Eurasian Research Bulletin

Operating Processes of Fertilizer Machines

Shoydiyev Quvvatbay Aytbayevich — Karakalpakstan Institute of Agriculture and Agrotechnologies. Assistant

Shoydiev Aymurza Kuvatbaevich — Khojaly is a vocational school teacher

ABSTRACT

The article discusses the working processes of irrigation machines and other important structures, such as the lighting system, energy supply, and other issues observed. Additionally, the article analyzes the principles of operation of irrigation machines, their practical application, and the significance of their use. The annotation supports other research on this topic and provides information on the technological development of irrigation machines and the benefits gained from their use.

Keywords: Informational and educational activity, duty and personal responsibility, harmonious, healthy life, national, cultural, custom, universal values, spiritual and moral, ideology, regulation, military, discipline, military duty.

ANNOTATION

KEYWORDS: irrigation machines, soil composition, hygroscopic mineral nutrients, microorganisms.

Introduction

In agriculture, the production obtained is cultivated and harvested based on various substances present in the soil composition. As a result, both organic and mineral substances in the soil decrease over the years. To maintain soil fertility, it is necessary to regularly supply it with various nutrients. The nutrients to be supplied contain elements such as phosphorus, potassium, nitrogen, carbon, and other elements required for plant development.

Nutrients are divided into categories such as mineral, organic, and organic-mineral mixtures. Mineral nutrients are prepared synthetically and consist of one or several chemical elements. Plants easily absorb these elements.

Irrigation machines, or robots, are machines automated through cyber-physical systems. They have the ability to learn, operate, and make decisions through interaction with massive analysis, statistical data, and interfaces between humans and computers.

Main Section

Irrigation machines have extensive applications in wide-ranging fields.

- ❖ Learning Machine Data Acquisition: Learning machines extract large amounts of data and optimize their operations based on this data. In this process, machines analyze and learn data through various algorithms and mechanisms.

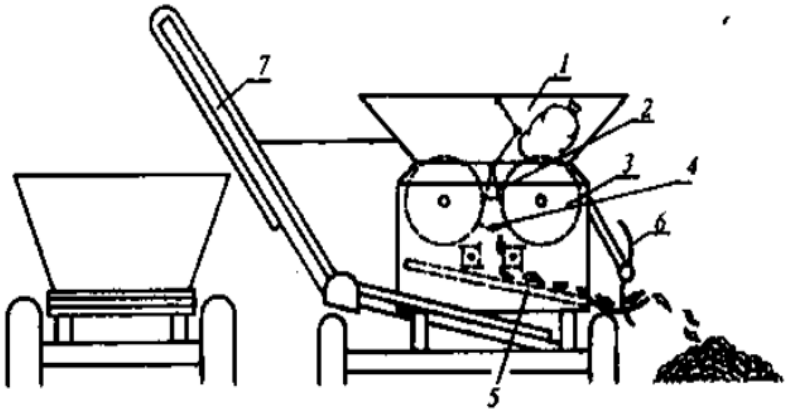
❖ Execution of Machine Tasks: Learning machines can execute any process until the production of goods, carrying out industrial activities. These machines facilitate technical training, communication with customers, managing workplaces, and performing other tasks such as technical exercises.

❖ Machine Distance Analysis: Learning machines can form distance analyses through data on the network. This process is used in telecommunications, data analysis, product sales, and other fields.

❖ Waste Reduction in Entrepreneurship: Learning machines help reduce waste and error rates in entrepreneurship. They learn data at high speeds and can facilitate decision-making or streamline processes in the execution of work.

❖ Justice and Security: Learning machines support law enforcement agencies, security systems, and government organizations in data analysis and utilization in the field of support. Learning machines play an important role in various fields in production and activity optimization. Although they are considered a promising area, their external impact is still limited. The capabilities of these machines continue to grow and they act more precisely for specific purposes.

