

## Edible Vegetable Oil Resources of Pakistan and Prospects of Their Development by Modern Methods

THE Indian subcontinent leads the world in the production of oil-bearing seeds. The new nation of Pakistan, by virtue of its geographic locations, sits astride the two gateways of this subcontinent to the rest of the terrestrial world and contains large agricultural belts of good soil fertility. This fertility may be attributed to natural contributions of the big



N. A. Khan

rivers like the Sind, the Ganges, and the Brahmaputra from the Himalayas, which are eternal sources of mineral elements in the form of different salts. This natural supply year after year may be one cause of the slowness of the people to adopt modern methods of agriculture. Furthermore, whatever they grow, the peoples of these areas do not make the fullest possible use of their crops, and this is especially true in the case of the oil seeds.

The recent report on vegetable oil resources of West Pakistan, compiled by Mr. Turner, Technical Division, Lever Brothers and Unilever Ltd., London, emphasizes this fact. Though cotton constitutes the major crop, its seed contributes very little to the supply of oil in the country. By far the greater

portion of the 500,000 tons of cottonseed separated annually from the cotton ginneries of West Pakistan is exported or used within the country as cattle food. A very small amount (about

10%) may now be crushed. The yield of crude oil is surprisingly low. There is no refining center efficient enough to make edible oils out of this crude product, and as a result the cottonseed oil thus produced is almost entirely employed for soap making.

The main reason that cottonseed crushing is unattractive is the farmers' preference for the whole black cottonseed as cattle-food over the cottonseed cake. He does not realize the value of the cake as a source of digestible protein and carbohydrate. The seed-crushing industry was started only after the introduction of 289F cottonseeds and similar fuzzy varieties, which find little favor with the farmer for feeding to cattle by reason of their coating of linters. Because of the non-utilization of by-products the processed oil is higher in price than it needs to be. Furthermore the growth of this industry has been hampered by the small and poorly equipped mills and lack of mechanical equipment for handling and storage of seed and cake. Judged by the criterion of a modern plant, most of the expellers in use are obsolete. Due to adverse conditions with which the industry has been faced in the past by the turn of political events in the Indian subcontinent, no attention has been given to the analytical control either of the crushing or refining process.

The situation is even worse with the other seed oil industries. Groundnut, sesame, and mustard seeds are crushed, but most of the village areas obtain their oil by means of old mortar and pestle methods, with power supplied by oxen, etc., thereby losing more than 50% of the oil. The same situation exists in East Pakistan, except that East Pakistan has no cottonseed. By introduction of modern methods of agriculture and acclimatization of oil seed plants, the production of oil seeds may be increased many-fold. Groundnut, sarsen, toria, sesame, mustard, sunflower, and poppy seeds can be grown in abundance in West Pakistan, and East Pakistan is very fertile for mustard, sesame, and soybean. Unfortunately soybean is unknown to this part of the country only because of a lack of interest in it.

With this brief description one can easily perceive where Pakistan stands so far as its vegetable oil resources are concerned. In this present world of hard competition we must follow the most advanced countries in the processing industries related to fats and oils. In this respect the U.S.A. leads the world. The best thing for us to do in order to save time and labor is to borrow this industrial know-how as far as practicable and start afresh in our country of Pakistan according to its present needs. The government of Pakistan may perform a miracle by starting a small-scale processing firm and stabilize it by all means of protection at their command. From this point the private enterprise can take over and promote progress in this line by expanding the scope to different branches of this industry, so urgently needed by Pakistan.

To this progress the American Oil Chemists' Society and the National Cottonseed Products' Association will act as beacons of guidance. The workers of Pakistan will derive continuous benefits from the Journal of the American Oil Chemists' Society. The cooperative work on the analytical methods so carefully undertaken by the committees of the A.O.C.S. will prove highly useful. Last, but not least, is the contribution of the section on abstracts of papers in J.A.O.C.S. to countries like ours where literature surveys are sometimes very difficult.

However Pakistan, surmounting all its present difficulties, has the prospect of being self-sufficient and independent in its vegetable oil commodities. When the day of success comes, Pakistan will surely pay its homage to the A.O.C.S. and the allied societies as well as to the countries where they originated.

N. A. KHAN\*  
Fats and Oils' Division  
Department of Scientific and  
Industrial Research  
Karachi, Pakistan

\* Present address: Ho. mel Institute, Austin, Minnesota.

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