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Agricultural Technology of Flax Seeding and Cultivation

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ABSTRACT

Oil crops are crops grown for obtaining oil from their seeds and fruits. They include the family of marigolds (cotton), marigolds (sunflower, marigold), marigolds (perilla, lallemansia), marigolds (rapeseed, mustard), legumes (soybean, groundnut).) includes annual and perennial plants belonging to the flax family (flax) and various other botanical groups. Some of these are trees that produce solid oil (coconut and oil palm, cocoa, nightshade), and others are herbaceous plants that produce liquid oil (soybean, sunflower, flax). The oil accumulates in seeds, fruits, and some pods (chufa) of oil crops. The amount of oil accumulated in the seeds and fruits of oil crops (in % of absolutely dry matter): hemp 18-20, seed 17-29, soybean 13-37, sunflower 29-57, peanut 41-57, rapeseed 48-50, poppy 46 — 56, 35-52 in oiled flax, 48-55 in hemp, 50-65 in sesame.

Flax selection and breeding.

Oilseed is one of the important oilseed crops. Linseed oil has excellent nutritional properties and is widely used in food preparation. Its oil is a drying type of oil, from which olifa, varnish and paints are made. The seed contains 32% to 52% oil. It is cultivated in mountainous regions of Uzbekistan (from sea level to 2800 m) in dry lands. In 1998, it was planted on 4.0 thousand hectares in the dry lands of Uzbekistan, with an average yield of 3.0 tons/ha. The selection of the oilseed crop is carried out in the regions where this crop is spread (in the European part of the Commonwealth of Independent States, Eastern Siberia, Stavrapol region, Volgograd, Saratov, Samara, Orenburg regions, in the forest-desert areas of Tatarstan and in the growing season of the crop. a third of it is located in the mountainous regions of Uzbekistan, Tajikistan, Kazakhstan, Kyrgyzstan, Armenia, and in scientific institutions - VIR, Stavropol Selection Station, Kuban Experiment Station, Research Institute of Grain Breeding in Uzbekistan held in the branch in Gallaorol and others.

Linun L. family. About 200 of its species are known. Of these, especially 80 cultivated flax *Linun usitatissimum L.* is widely cultivated for oil and fiber. The height of the plant is 20-75 cm, it grows upright, it branches strongly from the base of the plant or partially branches. The leaves are lanceolate, green or glossy green. Inflorescence in the form of an umbrella or in the form between an umbrella and a shingle (cyst). The petals of the flower crown are five, large or small, yellow, purple,

light purple, white, and sometimes pink. There are 5 stamens, the anthers are blue, orange or yellow. The fruit is a pod. The pods are small, medium or large, and the tip of the pod is sharp. The length of the cyst is 6-11 mm, the width is 5.5-8 mm. The pod is 5-celled, with two seeds in each cell. Up to 10 seeds are produced in one pod. (The pods do not open when ripe, but there are also forms with pods that open (crack) and the seeds are shed. 1000 seeds weigh 3-13 g. The seeds are dark brown or less often yellow. The useful life of flax is short. The useful life of early-ripening varieties is 70-75 days, and late-ripening varieties are 90-110 days. Flax seeds germinate and germinate at a temperature of 60 C, and their grass can withstand cold temperatures up to -40 C. Oily zig It is water-demanding, especially until the formation of the crop, and then it is resistant to drought. Flax is a self-pollinating plant, and the pollinator and the beak of the seed mature at the same time. The opening of the flower petals the anthers burst, and the pollen grains are poured into the beak of the seed of this flower. Cross-pollination can occur, but its amount is very small - 0.1-2%. The flowering of flowers on one plant can last 20-45 days Starting material for selection Linum genus from different regions of the world There are more than 200 species, most of which are found in the Mediterranean region. There are 24 species in the countries and regions of the Commonwealth of Nations, and one is a cultural species. Oil is produced from some wild species. There are 3 types of flax according to its classification: small-seeded, medium-seeded and large-seeded flax. The height of fine-seeded flax is 20-50 cm. horned, multi-sacral and serbarg. The period of action is short, medium or long-term. The main 81 distribution areas are Tajikistan, Armenia, Georgia, Azerbaijan, Kyrgyzstan, Dagestan, Ukraine and the Southern regions of Russia. This group includes such varieties as Buharsky 32, Hissarsky 1474. Medium-sized seeded intermediate medium-fiber flax plants are medium-tall and single-stemmed cultivars. The pods are medium in size (6.6-8mm), the seeds are relatively large, 1000 seeds weigh 6.6-9 g. The seed is brown. These linseed varieties are high-yielding, drought-resistant, high-oil, disease-resistant, and medium-ripening. Distributed in Crimea, Kazakhstan, Kyrgyzstan and Armenia, regions along the Volga, Bashkortostan, Altai region. This group of flax includes VIR 1647, VIR1650, VNIIMK 5237 Voronezhsky 1308 and several local varieties.

