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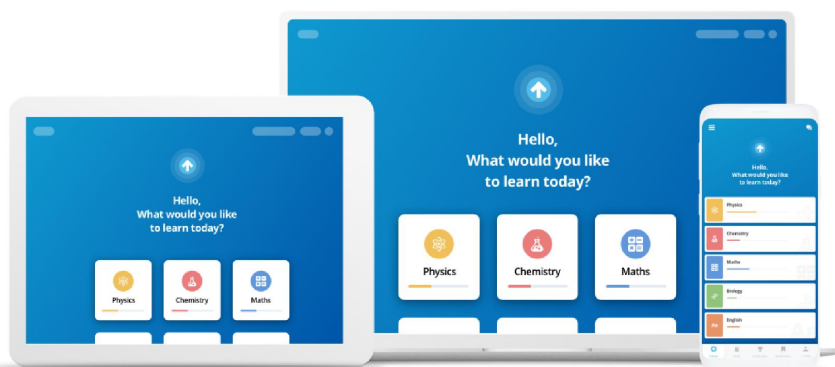
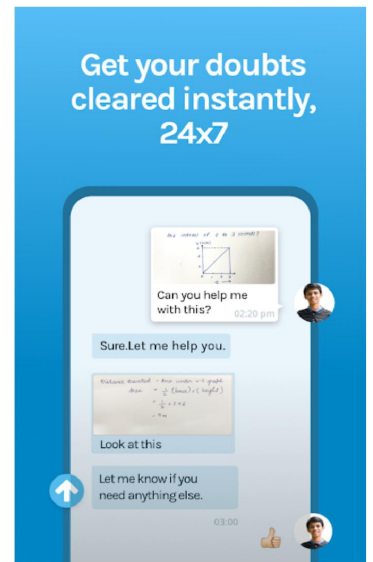
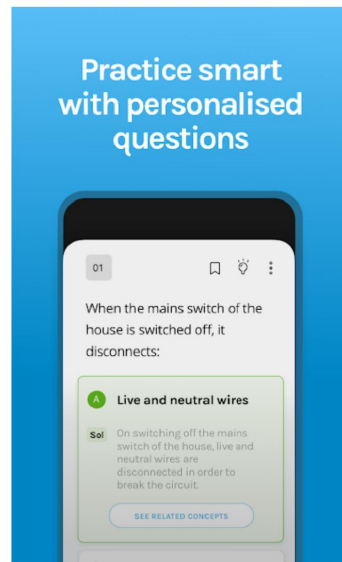
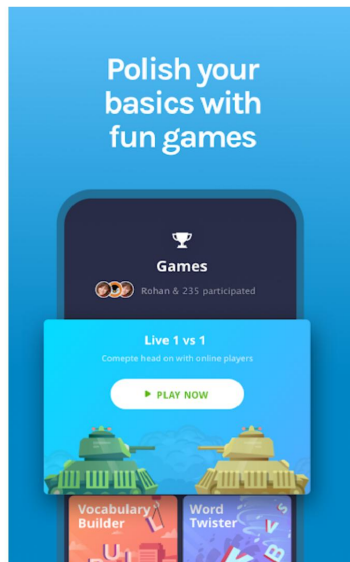
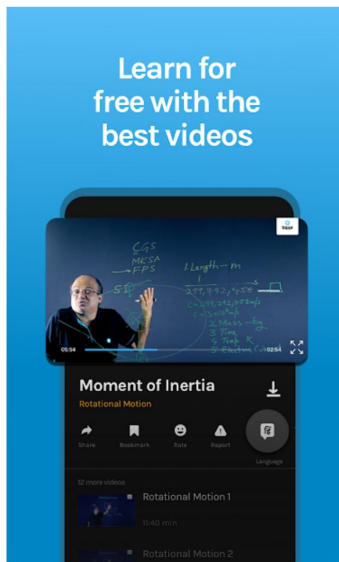
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#463053

Topic: Animal husbandry

How do good animal husbandry practices benefit farmers?

