

Commentary

Farming system and irrigation management

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ABOUT THE STUDY

A farming system is a resource management strategy for establishing economic and sustained output in order to meet the various requirements of agricultural producers while preserving a high level of environmental quality. The farm household, cropping, and livestock systems all work together to transform land, capital, and labour into valuable products that may be slaughtered or traded as part of the farming system. Farming system is a resource management approach for improving economic and long-term production to suit the different requirements of agricultural households while preserving the resource base and maintaining high environmental quality.

Scope of farming system

It generates nutritious food for the farmer in a pollution-free environment that enables for appropriate waste recycling. By increasing market yield each annum, we may enhance efficiency and sustainability. Reduce the consumption of pesticides and other hazardous agrochemicals in order to give civilization with pollution-free, healthy farms and an environment. A natural farming method approaches for osmotic stress control. Improve a farming community at large standard of living. The integrated livestock-farming system maintains and improves agricultural output while reducing adverse effects on the environment by integrating ecological sustainability and economic sustainability. Crop residues can be used more effectively to help individuals get out of poverty. Effective agricultural residue management, combined with an appropriate utilization of resources, leads to sustainable output for agriculture farming.

Irrigation management

Irrigation management aims to enhance the productivity, and sustainability of irrigated agriculture and irrigation systems in order to enhance food production, contribute to sustainable growth, and poverty eradication. Irrigation management is the process of controlling and modulating irrigation water applications to meet the crop's water requirements without wasting water, soil, plant nutrients, and energy. It comprises

distributing water in amounts that can be maintained in the soil and made accessible to crop production, as well as at rates that are consistent with the topsoil absorption characteristics and the site's erosion risk. Irrigation is the application of applying water to the soil mechanically using tubes, pumps, and sprays. Irrigation is frequently used in areas with climatic variability and where drought periods or crop failures are expected. There are several types of irrigation systems in which water is uniformly distributed across the entire landscape. Irrigation water can come from a variety of sources, including groundwater through springs or wells, surface water through rivers, lakes, or reservoirs, and even treated wastewater and desalinated water. As a result, producers must preserve their agricultural water source in order to minimize the incidence of pollution. As with any groundwater quality degradation, irrigation water users must be cautious not to pump groundwater out of a reservoir faster than it is being supplied.

Irrigation system types

Depending on how the irrigation is absorbed around the field, there are many different types of irrigation systems. Irrigation systems come in a number of different forms.

Irrigation on consumption: Every plant obtains low-pressure water that is supplied over a water supply systems network.

Surface watering: There seems to be no hydraulic pump involved in the distribution of water over and across land.

Drip irrigation: Drops of water are delivered at and around the root of plants in this form of localised irrigation. Evaporation and runoff are minimized in this method of irrigation.

Irrigation using sprinklers: Water is distributed from a central position in the field by overhead high-pressure sprinklers or automatic weapons either from motorized irrigation applications.

Manual irrigation: Manual efforts are used to spread water across farmland. This system is extremely time-consuming process.

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