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A MACHINE FOR LOCAL FERTILIZER BETWEEN COTTON ROWS

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Abstract: *The article mainly deals with plant fertilizing machines, i.e. types of organic and mineral fertilizing machines, hay cultivators, fertilizer seeders, and other modern fertilizing machines. The purpose of fertilization is to cause a positive change in plant growth and productivity. The operation process of the installation of local fertilizer between the proposed rows.*

Key words: *Fertilizer, bunker, mineral, local fertilizer, plant, auger, hydromator, cotton, row, phosphorus, potassium, nitrogen.*

The use of local fertilizers in the production of high yields of agricultural crops is considered important in increasing their productivity. The harvest obtained in agriculture is grown due to the assimilation and absorption of various substances contained in the soil by the crop. As a result, the organic and mineral content of the soil decreases year by year. To restore the fertility of the soil, it is necessary to regularly add various fertilizers to it. Fertilizers should contain phosphorus, potassium, nitrogen, carbon and other elements necessary for plant development.



| T/r | Name of mineral fertilizers and producers | Limited retail price of realization to the final consumer |
|-----|---|---|
| 1. | Ammonium nitrate | |
| | Product of "Navoiyazot" JSC | 1 150,0 |
| | Product of Maksam-Chirchik JSC | 1 050,0 |
| | Product of "Ferganazot" JSC | 1 100,0 |
| 2. | Urea | |
| | Product of Maksam-Chirchik JSC | 1 130,0 |
| | Product of "Ferganazot" JSC | 1 130,0 |
| 3. | Ammofos (product of Ammofos-Maksam JSC) | 2 850,0 |
| 4. | Superphosphate (product of Ammofos-Maxam JSC) | 1 950,0 |
| 5. | Ammonium superphosphate - (product of "Koqon SFZ"). | 850,0 |
| 6. | PS-agro (product of Ammofos-Maksam JSC) | 2 600,0 |

According to their chemical composition, fertilizers are divided into such types as mineral, organic and organic-mineral mixture. [1].



Figure 1. Mineral fertilizers.

Local fertilizers are divided into solid (manure, peat, compost, etc.), liquid (liquid manure) and sideral (various types of fast-growing green grass) types. If local solid and liquid fertilizers are mainly sprinkled on the soil before plowing, the fast-growing green grasses planted in the fields are crushed and sprinkled on the surface after growing in sufficient quantity, plowed with plows and mixed with the soil [3].



Figure 2. Local fertilizers.

Currently, animal waste (manure) and compost (a mixture of manure, plant stems and various waste) are widely used as the main local fertilizers. Preparation and application of solid local fertilizers are carried out in two ways: directly (farm-field) and in the form of collection in one place (farm-storage place-field). In this case, local fertilizers are mainly loaded from the storage places of livestock farmers to the transport vehicle and they are transported to the storage place prepared at the beginning of the field. Then they are stored in that place until the time of planting and when necessary, they are put into the soil. In non-saline fields, before plowing, solid and liquid local fertilizers are applied to the surface of the land, and then plowing is organized. It is advisable to apply it to the saline areas after washing off their salt during tillage.

Mineral fertilizer spreading machines are mechanized complexes for spreading loose and granular fertilizers on the soil surface, as well as substances necessary for changing the alkaline-acidic composition of soils and their density structure - dry limestone, gypsum and sand.

According to the method of combining with the main machines, spreaders are divided into trailer and semi-trailer machines, which are manufactured using wheeled chassis and mechanisms mounted on tractors. Depending on the insemination technique, the units that perform this operation are divided into the following[3,4,5].

- Mechanisms for introducing substances into the soil during plowing or planting - plows, seed drills and chisel-cultivator complexes equipped with special mechanisms.
- Complexes that scatter mineral and organic substances on the soil surface after fertilization plowing, they include various spreaders, as well as aggregates for spraying liquid substances.

The structural elements of complexes that distribute solid mineral fertilizers include



Figure 3. Feeder for grinding local fertilizer in the bunker.

Nowadays, only mineral fertilizers are used after planting, which makes the soil very weak, and the products we produce for consumption are saturated with harmful chemicals. To solve these problems, a simple inter-row fertilization device is used [4,6,7]. This equipment consists of parts (Fig. 3):

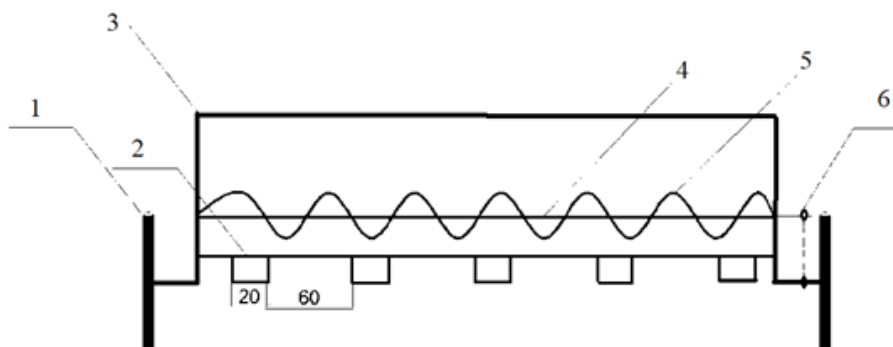


Figure 4. Kinematic scheme of the local fertilizer introduction device between the rows

1- wheel; 2 - fertilizer dropping pipe; 3 - bunker; 4 - screw axis; 5 - auger; 6-chain drive.

My device is mainly adapted to apply fertilizer to 5 rows. it takes from the tractor's rear drive transmission mechanism, it is connected to the tractor by three points. The advantage of this device is that it provides the land with the same consistency as the local fertilizer, which is a very low cost and a good harvest in the future.

Summary:

The study of the condition of constructions of technical tools used in the application of local fertilizer between cotton rows, the development perspective and the research conducted on the improvement of their technological work processes showed that It allows to optimize the parameters of the devices used in fermentation, to increase its work quality and productivity.Foydalanilgan adabiyotlar.

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