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THE ROLE OF THE PROCESSOR IN THE U.S. SUNFLOWER INDUSTRY

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The sunflower crop in the United States dates back to the middle '50's when several companies located in our Red River Valley area of North Dakota and Minnesota, began contracting with local farmers for the production of striped variety sunflowers for the bird food industry. This acreage remained relatively small until only a few years ago when these and other companies began de-hulling the sunflower seed and selling the nutmeats as a confectionery item. To date the bulk of the acreage is of the larger seeded varieties. The seed is graded with the larger seed being decorticated and the smaller seed sold as bird food.

There appears to be expansion possibilities particularly in the nutmeats outlet which should result in a continued demand for from 200 000 to 300 000 acres of large seeded variety sunflowers in the years ahead. At present there are some 15 companies involved in bird and confectionery sunflower seed, growing from 5 000 to 60 000 acres each.

The United States interest in the oil variety sunflowers had its start as a replacement crop by flax and cottonseed processors. As recently as 15 to 20 years ago, we had an internal consumption of an excess of 600 million pounds of linseed oil. This required 3 million acres or 30 million bushels of flax. Today our consumption of linoil is less than 250 million pounds or the equivalent of only 1.2 million acres. Flaxseed processors in the Minneapolis area are capable of processing 30 million bushels but the demand for only 12 million leaves ample plant time to process other oil seeds. Our cottonseed processors in the southern part of the US have found themselves in a similar situation. Acrylic fibers have replaced cotton and acreage reduction in this crop has meant less cottonseed available for processors.

Faced with the above, both industries began looking for an alternative crop to process. Oil sunflowers appears to be that alternative.

The introduction of the oil sunflowers into the Red River Valley was spearheaded by the two largest flax processors, namely the Minnesota Linseed Oil Company and Cargill, Inc., both of Minneapolis, Minnesota. In the south the Cotton Products Assn. undertook the challenge through their member processors.

As of today we have the nucleus of a viable oil sunflower industry in the north, but as yet the southern crop has proven disappointing.

From the beginning, the processors had a major role to play in the development of this new crop. Very little work had been done by the experimental colleges. Due to the small historic acreage, research was

not warranted. Thus the processor had three major challenges facing them.

- 1 - Expand the sunflower acreage both in and outside of the Red River Valley by introducing the crop to producers.
- 2 - Develop processing procedures.
- 3 - Develop domestic markets for the sunflower oil.

Let's look at these individually.

Except for the relatively few producers who had been growing bird or confection type sunflowers in local areas, very few farmers were familiar with this crop. Except for specialty crops, such as potatoes and sugar beets, the traditional crops in this area have been wheat, barley, oats and flax. The traditional crops have for years been supported by the US Department of Agriculture which gave the grower a guaranteed price for his production regardless of the free market value. During the past number of years, the traditional crops have all been in surplus production and the Department of Agriculture had been trying to discourage surplus production through incentive farm programs. These programs paid the farmers for leaving land idle.

This would appear to be fertile ground in which to introduce a new crop, but such was not the case. The predictable reaction of many growers was that if two large processing companies were so anxious to have them raise sunflowers they wanted a price that would return far more per acre than their traditional crops.

Over the past five years, hundreds of meetings were held with farmer groups explaining the history, cultural practices, expected yields and potential future of this new crop. We owe a lot to our elevator managers who could see the need and future of this crop and also to their innovating farmers for getting this crop started. Many elevators started off with only a few hundred acres in their area and are now contracting 6 000, 8 000 and even 10 000 acres.

Five years of average to good sunflower crops at prices which have returned considerably better profit than competitive crops has today proven that this crop is capable of competing with traditional crops in a wide area in the north central United States.

The processors were well aware that it would take several years to develop producer confidence in sunflowers. It was pointed out that if this area should experience a crop failure in wheat for five consecutive years the sixth year would see even larger acreage seeded while one crop failure in sunflowers would take many years to be reestablished.

