

On the Role and Developing Trend of Sunflower in the
Agricultural Production of Heilongjiang Province.

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The breeding history of sunflower in our province has several decades of history, next to soybean, is the second place in the newly-developing oil-bearing crops.

I. The sunflower's physiological features and its significance on the agricultural production.

sunflower has a high value in utility and plays an important part in keeping agricultural ecological balance, comprehensive exploitation and utilization due to its own characteristics of drought-resistant, saline-alkali-resistant, barren-resistant.

Our province is situated in the frigid and temperate zone belonging to semi-arid and monsoon climate, the yearly amount of rain drop is 400-450mm, effective accumulated temperature is 2000-3500°C (>10°C). There are 65500.000 mu of saline-alkali land, taking up 67.47% of 97,150.00 mu of the kind in three Northeast provinces. The physiological characteristics of sunflower can not be replaced in

the nine-out-of-ten dry climate and windy saline-alkali land reform in our province.

II. The reviewing and developing trend of the production of sunflower in our province.

On the basis of giving fully play to the natural advantages eighteen counties (cities) are mass producing area, taking up 60% planting area in the province, In addition to importing and selecting improved varieties of sunflower from home and broad, Gan Nan Sunflower Research Institute cultivated "Gan Nan Sunflower No 1." Due to closely combining scientific research with production, and theoretical research with practice, "Gan Nan sunflower No 1" Plays a secure role in the production of sunflower in our province.

The 42 years' (1949-1990) statistical data of production of sunflower shows that the production fluctuates greatly between the years, total output fluctuates according to the planting area and per unit area yield. The average per unit area yield is 70.5 kg per mu, raising 25.68% comparing with 56.1 kg mu in 1949. The general trend is wave-lide rising. Detailed illustration in diagram No 1. shows that planting area, total output, per unit area yield present low state in sixties, and reaching peak in eighties.

III. Economic Value, Exploitation and Utility of Sunflower.

Every part of sunflower, as people says, is useful: 1.

comparing with other crops, sunflower is high in price and low in cost (illustrated in diagram 2) 2. Sunflower oil is healthy oil advocated by doctors. 3. Sunflower is a good honey sources, planting sunflowers and raising bees can get benefits from both. 4. Sunflowers' plate, skin and shell are good forage of domestic animals, especially with the development of animals and in the situation of large demand of forage. This provides a new field in the further development of sunflower. 5. the by-product can be used as food, condiment, and also as materials in the production of paint, paper etc. 6. stem can be used as windproof materials directly, as building materials. 7. The stem and leaf of sunflower, containing such grassicide element as dropping liquid, scented bean is worth investigating organic grassicide. 8. kernel can be processed as sunflower jam. The sunflower milk and food have high exploiting value.

IV. The significance of rapid construction of sunflower base on the production of sunflower.

Sunflower base is a high effective agricultural organic part. The production of sunflower, like other agricultural production, is also restricted by the law of nature and the law of value. Under

the socialist good market condition, the place of sunflower is weak. Therefore, we should follow the principle of science and technology first, policy second, and input third, in order to form mass production as quick as possible, and make natural advantages become social advantages.

As for sunflower production base, we should increase science and technology input first, become a comprehensive carrier to the production and management. So in the production of sunflower, we should follow such principles: 1. use scientific method according to the different districts, stabilize the area of main production region, the general rule is 15%, and make sure that the advantage of production of sunflower developed in healthy way. 2. Fully bring out latent potentialities, the main aim is to raise per unit area yield, increase total output in the ecological balance. 3. adopting crop rotation, avoid planting the same kind of plant year after year, exploit 5-6 years rotation. In the area of serious plant diseases and insect pests, the rotation should be lengthened, stick to the principle of using land and enriching land.

I. the comparison of the production of sunflower between the years in Heilongjiang province.

Summary:

Through the reviewing of 42 years' production of sunflower in Heilongjiang province, this paper expounds the sunflower's value, its role and function in the agricultural production of Heilongjiang Province, also from the characteristics of sunflower, discusses its future exploitation and utility.