by ag biotech advocates, will be molecular producers whose products will cure cancer and river blindness.

9. How much is a Bt or a Roundup Ready soybean premium — if there is one -- going to add to your bottom line during the next two years? Will it be enough even to offset the 5 cent per bushel drop in price for corn and the 15 cents drop for soy that the USDA just predicted last week? Even if the technology fee is eliminated and the seed price drops, and the technology actually performs as promised, and not as reported in Iowa State University’s Pesticide Advertising Hall of Shame, will you prosper, or at least survive by planting Bt corn and/or RoundUp ready soybeans?

10. I cannot answer those questions for you, but I do encourage you look for sources of information outside of the U.S. Department of Agriculture, which “chronically overestimates” export markets, according to a January 1999 study by the Food and Agriculture Research Policy Institute at the University of Missouri-Columbia and Iowa State University. For example, a November 8 article in Toyko’s Nikkei Weekly reports a survey of food processors on their use of GM ingredients. The article, “Genetically altered foods quickly becoming taboo,” states that “a survey of 323 food producers found that over two-thirds have either stopped using genetically modified ingredients or are considering doing so.” Furthermore, these processors believe that there are ample sources of non-GM. The trading giant Honda has set up a plant in Marysville, OH to segregate, certify bag and ship non-GM soy on contract. The Tokyo Grain Exchange and the Osaka commodities exchange have begun listing non-GM soy for trading next April.

11. If you think that market resistance to GM ingredients is the hysterical product of fringe groups with no scientific backing — the position of the U.S. government, biotech industry and most industry funded academics — then go ahead and plant GM crops fence row to fence row. If you think that the revolving door between industry/academe and government, which has fast-tracked U.S. approvals of GM crops, has not compromised the U.S. regulatory system, place, bet the farm on the Roundup Ready system and on Bt corn. Perhaps biotech proponents are right and you will survive the extinction of production agriculture predicted by Mr. Baker to “pharm” soybeans that will cure cancer in ten years or so. But how will you survive that extinction, if it occurs?

12. Perhaps you are counting on the U.S. government to knock out European Union scientific and consumer resistance to GM crops through the World Trade Organization negotiations on agriculture. Here is the U.S. proposal on agricultural biotechnology for the WTO Seattle Ministerial: “That the objectives for the negotiations include addressing disciplines to ensure [that] trade in agricultural biotechnology products is based on transparent, predictable and timely processes.”
According to yesterday's *Inside U.S. Trade*, the U.S. government has proposed a WTO working party on biotechnology that would attempt to realize the goal of "transparent, predictable and timely processes" for approving GMOs, since the possibility of rejecting or withdrawing applications for commercialization is never mentioned. If the U.S. proposal for a working party, currently opposed by the majority of WTO members, wins the day in Seattle or later, the working party will issue a report on its findings 18 months, i.e. in June 2001, at the earliest. The report of any WTO working party is not binding on WTO members.

13. In the meantime, however, you may be hoping for trade policy relief from the WTO dispute resolution panels to which the U.S. will bring complaints to force the acceptance of GM crops. As you know from the beef growth hormone complaints, the WTO dispute resolution process is a long one. Furthermore, even though the panelists are not scientists, but trade lawyers accustomed to promoting trade and thus favoring the U.S. government and industry cause, the panelists cannot ignore science or even limits reference to scientific authority to the industry dominated international food safety standards body, the Codex Alimentarius. Indeed, in June 1999, Codex Alimentarius members force the U.S. to withdraw a petition to legitimate the use of rBGH, a genetically altered bovine growth hormone. Both Canada and the European Union had reviewed the raw risk assessment data on rBGH, rather than the data summary provided by Monsanto that was the basis for the Food and Drug Administration approval. In the EU review of rBGH, the fundamental risk assessment assumption of U.S. GM regulatory doctrine, that GMOs are "substantially equivalent" to non-GMOs was declared to be scientific rubbish.

14. Without going into further detail, the prospects for advancing the cause of agricultural biotechnology through the WTO or even through bilateral trade retaliation fast enough to help you out do not appear to be good. For the moment, we can force our GM corn down the throats of Mexicans, even though Mexicans hate No. 2 yellow corn because it makes a lousy tortilla and puts tens of thousands of their farmers out of business. But can we force it down the throats of the French or of the Japanese, who hold more than a trillion dollars of U.S. debt that they can call in? If you think that agribusiness companies will reverse historic trends and turn more of the agricultural dollar over to the farmer and if you think that U.S. diplomacy will vanquish consumer and scientific resistance to GM crops, don't think twice about planting GM crops. But if you go to your banker and ask for a loan to plant GM, just tell him or her what I've told you and your banker might think twice. Thank you for inviting me to speak and I look forward to your questions.
Returns to Farmers
(excluding government payments)

Source: USDA ERS:
Farmers Caught in a Cost-Price Squeeze

Source: USDA ERS, FAO
"Is There Farming In Agriculture's Future?:
The Impact of Biotechnology"

Dr. Stewart Smith
Senior Economist
Joint Economic Committee
U.S. Congress

Lecture revised 10/21/92

Figure 4
Farm Share Trend Line
"Is There Farming In Agriculture's Future: The Impact of Biotechnology?"

Dr. Stewart Smith
Senior Economist
Joint Economic Committee
U.S. Congress
10/21/92

Marketing, Input, and Farm Totals
Table 10. Rough Estimates of the Size and Performance of the Basic Sectors in the U.S. Food System, Late 1990's

<table>
<thead>
<tr>
<th>Sector</th>
<th>Assets ($Billion)</th>
<th>Market Value ($Billion)</th>
<th>Revenue ($Billion)</th>
<th>Profits ($Billion)</th>
<th>Profits as a Percent of --</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeds</td>
<td>22</td>
<td>33</td>
<td>6.7</td>
<td>0.804</td>
<td>3.7%</td>
</tr>
<tr>
<td>Pesticides and Drugs</td>
<td>36</td>
<td>71</td>
<td>24.1</td>
<td>1.43</td>
<td>3.9%</td>
</tr>
<tr>
<td>U.S. Agriculture, Inc.</td>
<td>1,088</td>
<td>1,632</td>
<td>230.8</td>
<td>4.8</td>
<td>0.4%</td>
</tr>
<tr>
<td>Food Processing</td>
<td>329.5</td>
<td>638.9</td>
<td>429.9</td>
<td>30.1</td>
<td>9.1%</td>
</tr>
<tr>
<td>Retail</td>
<td>140</td>
<td>239.6</td>
<td>319.9</td>
<td>14.8</td>
<td>10.6%</td>
</tr>
<tr>
<td>Food Service, Restaurants</td>
<td>62.3</td>
<td>123.6</td>
<td>297</td>
<td>10</td>
<td>16.1%</td>
</tr>
</tbody>
</table>
