

Chapter 5

Conclusion and Suggestion

Sunflower is an oily herb with a life span of 100-120 days. Sunflower seeds contain 30-40 % of polyunsaturated oil which is easily digested and rather not accumulate in the body. It also contains 70 % of amino-acids that are useful for the body. The residue remained after the oil extraction is rich in protein and is very useful for animal feed. The oil is not only used as salad and cooking oil but it is also used in the manufacture of margarine. Because of its semidrying oil property, it is also very popular in the paints, varnishes and soap industry.

Sunflower, a native plant of the west of America, was spreaded to Europe and became an important oil crop especially in Russia. It was long grown in Thailand mostly as ornamental plant and the seed as bird's feed. In the period of 1971-1974, there was an unsuccessful attempt to promote the sunflower planting by the Applied Science Institution of Thailand. The failure was due to certain problems. A survey of the production and sales of sunflower seed conducting on the planters of 6 provinces indicate that of the 180 samples being surveyed only 30 samples have ever planted sunflower (16.67 %) and at present there are not a single planter planting sunflower as a commercial crop.

Problems concerning the production and sales of sunflower seeds are :-

1. Agricultural Aspect of Problems

Research on the sunflower plantation indicated problems caused low and unstable seeds output as follow :-

1.1 Planters still lacks the knowledge of proper planting and cultivation, a good system of irrigation, and the application of new technology for a more effective production. In most agricultural product, the planters depend solely on the weather condition. Therefore, new technology should be applied for an advancement on the production process.

1.2 Planters lack pure and appropriate seed variety. Impure and unsuitable seed variety will produce low quality seeds (low percentage of oil) and low output. Suitable variety to be grown in Thailand should be gained through sincere and consistent effort in researches that there is an experimental planting carried out by the Adams International Co.,Ltd. in Khon Kaen and by the Pacific Seed Co.,Ltd in Chiang Mai. Varieties of seed are brought in from many countries such as Canada, Australia, Nether-land and Britain for the purpose of experimental planting and cross-pollination, for a better variety of seed to be planted in Thailand. This operation depends on time and application of new technology.

Occurrences of thin seeds in quantity did not happen only because the impurity in the seed varieties that are planted, but there are some other causes such as too distant spaces between plants which

results in flowers that are rather too large to be able to store nourishment in the seeds and production of too many small flowers that are not fertilizable or will bear thin seeds, and insufficient water during the flowering phase due to unsuitable planting period, and seasonal changes, lack of irrigation systems etc. These problems can be solved by supplying the proper knowledge of sunflower planting to the planters another important problem is the lack of pollinated bee. Because sunflower is classified into the cross-pollinated category, it requires outside agent to carry the pollens from one flower to the ovary of another, the bee is considered an ideal pollinator. It is recommended to keep bees within the sunflower plant action or having the plantation set near a forest site or in the vicinity of many flowering plants. Thailand has many provinces that are suitable for sunflower planting, such as Chiang Mai a place of abundant flowering plants and forest ; Ratchaburi, near the Tanoosi Mountain range in Amphoe Jombung; Prachuap Khiri Khan, at Amphoe Tab Sakae where coconute plants and bees are raised together : Kanchanaburi wellknown for its dense forest.

2. Problem Concerning Marketing

In the past, sunflower seed producers are confronted with the problem of not being able to find the market for the supply and the selling price is too low to make a profit, it is not worthy for investment. This can be counted as the agricultural aspect of problem that hinders successful sunflower seed production and the quality of

seeds to be utilized. Eventually the market demand decreases.

Industrialists have no confidence in risking investment in industrial that consume sunflower seed as raw material. Therefore measures should be taken to solve the agricultural obstacles, improving the seed quality and increasing the production to satisfy the market demand.

Nowadays, it is believed that there is no sunflower seed production for commercial purpose. Sunflowers still find a very limited application, mostly used as animal feed and ornamental plant. Sunflower market has its supply dominated by importations of only a low quantity. In 1978 there was an importing amount of 4,050 kg. In 1979, there was an importation of 10,000 kg. and in 1980, there was no importations during January to April. From previous studies, the Researcher are confident to assume that half of the quantity imported are used for experiment and research study to find the variety and suitable planting methods for planting in Thailand.

Problems concerning market still do not occur at present, but will arise after there are promotions on the production. These problems concern the channel of distribution, the middleman, and setting up of price. Although there are direct communications between the buyers who are the manufacturers and the producers to reduce the problems of middleman, in order to solve as many other problems that may arise in a later time, cooperatives should be set up. The cooperatives should function to control the output to meet the

market demand, and to control the quality standard to prevent exceeding competition in production from over loading the market and spoiled the price. The cooperatives will sell their own product to deprive the problems of the middleman, and keep the price level on the market and possess a strong bargaining power for their products. Cooperative should also assist their members on the part of investment fund, playing the role as representatives in communication with the bank, and providing the loan to some small lenders. The cooperatives set up regulations and establishing close coordination with the governmental body in the promotion of production. Additionally the cooperative should set up experimental program for the purpose of reforming the varieties, and this should be done with utmost sincerity. Furthermore the cooperatives are always advancing for the better maintenance and harvesting techniques and expanding of more utilities from the sunflower seed which will inturn boost the production and sales toward the ultimate goal. Nevertheless, the promotion will be achieved only through continuous effort and performances. The promotion program may be set up and accomplish in some of the province first to set up as a successful example for the planters of the other provinces, paving a convenient road for the propaganda and promotion in the future.

Survey on the degree of interest of planters in the sunflower planting has been conducted in the provinces of Kanchanaburi, Ratchaburi, Khon Kaen, Nakhon Ratchasima, Chiang Mai and Prachuap Khiri Khan. These provinces are all the advantageous conditions for sunflower planting. But planters in Chiang Mai and Khon Kaen possess the

highest rate of interest, accordingly these two provinces should be selected as the primary candidates for promotion. The successful results achieved from this promoting programs in these two provinces will be a good example for the planters of other provinces in the near future.

Recommendation for the next step is that the following surveys should be conducted in order to find proper ways and means to promote the production and distribution of sunflower seeds in Thailand, to ensure achievement.

1) Obtain information in regard to the opinions of the planters in every province where sunflower growing is considered feasible, in order to be more familiar with their problems and opinions concerning sunflower.

2) Obtain information in regard to the agricultural promotion activities of the Government and various institutions such as the Agricultural Promotion Department, Ministry of Agriculture and Cooperatives, the Applied Scientific Research of Thailand, the various universities, etc.

3) Obtain information in regard to the opinions of the industrial operators who can use sunflower in their manufacture such as the vegetable oil industry, the soap industry, the paint industry, the animal feed industry, etc., for use as guides in estimating the market demand for sunflower seeds, and for finding sale channels.

4) Obtain information in regard to the consumers' views concerning the consumption of products made from sunflower. How much do they know about the usefulness of sunflower ? Whether or not the products made from sunflower will be acceptable to the consumers ? And to what extent ?



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