

SUNFLOWER PRODUCTION AND UTILIZATION TRENDS  
Southern U.S.A.

By

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I appreciate the opportunity to appear on the program of the Third International Sunflower Conference discussing sunflower production opportunities in the Cotton Belt area of the United States from the Carolinas to California.

First, I should comment on why the Cotton Belt is interested in the development of other oilseed crops. This area should have a distinct market advantage because many cotton oil mills have surplus crushing capacity which could be used in processing sunflowers. Many of the farms in the Cotton Belt area need an additional cash crop to utilize idle acreage or to replace presently grown marginal profit crops.

Information about growing sunflowers in the Cotton Belt region of the United States is entirely inadequate, and it appears that only limited knowledge is available in the present-day center of commercial production in the United States - Canada - Red River Valley of the North. However, preliminary observations appeared promising enough to justify trial plantings in certain areas of the Cotton Belt.

The position of the National Cottonseed Products Association was one for trial plantings in 1968. The lack of information in certain areas of production practices did not permit us to either encourage or discourage commercial plantings in 1968. While we admire the initiative of those who were willing to risk their land, labor, and capital for commercial acreage in this venture which appears promising, we are obligated to avoid creating the impression that the information we possessed assured the success of commercial plantings at the present time. That is why we have recommended trial plantings with the innovator or top grower who will keep detailed records of conditions existing during growing seasons on the precise cultural and harvesting practices. These are essential if we are to interpret the results obtained and establish the best procedures to follow in the future. With increased knowledge of improved production practices and improved varieties, higher yields can be expected at unit costs that will make production economically feasible. The economics of product market will determine which of the oilseeds in certain areas of the Cotton Belt will develop to a position of agronomic importance whenever they might be grown in adequate volume.

The results from our 1968 Sunflower Production Contest should provide information needed in certain aspects of production practices. A week's vacation here in Minnesota for a man and wife awaits the winner with the highest production per acre and with the best record information. The information requested is essential for improving production guidelines for the future. Observations are being made during the current growing season by members of our staff, county agents, University experiment station personnel, chemical company representatives, oil mills who have sunflowers under contract, and others interested in the potentials offered by this crop.

We have to date 38 oil mills who are offering a market for sunflowers with approximately 750 growers across the Cotton Belt who have trial plantings totaling approximately 40,000 to 45,000 acres. Thirty-six experiment stations have observation plantings conducting various types of demonstrations in addition to the regional variety tests of Dr. Murray Kinman.

Although we provided guidelines for 1968 Trial Plantings from information assembled from a wide variety of sources, we suggested that only those who would be willing to sacrifice their land, labor, and capital needed to secure the maximum production at the lowest cost make a trial planting of sunflowers. By keeping an accurate set of records, these growers can hasten the time when we could make recommendations for growing sunflowers in the South.

I will share with you at this time a few slides of our trial plantings from various areas of the Cotton Belt.

(Slides with Comment)

It appears from observations and results from our early plantings where suggested production practices as to soil type, seed bed preparation, planting rate and plant spacing, fertilization, adequate weed and insect control and ample moisture during the critical flowering stage were followed, yields are very encouraging. There were some who thought of sunflowers as a miracle crop, unwilling to follow those practices which are desirable for optimum production and treated it as such resulting in disappointing yields; but, they are not discouraged as to its potential.

Summary - It is a versatile, hardy crop responding well to good management, fertilization, and water. It has the potential of becoming an alternate cash crop that will find a place in certain areas of the Cotton Belt where a ready market by the cotton oil mills awaits the grower for his seed. Its product value will be discussed later in a paper during this program on "Nutritional Value of Sunflower Meal." With the approval of new chemicals for adequate weed and insect control, I see no reason for this crop not to become of increasing economic

importance in the South when volume production is achieved.

In closing I would like to recommend a committee from the Northern and Southern areas to study the comparable disease and insect problems that we are sure to encounter as the plant breeder makes available the latest high oil content improved varieties for planting.

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#### DISCUSSION

Question: Are the sunflowers planted on dry land or on irrigated land in the Southern U.S.A.?

Gandy: We are harvesting the first plantings of any consequence in Southern U.S.A. currently. Plantings were made last April and May. Reported dry land yields are between 500 and 2600 pounds per acre. The irrigated plots are not being harvested at this date. It is possible that two crops of sunflowers can be raised per season in certain areas of the South. Very little is known currently about the culture of this crop in Southern U.S.A. All aspects of the cultural practices of the crop are being explored.

Question: What herbicides do you use?

Gandy: To date, we find that the early planting doesn't really need herbicides. Should the weather not cooperate for early planting, we can use Treflan and initial observations show good results.

Johnson: What insecticides are you using and what looks promising?

Gandy: Head moth is bothering us and very limited observations indicate that if you begin control measures at the onset of blooming you can get complete control of the head moth.

Question: What about the effect on bees during spraying for the head moth?

Gandy: We have found that spraying early in the morning or late in the afternoon minimizes the damage to bees.

Johnson: Has Thiadine been effective?

Gandy: Not as effective as Methylparathian, for which approval is being sought.

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