

**UNITED STATES OF AMERICA  
BEFORE FEDERAL TRADE COMMISSION**

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In the Matter of	)	
	)	
<b>Novartis AG,</b>	)	
	)	Docket No. C-3979
a corporation,	)	
	)	
<b>AstraZeneca, PLC,</b>	)	
	)	
a corporation, and	)	
	)	
<b>Syngenta AG,</b>	)	
	)	
a corporation to be formed.	)	
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**COMPLAINT**

Pursuant to the provisions of the Federal Trade Commission Act and of the Clayton Act, and by virtue of the authority vested in it by said Acts, the Federal Trade Commission (the "Commission"), having reason to believe that respondents Novartis AG ("Novartis"), a corporation, and AstraZeneca PLC ("Zeneca"), a corporation, both subject to the jurisdiction of the Commission, have agreed to combine Novartis' crop protection and seeds businesses with Zeneca's crop protection business to form Syngenta AG ("Syngenta"), a corporation, in violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 45, and it appearing to the Commission that a proceeding in respect thereof would be in the public interest, hereby issues its Complaint, stating its charges as follows:

**I. RESPONDENTS**

1. Respondent Novartis AG is a corporation organized, existing and doing business under and by virtue of the laws of Switzerland, with its office and principal place of business located at Lichtstrasse 35, CH-4002, Basel, Switzerland. Novartis owns a variety of subsidiaries, including Novartis US Co., Novartis Agribusiness Biotechnology Research, Inc., Novartis BCM North America, Inc., Novartis Crop Protection, Inc., Novartis Seeds, Inc., Novartis Specialty Crops, Inc., and Wilson Genetics, LLC, which engage in crop protection and seed businesses in the United States. Novartis is engaged in the discovery, development, manufacture and sale of crop protection chemicals, seeds, proprietary and generic pharmaceutical products, and human

and animal health products.

2. Respondent AstraZeneca PLC is a corporation organized, existing and doing business under and by virtue of the laws of the United Kingdom, with its office and principal place of business located at 15 Stanhope Gate, London W1K 1LN, United Kingdom. AstraZeneca owns a variety of subsidiaries, including Zeneca Holdings, Inc., and Zeneca Ag Products, Inc., which engage in the crop protection business in the United States. Zeneca is engaged in the discovery, development, manufacture and sale of crop protection chemicals and proprietary and generic pharmaceutical products.

3. Respondent Syngenta AG will be formed as a corporation organized, existing and doing business under and by virtue of the laws of Switzerland with its office and principal place of business located in Basel, Switzerland.

## **II. JURISDICTION**

4. Novartis and Zeneca, and/or their subsidiaries, are, and at all times relevant herein have been, engaged in commerce as “commerce” is defined in Section 1 of the Clayton Act, as amended, 15 U.S.C. § 12, and are corporations whose businesses are in or affect commerce as “commerce” is defined in Section 4 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 44.

## **III. THE PROPOSED MERGER**

5. On or about December 2, 1999, Novartis and Zeneca executed a Master Agreement pursuant to which Zeneca will contribute its agricultural chemicals business and Novartis will contribute its agricultural chemicals and seeds businesses to a newly formed Swiss company, Syngenta AG. Novartis shareholders will own 61 percent of Syngenta and Zeneca shareholders will own 39 percent of Syngenta. Syngenta will have annual sales of approximately \$8 billion.

## **IV. THE RELEVANT MARKETS**

6. One relevant line of commerce in which to analyze the effects of the proposed transaction is the research, development, manufacture, and sale of herbicides applied prior to weed emergence for control of grassy weeds in corn. Such herbicides contain active chemical ingredients that inhibit the growth of grassy weeds. Preventing early competition between growing corn and grassy weeds is essential to economic production of corn. There are no economic substitutes for pre-emergence grass herbicides for use on corn.

7. Other relevant lines of commerce in which to analyze the effects of the proposed merger are the research, development, manufacture, and sale of foliar fungicides for treatment of diseases in cereals, foliar fungicides for treatment of diseases in peanuts, foliar fungicides for treatment of diseases in potatoes, foliar fungicides for treatment of diseases in rice, foliar fungicides for treatment of diseases in turf, and foliar fungicides for treatment of diseases in vegetables. Foliar fungicides, which are applied predominantly to the foliage of plants, contain

active chemical ingredients that kill or inhibit the growth of certain types of organisms that cause disease. Such fungicides are essential to economic production of crops and have no economic substitutes.

8. The United States is a relevant geographic area in which to analyze the effects of the merger. United States law requires that herbicides and fungicides undergo a rigorous registration process with the U.S. Environmental Protection Agency (“EPA”) before they may be used or sold in this country. Other countries have similar registration requirements. The patchwork of regulatory regimes creates national markets.

## **V. STRUCTURE OF THE MARKETS**

### **Corn Herbicides**

9. The market for pre-emergence grass herbicides for use on corn is highly concentrated, as measured by the Herfindahl-Hirschman Index (“HHI”) and other measures of concentration. United States sales of corn herbicides for pre-emergent control of grasses were more than \$770 million in 1999. Novartis is the leading developer, manufacturer and seller of corn herbicides for pre-emergent control of grasses in the United States with a share of about 50 percent of sales. Zeneca has approximately 15 percent of the market. The proposed merger would increase concentration, as measured by the HHI, by nearly 1400 points to over 4600.

10. The pre-emergence grass herbicides used by growers of corn belong predominantly to a class of chemicals known as acetanilides. Herbicides based on one of three active ingredients from this group of chemicals, metolachlor, acetochlor, and dimethenamid, account for nearly all sales. Novartis’ metolachlor herbicides, sold under the brands Dual and Bicep, are the leading products in the market.

