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CURRENT SUPPORT BRIEF

NORTH KOREA COMPLETES FIRST SYNTHETIC FIBER PLANT

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CENTRAL INTELLIGENCE AGENCY

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NORTH KOREA COMPLETES FIRST SYNTHETIC FIBER PLANT

The North Korean regime has announced the completion on 6 May 1961 of North Korea's first synthetic fiber plant. 1/ The plant, which is located at Pongung, a town between Hamhung and Hungnam, is part of an ambitious program to expand the production of chemical fibers* in North Korea and to reduce the dependence of the growing textile industry on foreign sources of raw materials. The fiber to be produced at Pongung is Vinalon, an unusual fiber currently being produced on a commercial scale in only one other country, Japan.

Vinalon, which is made from polyvinyl alcohol, was developed by a North Korean chemist named Yi Sung-ki in collaboration with Japanese chemists at Kyoto University.** Yi evently directed the technical work necessary to make the commercial production of this fiber possible in North Korea. 2/ Vinalon is unique among synthetic fibers in that its water absorbency is high. For this reason it is a good substitute for cotton in certain applications such as underclothes and sheets. However, its wet-heat resistance is low, making ironing a problem. The Japanese began production in 1951 and output reached 23,000 tons in 1960. In the interim, the US and West Germany acquired licenses from Japan to produce the material, but production has not yet gotten beyond the pilot plant stage in these countries. Within the Bloc, the USSR reportedly is in the process of developing a similar fiber called Vinol.

The production capacity of North Korea's new Vinalon plant, presently about 10,000 tons, is to be expanded to 20,000 tons by the beginning of 1962 and to 30,000 tons by the end of 1963. 3/ The planned expansion of this plant is a key factor in the overall plan to increase chemical fiber production in North Korea from 15,000 tons in 1960 to 100,000 tons by 1965 or 1967.*** Production of natural fibers in North Korea is limited by such factors as climate and the amount of arable land available. Augmenting the production of natural fibers with synthetic fibers will reduce the dependence of the North Korean textile industry on imports of cotton and cotton yarn. In 1960, the production of 15,000 tons of rayon reportedly satisfied about one-third of the requirements of the textile industry for fibers. Textile production from natural and synthetic fibers is scheduled to expand from 190,000,000 meters of fabric in 1960 to 500,000,000 meters in 1967. 4/ If chemical fiber production in fact increases during

* Includes rayon (cellulosic) and synthetic fibers (non-cellulosic).
** Yi was on the staff of Kyoto University from 1932 to 1948.
*** Other synthetic fibers to be produced in North Korea include Vichlon, a chlorinated polyvinyl chloride fiber, and fibers of the US Dacron, Orlon, and nylon types. The initial production of Vichlon is scheduled for mid-1962. Comparable information is not available on the other fibers.

the same period from 15,000 to 100,000 tons, 5/ most of North Korea's fiber requirements in 1967 could be satisfied from domestic production. At the same time, per capita production of chemical fibers in North Korea would exceed that in any other country of the Bloc with the exception of East Germany.

Analyst : [redacted] 25X1A

Coord :

Sources :

1. [redacted]

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2. Kyoto Shimbun, 20 Apr 59.

3. [redacted]

4.

5.

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