

"The location of synthetic industries in the main agricultural raw material importing countries is, of course, basically inimical to an expansion of the trade in the natural products. However, the establishment of such industries is usually inspired by technical, rather than autarchic, considerations except insofar as the synthetic products are competing among themselves. It is but one facet of the general process of technological evolution which is affecting the demand for agricultural raw materials in many different ways."

The origins of the natural materials much exposed to competition from synthetics are shown in table 6. Later this FAO report points out some rapid increases in demand:¹³

TABLE 6. DISTRIBUTION OF EXPORTS OF AGRICULTURAL RAW MATERIALS BY ECONOMIC GROUP OF ORIGIN AND DESTINATION, 1959-61

[In millions of U.S. dollars, f.o.b.]

	Origin				Destination			
	Developed regions	Developing regions	Centrally planned countries	World total	Developed regions	Developing regions	Centrally planned countries	World total
Rubber.....	^a 68	1,392	-----	1,460	^b 1,061	93	306	1,460
Cotton.....	894	1,115	302	2,270	1,363	325	544	^c 2,270
Wool.....	1,233	249	63	1,545	1,307	42	196	1,545
Jute, allied fibers.....	-----	185	-----	185	145	24	17	185
Hard fibers.....	-----	134	-----	134	124	4	5	134
Total.....	2,155	3,074	365	5,594	4,001	487	1,067	5,594

^a Reexports.

^b Includes imports of rubber subsequently reexported.

^c Includes unallocable exports valued at \$38,000,000.

Source: FAO, Trade in Agricultural Commodities in the United Nations Development Decade, Rome, 1964. FAO, "Synthetics and Their Effects on Agricultural Trade," Commodity Bulletin Series 38, FAO, 1964.

"When assessing the effects of these developments on the demand for agricultural raw materials it is necessary to keep in mind that the overall world market for apparel fibers and elastomers has been expanding at a rapid rate throughout the postwar period. Between 1952 and 1962, apparel fiber consumption increased by over 50 percent, while elastomer consumption nearly doubled. The markets shared by natural and synthetic products have, in fact, grown faster than those of some of the important food products."

In the United States, synthetic sweeteners have become of some importance as a substitute for sugar. A recent study examined five major food processing industries which normally use 60 percent of the sweeteners used in the United States; namely the beverage, baking, confectionary, canning, and dairy industries. After discussing competition among natural sweeteners in some of these industries, Hayenga¹⁴ concludes:

"The soft drink industry has exhibited little caloric sweetener substitutability because of technical requirements for a high sweetness level per sweetener unit and purity, color, and sediment standards. Consequently, sucrose has historically supplied between 92 and 96 percent of the caloric sweetener requirements in the beverage industry. But the beverage industry recently began extensive use of the much

¹³ *Ibid.*, p. 6.

¹⁴ Marvin L. Hayenga, "Sweetener Competition and Sugar Policy," paper to be presented to the American Farm Economics Association, August 1967.