Machines for preparing mineral fertilizer for planting. Over time, hygroscopic mineral fertilizer stored in warehouses sticks together, hardens and turns into large lumps. Therefore, it is necessary to grind them (pic. 121). Such a crushing unit grinds solidified pieces in bags and without bags and loads them into vehicles, separates bag residues.



121-Picture

To prepare the mineral residue remaining after the preparation for discharge into the aggregate bunker, a hopper is utilized. Two feeders, which rotate in opposite directions, are connected to each other by a reversing drum 3. The drums feed the residue into a non-rotating screw 4, resulting in the crushing and pulverization of the residue. The pulverized residue is then deposited into a hopper with a rotating shaft 5, where the remaining remnants of the hopper are separated and fed to the ground via a revolving chute 6. From the hopper, the pulverized residue is loaded onto a transport vehicle via a conveyor 7.

The apparatus for the rotor organic residue processing consists of a long rotor that rotates horizontally, arranged in the form of a drum or barrels. Various types of paddles or blades are installed on them. The movement of organic residue can be divided into two categories:

1. The drying movement of the residue along the dryer, up to its discharge.
2. The free movement of the dried residue falling to the ground.

The movement of the residue along the dryer starts with its primary departure from the main chamber. This movement is reasonable compared to the vertical displacement. With a

mass of m, the weight force is P = mg; the centrifugal force from the center is Fm = $m\omega^2 r0$; the centrifugal inertia force is Fk = $2m\omega r0$; the force of interaction with the dryer is Fi = $f(mg\cos\omega t + 2m\omega r0)$. In this case, as in the case of processing mineral residue with a disc apparatus, it is required to determine the absolute speed Vn when the residue is separated from the dryer.

Agricultural Machinery:

Preparing the land adequately for high-quality and abundant yield production is not sufficient in itself. To achieve the goal, it is necessary to cultivate crops with quality seeds or seedlings adapted to local soil and climate conditions. This task is performed by agricultural machinery (seeders). There are four main requirements for the operation of a seeder:

1. Planting seeds according to the specified depth determined by the agronomist;
2. Distributing and placing seeds evenly across the field;
3. Ensuring the seed is sown to the precise depth suitable for local conditions;
4. Preventing seed damage.

The seeder works by planting seeds in rows in the predetermined order. The order is determined by indicators such as the spacing between rows (c), the width of the adjacent rows (b), and the depth of seed burial (a). For successful cultivation and later high yields, the planted seeds must possess specific characteristics, such as germination rate, viability, resistance to diseases caused by pathogenic microorganisms, uniformity in size, and adherence to other specific requirements

CONCLUSION

It can be concluded that teaching machines are technologies used for learning, data analysis, classification, and performing many tasks. They are used for analyzing data through algorithms and artificial models for learning and analysis. Then, algorithms for identifying and classifying types are used to recognize and classify them. The trained system is evaluated and optimized for the execution process. Teaching machines can be used in various fields, such as recognizing regular places, learning technical concepts for different fields, etc. These technologies are highly popular and widely used in many areas.

REFERENCES

1. Abdillayev T.A., Shoumarova M.Sh. G'alla kombayni va paxta terish mashinalari. Toshkent, 1999.
2. Shoumarova M.Sh., Abdillayev T.A.Qishloq xo'jaligi mashinalari (o'rim yig'im va tozalash mashinalari). Toshkent, „Mehnat", 2000.
3. Obidov Q., Sultonov M.Paxtachilikda Andijon uslubi: chigitni plyonka ostiga ekish va uning samaradorligi. Toshkent, 1996.
4. Case Corporation. Зерноуборочный хедер с жёстким режущим аппаратом 1010. Rac 6-2980.1997.
5. New Holland. Зерновая жатка. Для комбайнов Al-MCS INTEGRALE. Viale delle Nazioni, 55-41100 Modena, Italia. 1998.
6. Kverneland Kleep AS. Руководство по вспашке. N-4344 Kvemeland Norway. 1998.
7. Свешников П.Г. Тенденции развития теорий почвообработки. Журнал „Аграрная наука". № 9,1999.