ous impurities, and then delivered to refineries, where the necessary products are obtained from it.

Oil does not pass oxygen through itself. It can be dangerous if it is spilled in the ocean during transportation. It spreads like a thin film over the surface of the sea, not letting in oxygen, which the fish breathe and they die.

Interesting facts:

- the word "oil" comes from the ancient Greek "petra", which means stone, and the Latin "oleum", which means oil. It means "oil made of stone", which reflects the nature and origin of oil.

- petroleum products are used in cosmetics. Many types of creams, lotions and make-up contain ingredients made from petroleum.

- oil is one of the main causes of global warming. Burning oil releases a large amount of carbon dioxide into the atmosphere.

Summing up, we can say that oil is a unique resource of the surrounding nature and is of great importance for all mankind.

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THE ROLE AND IMPACT OF FERTILIZERS IN AGRICULTURE

Fertilizers play a crucial role in modern agriculture by providing essential nutrients to crops to enhance their growth and productivity. This report aims to provide a comprehensive research on fertilizers, including their types, benefits, application methods and future trends.

Plants need nutrients to grow which they absorb from the soil via the plant's root system. Unless the nutrients are replenished, the soil's productive capacity declines with every harvest. Fertilizers provide the major nutrients (nitrogen, phosphorus, potassium and important secondary elements) that plants need.

Types of Fertilizers

There are two common types of fertilizers, which include organic and inorganic fertilizers.

Organic fertilizers are made from natural materials such as manure, compost and peat moss. This type of fertilizer helps retain moisture in the soil and adds essential nutrients to it. It also provides a habitat for beneficial insects like earthworms that aerate the soil and improve its drainage capacity by bringing down deep-rooted plants from the topsoil layer to the subsoil layer where it can be accessed by the roots of most plants. They are generally easier on the environment, but also slower acting than chemical fertilizers and they can cost more money.

Inorganic fertilizers are made from chemicals such as nitrogen (N), phosphorus (P), and potassium (K). These chemicals can be found in many different combinations to match the nutrient needs of specific plants.

Inorganic fertilizers are often used when planting new plants or seeds in soil because they help plants get established quickly. This means that plants can produce more fruit and vegetables per plant than if they were growing in soil without any additional nutrients added to it [1].

Benefits of fertilizers

- 1. Support of plant growth
- 2. Provides a predictable and efficient source of nutrients
- 3. Grow crops fast and big
- 4. Increase harvest yields

Application methods

1. Broadcasting

Broadcasting of fertilizers means the uniform spreading of fertilizer over the entire field.

2. Placement

Fertilizers are placed in the soil before sowing irrespective of the position of the seed.

3. In Situ Application

When fertilizers are applied on a specific spot, it is called 'in situ' application or localized application of fertilizer in wide fertilizers. There are several kinds of in situ application of fertilizers, such as Drill application, Dollop method and Pellet application.

4. Foliar application

Foliar application refers to the spraying fertilizer solution on foliage (leaves) of growing plants.

5. Starter Solutions

Solutions of fertilizers, generally consisting of N, P2O5, and K2O in the ratio of 1: 2: 1 and 1:1:2 are applied to young vegetable plants at the time of transplanting. These solutions are known as 'Starter Solutions'. They are used in place of the watering that is usually given to help the plants to establish. Only a small amount of fertilizer is applied as a starter solution.

6. Fertigation

Fertigation is the technique of supplying dissolved fertilizers to crops through an irrigation system. Small application of soluble nutrients saves labour, reduces compaction in the field and thereby enhancing productivity [3].

Fertilizers play a vital role in modern agriculture by supplementing essential nutrients required for crop growth. Their usage must be managed responsibly to mitigate environmental risks.

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CHEMISTRY OF POLYMERS

Implantable internal organs made of silicone are modern medical devices designed to restore the functionality and aesthetic integrity of the body. Silicone is one of the most popular materials for the manufacture of such implants due to its high biocompatibility, durability and resistance to various influences. In addition, silicone implants can be used to restore the function of internal organs such as the heart, kidneys, liver, lungs and other organs.

Heart. In Switzerland scientists have managed to create an artificial human heart as close as possible to the real one. The silicone model was developed by doctoral student Nicholas Cohrs under the supervision of Wendelin Stark, professor of functional materials development at the Swiss Higher Technical School of Zurich.

Blood vessels. Scientists from the Vienna University of Technology and the Vienna Medical University reported on the possibility of replacing the damaged vessel with an artificial one made using a special polymer material. The main idea of this artificial blood vessel is connected with its walls. The walls of this tube are porous, which allows blood to penetrate through them at first. This, in turn, allows cells of a certain type located in the blood to penetrate into the material and become fixed in its volume.