11. Herbicides containing the active ingredient acetochlor are the second best selling products in the market, as well as the second choice for most growers who use Novartis’ metolachlor herbicides. Zeneca and Monsanto Company (now known as Pharmacia Corporation) both sell acetochlor herbicides, with all of the active ingredient produced at a Monsanto facility in Muscatine, Iowa, pursuant to a production and registration joint venture between Zeneca and Monsanto. Zeneca’s acetochlor herbicides are sold under the brands Fultime, Surpass, Doubleplay, and TopNotch. Taken together, acetanilide herbicides sold by Novartis, Zeneca, and Monsanto account for nearly 90% of sales.

### **Fungicides**

12. Novartis and Zeneca are the leading sellers of fungicides in the U.S. market, and account for a combined total of approximately 40% of yearly fungicide sales. Typically, for a given crop, there are only 2 or 3 significant sellers of fungicides. In cereals, peanuts, potatoes, rice, and turf, sales by the top 2 or 3 fungicide sellers range from nearly 70% to more than 90% of all sales. In vegetables, sales by the top 5 sellers account for approximately 70% of all sales.

13. Novartis’ primary foliar fungicide products are based on the active ingredients

propiconazole and trifloxystrobin. Novartis' propiconazole fungicides are sold under the brands Banner, Break, Orbit, and Tilt. Novartis obtained U.S. registration for its trifloxystrobin fungicides in 2000. They are sold under the brands Flint and Compass. In addition, a combination product of propiconazole and trifloxystrobin is sold under the brand Stratego.

14. Zeneca's primary foliar fungicide products are based on the active ingredients chlorothalonil and azoxystrobin. Zeneca's chlorothalonil fungicides are sold under the brands Bravo and Daconil. Zeneca's azoxystrobin fungicides, which were registered in the U.S. in 1997, are sold under the brands Abound, Heritage, and Quadris.

15. The most significant recent development in terms of foliar fungicides has been the introduction of a new class of fungicides known as strobilurins. Fungicides of this class are effective against a broad spectrum of diseases on a wide variety of crops and are more environmentally friendly than most traditional fungicides. The effectiveness and environmental profile of strobilurin fungicides have created strong demand for the products among growers. Strobilurins introduced to the market have quickly achieved significant market share and have taken sales away from traditional foliar fungicides. Zeneca's azoxystrobin fungicides and Novartis' trifloxystrobin fungicides are both strobilurins.

16. Zeneca's and Novartis' strobilurin fungicides are direct competitors. Zeneca and Novartis, along with BASF Corporation, are the only companies with strobilurin fungicides registered for sale in the United States. No company other than Zeneca, Novartis, or BASF is likely to introduce a new strobilurin fungicide into the U.S. market within the next 3 or 4 years.

## **VI. ENTRY CONDITIONS**

17. Entry into the relevant markets would not be timely, likely, or sufficient in its magnitude, character, and scope to deter or counteract anticompetitive effects of the merger. The need for extensive research and development and registration requirements create long lead times for the introduction of new products. Additionally, patents and other intellectual property create large and potentially insurmountable barriers to entry.

18. Developing a new herbicide or fungicide can take six to ten years from the time when a potentially attractive active ingredient is identified. Extensive testing in the field is necessary to evaluate efficacy and use requirements. In addition, several years of testing for negative environmental and toxicological impact is necessary to achieve registration.

## **VII. EFFECTS OF THE PROPOSED MERGER**

19. The proposed transaction, if consummated, may substantially lessen competition or tend to create a monopoly in the relevant markets in violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the FTC Act, as amended, 15 U.S.C. § 45. Specifically the merger will:

### **Corn Herbicides**

- a. eliminate Zeneca and Novartis as substantial, independent competitors;
- b. eliminate actual, direct, and substantial competition between Zeneca and Novartis;
- c. reduce innovation competition among researchers and developers of pre-emergence grass herbicides for use on corn, including the reduction in, delay of, or redirection of research and development projects;
- d. increase the level of concentration in the relevant market;
- e. increase barriers to entry into the relevant market;
- f. increase the merged firm's ability to exercise market power unilaterally by combining two of the three closest substitutes in the market;
- g. increase the likelihood and degree of coordinated interaction between or among competitors in the market;

### **Fungicides**

- h. eliminate Zeneca and Novartis as substantial, independent competitors;
- i. eliminate actual, direct, and substantial competition between Zeneca and Novartis;
- j. reduce innovation competition among researchers and developers of foliar fungicides, including the reduction in, delay of, or redirection of research and development projects;
- k. increase the level of concentration in the relevant markets;
- l. increase barriers to entry into the relevant markets;
- m. increase the merged firm's ability to exercise market power unilaterally by combining two of the three closest substitutes in the markets; and
- n. increase the likelihood and degree of coordinated interaction between or among competitors in the markets.

## **VIII. VIOLATIONS CHARGED**

20. The merger agreement described in Paragraph 5 constitutes a violation of Section 5 of the FTC Act, 15 U.S.C. § 45.

21. The merger, if consummated, would constitute a violation of Section 5 of the FTC

Act, 15 U.S.C. § 45, and Section 7 of the Clayton Act, 15 U.S.C. § 18.

WHEREFORE, THE PREMISES CONSIDERED, the Federal Trade Commission on this first day of November, 2000, issues its complaint against said Respondents.

By the Commission.

Donald S. Clark  
Secretary