Solution

Animal husbandry is care and management of the farm animals by humans, in which the cattle are reared in such a way that the qualities that are beneficial to human beings are improved. Therefore, by using practices of animal husbandry, better breeds of draught animals are produced. Draught animals are animals that are used for doing labour work in the field such as irrigation, tilling etc. Better breed of milch animals will provide with high quality of milk, that will ultimately fetch a high market value.

#463054

Topic: Animal husbandry

What are the benefits of cattle farming?

Solution

In an agricultural country like India, cattle farming is also one of the major livelihood of thousands of people.

- (1) Milch animals can be reared for the production of milk. Milk is considered as a nutritious food and has got a demand in the market.
- (2) Draught animals are the animals that are used to do the labour work in the field. An animal such as Bullock can be used for works like tilling and carting.
- (3) Wastes from the cattle can be used to enrich the soil as well as can be used in the biogas production.

#463055

Topic: Animal husbandry

For increasing production, what is common in poultry, fisheries and bee-keeping?

Solution

Production of poultry, fisheries and bee keeping can be increased by adopting new scientific ways of management. This includes providing proper diet, keeping the area clear and disease-free, applying various breeding techniques like cross-breeding to produce hybrids which are of better quality and can fetch a high market value.

#526040

Topic: Animal husbandry

Explain in brief the role of animal husbandry in human welfare.

Solution

Animal husbandry is defined as the agricultural practice of breeding and raising livestock. Poultry such as chicken, duck, quails, etc are reared for eggs and meat. Animals such as cows and buffaloes are reared for milk. Goats are reared for milk and meat and sheep are reared for meat and wool. Animal husbandry can be carried out as a side occupation along with agriculture as it is cost effective with high-profit returns. In this way, animal husbandry has contributed to human welfare.

#526043

Topic: Animal husbandry

If your family owned a dairy farm, what measures would you undertake to improve the quality and quantity of milk production?

Solution

To improve the quality and quantity of the milk production the first step to be taken is selecting a good and healthy cattle. Hybrid cattle should be preferred to wild ones as they have genes responsible for high yields of milk. They are also disease resistant. In order to make sure the cattle are healthy the surrounding environment should also be kept clean and tidy and ensuring that the animals are properly fed will also improve the quality and quantity of milk.

#526047

Topic: Animal husbandry

What is meant by the term 'breed'? What are the objectives of animal breeding?

Solution

Breed refers to a group of animals within a species that exhibit same ancestral characters like size, physique etc. Objectives of animal breeding are the production of disease resistant high yielding varieties of animals.

#526057

Topic: Animal husbandry

What is apiculture? How is it important in our lives?

Solution

Apiculture is rearing of honeybees for honey and wax. Honey is used as home remedy for various infections as well as a food source; wax is used in polishing and cosmetic products. Bee pollens are used as supplement in the form of capsules. Apiculture has served as earning source for many people.

#526058

Topic: Animal husbandry

Discuss the role of fishery in enhancement of food production.

Solution

The fishery is an entity engaged in raising or harvesting fish and other aquatic animals which are economically important. It plays an important role in the Indian economy because a large part of the Indian population is dependent on fishes as a source of food, which is both cheap and high in animal protein.

The fishery is an employment-generating industry especially for people staying in the coastal areas. Both freshwater fishes (such as Catla, Rohu, etc) and marine fishes (such as tuna, mackerel, Pomfret, etc.) are of high economic value.

#526066

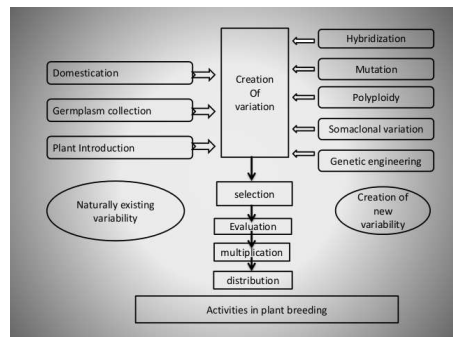
Topic: Plant breeding

Briefly describe various steps involved in plant breeding.