Functions and main directions of flax selection. The purpose of breeding is to create high-yielding, high-oil, multi-bore, large-seeded varieties. Larger seeds usually contain more oil. In order to be suitable for mechanization, it is desirable to create varieties with seeds that do not swell and the pods are located higher. When creating varieties, it is intended to create early varieties that are resistant to diseases and drought.

Factors ensuring yield of flax crop: - number of plants per hectare, - average number of pods per plant, - weight of seeds per pod and weight of 1000 seeds. The largest number of cysts occurs when they branch. The weight of 1000 seeds of flax plant can be from 3 grams to 13 grams. (for small seeds 3-6.5, for medium seeds 6.6-9, for large seeds 9.1-13 g). In order to increase productivity, it is necessary to increase the size of the seeds in the process of selection, because the medium-sized and large-sized flax contains more oil. Among such varieties is VIR-1647. VIR-1650, VNIIMK 5237, all other varieties are small-seeded. Evaluation according to the duration of the period of operation. Early and mid-season varieties of flax are suitable for the conditions of Uzbekistan. The period of validity of early varieties of flax is 75-80 days. Oily flax is damaged by rust, fusarium, anthracnose, polysporosis and other diseases. Therefore, in the selection of flax, it is necessary to work according to the resistance to these diseases. 82 Rust-resistant varieties of flax include VIR-1647, VIR-1650, VNIIMK5237, Voronezhsky 1308, Krupnosemyanniy-3, Kubansky-9 and other varieties. The height of the flax plant should not be less than 40 cm, preferably 50-65 cm, and the pods should not burst when ripe. Suitable for mechanization, small-seeded and medium-seeded intermediate and large-seeded varieties are considered. Due to the low quality of the cultivars, they are not suitable for mechanization. In the process of flax crop selection, it is desirable to create varieties that contain a large amount of oil and have a high iodine content of the oil, that is, it ensures good durability. Although there is no direct correlation between large grains and high fat properties, large grains are richer in oil, their oil content is 41-48%. Hybrid varieties are created as a result of cross-breeding large-seeded and medium-seeded, and their oil content is 42-48 percent. Oil content of medium-

seeded flax varieties VIR-1647, VIR 1650, VNIIMK-5237 is 42.5-48%. The oil content of small-seeded flax varieties is much lower - 35-43%. The iodine number of linseed oil can be 160-201. In breeding varieties, this indicator is on average 170-179, in some favorable years it can reach 194 (variety VNIIMK 5237). High fatness and high iodine number are observed in regions with high humidity and mountains. In addition, the quality of the oil is also affected by the good full ripening of the seed. The selection aimed at high oiliness will give good results if it is carried out in conditions of high humidity. Cultivars with higher oil content can be created by single selection of oilier plants in a high oil population. Oiliness improvement is done by cross-breeding high-oil varieties and growing and selecting them under high agronomic and humidity conditions. Local varieties of flax have been collected and well studied at the VIR and at the Research Institute of Oilseeds. On the basis of local varieties, many good quality high-yielding flax varieties such as Donskoy 166, Stavropolsky 79, Shatilovsky 39, Shatilovsky 48 were created. In Kazakhstan, 83 high-fat, suitable for mechanization, rust-resistant VIR-1647, VIR1650 varieties were created from local varieties (with medium seeds). VNIIMK 5237 variety was created in Azerbaijan. Selection methods. Since flax is a self-pollinating plant, this is the main method of crop selection and is a one-time single selection. Almost all varieties of flax created in this way are resistant to diseases and insects.

Production technology . The technology of growing flax is close to sesame. To plant flax, the land should be well plowed and organic fertilizers should be applied. Before planting, the ground should be leveled and leveled. In February-April, 20-22 kg of seeds are used per hectare in a vegetable or grain planter with a spacing of 60 cm and a planting depth of 0.5 cm. Along with planting, 50-60 kg of superphosphate is applied per hectare.

The first feeding of the plant begins after the grass sprouts, with 30 kg of nitrogen and 20 kg of phosphorus fertilizers per hectare. The second feeding is completed by giving 40 kg of nitrogen and 30 kg of potassium fertilizers after the plant has budded. During the vegetation, flax is watered 4-5 times. After each watering, the plant beds should be cultivated and weeded quickly. For the good growth and development of flax, 70 kg of nitrogen, 40 kg of phosphorus and 30 kg of potassium fertilizer per hectare during the growing season. is fed by the dog. It will be possible to collect 1.3-1.5 tons of seeds from the fields planted with flax .

List of used literature

1. Introduction and acclimatization journals. 1990-96 years.
2. Kurmukov AG, Belolipov IV Dikorastushchie lekarstvennye rasteniya U uzbekistana. Monograph. Tashkent. 2012. - P. 59-60.
3. Berdymukhamedov G. _ Medical plants in Turkmenistan. Monograph. Ashgabat. 2013. T.5. 156 p.
4. Abu Ali ibn Sina. Medical laws. Book 2. Tashkent. 1994. 210 p.
5. Alimova RA, Sagdiyev MT Physiology and biochemistry of plants. Manual. Tashkent. 2013. 320 p.