Fat and Oil Problems in South America

SOUTH AMERICA, containing 10 of the 20 Latin American Republics, lies principally south of the equator. Although two and one-third times larger than the United States, its population is only three-fifths as great. This continent presents many contrasts and often great extremes in topography, climate, vegetation, mineral resources, and population density as well as in economic and cultural development. All of these contrasts and extremes affect the fat and oil industries of the different countries.

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Because of the wide range of climates, sometimes even at the same latitude, there is found within the Southern Hemisphere a diversity of oil-bearing plants including representatives of practically all of the edible and industrial oils used in the world. Some oilcrops (cotton, sunflower, coconut, peanuts, and flax) are cultivated on a large scale; others (castor, oiticica, babassu, and other oilpalms) grow wild or semi-wild. Recently many new oilcrops (sesame, soybeans, olive, African oilpalm, and tung) have been introduced or put under large-scale plantation cultivation.

During the past several decades South America has become a major producer of linseed and castor oils. Increasing cotton production is providing more edible oil for domestic consumption. In the past few years the production of tung oil has exceeded that of the United States. Argentina is now exporting olive oil, and Chile, Peru, and other countries are producing it on a small scale. Peanut production has been expanding, and indigenous oils such as oiticica, babassu, and other palm kernel are being produced on an increasingly larger scale. Despite the hemispheric diversity of oil plants and crops, marked contrasts exist between individual countries with respect to their resources in raw materials for the fat and oil industry.

THE diversity, variation in volume, and pattern of distribution of raw materials are reflected in the individual units of the processing industry, which range from very small to moderately large and from primitive to ultra-modern. In general, the small and more primitive oil mills and refineries are located in isolated areas while the larger and modern plants are situated in or near the large centers of population.

The number of oil mills has been steadily increasing, and the smaller mills have been expanding. Countries like Argentina and Brazil that previously exported large volumes of oilseeds now prefer to export oil and cake. Oil-deficit countries prefer to import oilseeds or crude oils rather than finished products. The number of refineries has likewise been increasing, and such products as margarine and shortening are now being manufactured on a limited scale. Expansion has occurred, too, in the production of toilet soaps, paints, and varnishes; and more recently the manufacture of detergents has been undertaken.

In general, there is little processing equipment manufactured in South America, and such items as are produced are not comparable in size, efficiency, and quality with those of European or North American design and construction. Variations in available foreign currencies, political and economic ties, persuasiveness of sale representatives, the diversity in ownership and management of plants all have led to the introduction of a bewildering array of equipment of different origins.

There is much less mechanization in most plants than in the United States. This is particularly noticeable in the handling of raw materials and finished products. More reliance is placed on the backs of men than in conveyor systems. It is not unusual to see 10 or even 20 men doing the work of one man and a conveyor. Similarly, the oxcart and wagon often serve in place of trucks and freight cars, drums instead of tank trucks and tank cars, and bags instead of bulk.

THE lack of coal, petroleum, and electric power in many areas imposes serious problems and high operating costs on oil mills and refineries. Often the only source of fuel is wood and the processing residues (hulls, cake, etc.) produced in the mill itself. The lack of modern highways and railways likewise contributes to the problems and difficulties of producing and distributing the products of the fat and oil industry.

Because of the many handicaps to economic production and distribution, the price of finished fat and oil products to the consumer is disproportionately greater than in the United States, especially in terms of average income. This higher cost is reflected in lower per capita consumption, which in some countries is only 20 to 30% of that in the United States.

The oil technologist coming to South America would encounter much with which he is familiar but more that would be strange and difficult to understand. He would, for example, be struck with the dependence on rule of thumb instead of the laboratory to control the complex operations of the oil industry. Research to develop new products or for the improvement of quality of established ones is practically non-existent.

Economic and social environment place limitations on any industry, but there are many opportunities to increase efficiency and lessen the cost of producing fats and oils which require primarily only a desire on the part of the owners and managers to embark on such a course.

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