

The Institute of Oil Seed Technology at the A.&M. College of Texas

THE Institute of Oil Seed Technology at the A. and M. College of Texas is the product of many factors and many persons' influence. The cotton crop and its attendant by-products play an important role in the economy of the state of Texas. About 25 years ago the Texas Cottonseed Crushers Association, in cooperation with the Department of Chemical Engineering, established a course known as the Cottonseed Oil Mill Operators Short Course that has been given periodically. With gifts and loans from the Texas Cottonseed Crushers Association and manufacturers, as well as purchases by the college, a complete oil mill has been equipped.



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In 1941 the State Legislature set up the Cotton Research Committee of Texas and provided funds for research which would increase the use and consumption of cotton products as well as improve the operating techniques of manufacturing. Three years later, with funds from the Cotton Research Committee of Texas and the A. and M. College of Texas, the Cottonseed Products Research Laboratory was built on the latter's campus. The processing equipment and much of the research work on cottonseed sponsored by the Texas Engineering Experiment Station was moved to this building. It is now completely equipped with both pilot plant and standard-size oil mill machinery for full-scale operation in the many phases of oil processing. Since it appeared desirable to set up an organization so that these facilities and staff members would be available for educational purposes, the Institute of Oil Seed Technology was created in 1949.

IN organizing it into a functioning agency, the decision was made that its work should be on an advanced level, and plans of similar organizations in other fields were studied, the Institute of Paper Chemistry, the Institute of Gas Technology, the Institute for Atomic Research, and the Institute of Textile Technology. The Institute of Oil Seed Technology, as developed at the A. and M. College of Texas, cuts across all departmental lines. It is an organization for coordinating plans for research and teaching in all the scientific and tech-

nological aspects of production, processing, and utilization of oil-bearing seeds. It operates under the joint guidance of its own advisory and policy committees. Members of the advisory committee, chosen from interested groups, organizations, and companies outside of the college, are invited to serve by the president. The policy committee consists of persons appointed by the president from interested groups within the Texas A. and M. College system.

The formal course work and research are conducted in the several departments of the A. and M. College of Texas. The advance degrees are awarded through these departments. If desired, the degree may be designated, as in the field of Oil Seed Technology. In assessing the merits and needs in a curriculum leading to the master's degree within the Institute, it is felt that there should be a great deal of latitude. This is necessary in order that the program be adaptable to students from a variety of fields within the schools of agriculture, engineering, and arts and sciences. Although certain basic courses are essential, allowances may be made with considerable variation in supporting courses. In general, programs can be worked out for individuals that would include such courses as Oil Seeds—genetics, agronomy, harvesting, grading, and storage; Oil Seed Technology—industrial processing, testing, evaluation of laboratory results, and end-use of products and by-products; Oil Mill Operation—laboratory work covering operating characteristics of units, economic factors and their over-all effects on plant operation; as well as the more usual courses in organic chemistry and biochemistry.

THE diversity of research in the oil seed field at Texas A. and M. is great. As previously indicated, there are many cooperating groups, the Texas Agricultural Experiment Station, the Texas Engineering Experiment Station, the Cotton Research Committee, as well as the various academic departments. Many of these units work with industrial or governmental agencies. Some of these studies include the effect of prepressing before solvent extraction; the relationship of seed variety, soil, climate, and other conditions on yield and quality of cottonseed products; the operating characteristics of individual oil mill machinery units and their effects on products; the effect of processing on vitamin content; the characteristics of stillingia and other oils; the development of new industrial products from vegetable seeds; the effect of processing on gossypol content and the nutritive value of cottonseed protein; and the development of new solvent extraction and refining processes and equipment.

Many of these researches are familiar as a result of having been described in the pages of the Journal of the American Oil Chemists' Society. It has always been a privilege for the staff members to attend the meetings of the Society, to exchange ideas and get inspiration by association with fellow members. One of the major purposes of the Institute of Oil Seed Technology is to train men for the oil seed industry. Since the membership of the American Oil Chemists' Society is made up of workers in this field, the interests of the two organizations are mutually interrelated. The Institute would be very happy to work closely with the A. O. C. S. in any project beneficial to the industry.

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