To date we have had only limited crop damage from insects or diseases and as of today, we have research personnel in the land grant colleges working on breeding, pathology and entomology. This has given the producer considerably more confidence, knowing that he is being backed up by crop research.

The processor faced only minor problems in adapting their plants to process sunflowers. Both plants continued to process flax and it was therefore necessary to crush the sunflowers in existing equipment rather than to design a plant especially for sunflowers. Over the past five years processing procedures have been established and we now know that we can process sunflower economically and efficiently.

This places two hurdles behind us as we now know that given a price farmers can and will grow sunflowers and existing plants can process. The unanswered challenge as of today is n° 3, the marketing of the oil into domestic channels.

We, in the United States, are not a deficit producing nation in fats and oils, in fact, as everyone here knows, we are constantly seeking foreign markets for these commodities. Since we must contract in January through May for seed that will be crushed over a 12-month period from the following November to October a year ahead, we are well aware of the risk involved in this type of operation. Oil and meal extracted from sunflower seeds in our area is land locked from December through early May.

During the navigation season which is late May through November, we can deliver products to seaboard at favorable rates. However, when the lakes and rivers freeze we are faced with high priced transportation to put our products in a shipping position. Also, since over the past five years we have experienced sun-oil values in Rotterdam from a low of \$ 156 per metric ton ex-tank, to a high of well over \$ 400 per metric ton, we must exist in constant fear that by the time our crop is processed, the export market will be too low to offer us an outlet.

In view of the above, we feel very strongly that sunflowers will not be a viable crop in the United States as only an export commodity for seed or oil and meal. To succeed we must have proprietary products made of sunoil and advertised as such and marketed in the US. Both the quality of this oil and the beauty of the growing plant, lend themselves favorably to our type of mass marketing. We feel certain that once such a product is on the market our US Housewives will be happy to pay the small premium necessary for this high quality oil. Today she is willing to pay a 15 to 20 ¢ per pound premium for corn oil margarine and over 450 million pounds of corn oil is sold annually, almost all as a proprietary product. To just equal this market would require a million acres of oil sunflowers. We have the capabilities, the crushing plant capacity and a waiting market. Several large processors are today taking a long, hard look at this new oil and we feel certain that we will soon have a new and expanding sunflower industry in the US.

At present we are experiencing growing pains and for the past several years there has been a mad scramble for supremacy in this new industry. One farmer organization which calls itself the National Sunflower Growers Assn. has set themselves up as the spokesman for producers. Two years ago and again this year they have become a marketing group, contracting acreage and selling the production into export channels.

Another farmer group called the National Farmers Organization have not been willing to let the growers assn. occupy center stage and this year became very vocal in the demands for higher contract prices. The NFO too, has gotten into the marketing by contracting for acreage and again selling sunflower seed into export.

Neither of these groups make their position public, but a conservative estimate places their combined export sales at between 80 to 90 000 metric tons. The bulk of this expected production is in the northern areas where late harvest often finds producers unable to get the crop off in time to meet the freeze at the Great Lakes Shipping Ports.

In addition to these two farmer organizations, another large oil seeds processor in the Minneapolis area is interested in getting started in the sunflower industry and is contracting a few thousand acres and several export companies from the West Coast are contracting acreage throughout the Red River Valley, primarily for seed export. Another large international grain company has developed acreage in the Iowa and Illinois areas for shipment down the river for loading at gulf terminals.

We have this year experienced a very late planting season due to heavy rains and as of today, June 10, only about 60 % of the intended acreage is in the ground. Anything less than an ideal fall harvest could place an extreme hardship on the producers ability to make delivery on time to load vessels at Duluth-Superior, the port of delivery.

At this writing estimates vary as to the number of oil sunflower acres that will be seeded. To satisfy the estimated demands for export and domestic crush, we will have to have a production of about 600 000 acres, but many observers feel that the planted acres will not exceed 500 000 acres in the three states of North Dakota, South Dakota and Minnesota.

Should it develop that acreage is less than sufficient to meet sales, or an untimely rain in the fall developed to delay harvest and delivery, we could experience a very interesting situation this fall.