Solution

Plant breeding is the process where two genetically dissimilar varieties are purposely crossed to produce a new hybrid variety to improve the quality of food. The various steps involved in plant breeding are as follows:

- Collection of genetic variability: At this step, different types of genes from wild varieties are collected to maintain genetic diversity. It is also called as germplasm collection.
- Evaluation of germplasm and selection of parents: At this step, evaluation of the desired gene from germplasm for breeding is done.
- Cross-hybridization between selected parents: In this step, plants with the desirable characters are crossed to produce hybrids.
- Selection of superior hybrids: The progenies of the hybrids having the desired characteristics are selected through scientific evaluation.
- Testing, release, and commercialization of new cultivars: The selected progenies are evaluated for characters such as yield, resistance to diseases, performance, etc. by growing them in research fields. After selection and testing of seed, they are distributed to market.



#526069

Topic: Plant breeding

Explain biofortification.

Solution

Plant breeding done with the aim to raise crops having a higher level of nutrients (vitamins, minerals, proteins, and fat content) by conventional plant breeding methods and modern biotechnology is called as biofortification. It aims to increase the nutrient level as well as the quality of nutrients (oils and proteins) during plant growth to improve public health.

#526075

Topic: Tissue culture

Which part of the plant is best suited for making virus-free plants and why?

Solution

Apical meristems are virus free tissues as most of the viruses can not infect these tissues and viral growth can not keep pace with these fast growing/dividing meristems. Thus, apical meristem is used to culture and produces a virus free plant.

#526078

Topic: Tissue culture

What is the major advantage of producing plants by micropropagation?

Solution

Micropropagation is culture of apical shoots, axillary buds and meristems on suitable nutrient medium to produce large number of genetically identical disease resistant progenies in short time span.

#526081

Topic: Tissue culture

Find out what the various components of the medium used for propagation of an explant in vitro are?

Solution

The various components of the medium used for propagation of explants in vitro are carbon sources such as sucrose, vitamins, amino acids, inorganic salts, agar-agar, water and certain growth hormones such as auxins and gibberellins.

#526086

Topic: Plant breeding

Name any five hybrid varieties of crop plants which have been developed in India.

Solution

Sonalika (wheat), Jaya (rice), Pusa shubra (cauliflower), Pusa komal (cowpea) and Pusa swarnim (mustard) are the hybrid varieties of crop plant which have been produced in India.

#526142

Topic: Single cell protein

Find out the role of microbes in the following and discuss it with your teacher.

- (a) Single cell protein(SCP)
(b) Soil

Solution

a) Single cell protein(SCP)

Single cell protein is a protein obtained from pure or mixed cultures of algae, bacteria etc. that have 30-70% of protein content in their dry mass. *Methylophilus methylotrophus* is a bacterial species that produces single cell protein. It is used as a food supplement by humans as well as animals.

Chlorella is a single-celled green algae belonging to the phylum Chlorophyta. It is rich in proteins that contain essential amino acids needed for tissue building and maintenance of metabolic pathways. Hence it is consumed as a source of protein.

b) Soil

The microbes such as protozoans, fungi and bacteria in soil help in the breaking down of the complex organic matter. Hence they act as decomposers and form a part of Detritus food chain. This food chain helps in soil replenishment by adding nutrients to the soil.

#526234

Topic: Animal husbandry

If a marine fish is placed in a fresh water aquarium, will the fish be able to survive? Why or why not?

Solution

If a marine fish is placed in a freshwater aquarium, fish would not be able to survive because fishes are adapted to sea water, fishes body are hypertonic but when water moves to an aquarium it becomes hypotonic. They are unable to regulate the metabolic process in the changed environment and they die.