



A GEOGRAPHICAL REVIEW OF MODERN AGRICULTURAL PRACTICES

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Introduction

Agriculture is the backbone of the Indian economy. India is the country with 70% population living in the villages and having agriculture as the major earning source. The farmer's lot is reeling under poverty since ages. The successive government has cared to increase the productivity. The new techniques thus invented and practiced elsewhere. Should be introduced for the poor farming community in our country to enhance the production and also bring down the skyrocketing prices of agriculture products.

Agricultural production improvement, cropping practices and maximizing the harvest are perhaps the oldest of human occupation, which continue to be of highest priority in most region of the world till date, because hunger continues to exist, at times in many parts of the world, crop production trends economics of cultivation distribution and consumption demand of different crops however naturally uneven depending on the geographical area and population growth even in within an area it has fluctuated during a decade, year of seasons hence during recent decades there has been a concentrated effort all over the globe to make each specific zone self-sufficient in terms of food requirements. We have accumulated knowledge of production of improved legumes, oil-seeds, fiber crops sugar and starch crops and narcotics, greater emphasis has been placed on aspect such as global distribution climatologically requirements land preparation, agronomic practices availability of improved varieties and post harvested technologies.

Objectives

1. To identify the new Agriculture technology.
2. To study the effects of new technology on Agriculture production.

Significance of Study

India's the total population depends upon the Agriculture sector. The farmers are using the traditional method of agriculture. It has effected on the productivity of agriculture. In the present era, new agricultural technologies are invented. But majority of the farmers are unknown about such agricultural technologies. In the light of this, present study has been undertaken.

Data Base & Methodology

The present study is a theoretical study. The study is depends upon secondary data. The Data is collected through references books, research magazines and unpublished environmental Projects. The researcher has discussed with the farmers.

Discussion:

The use of hybrid seeds, irrigation and modern practices of agriculture has changed the farming picture. Now with more yield of crop per acre, you can see variety of threshing machines operating in the farms during harvesting time. While talking about farm machinery let us look to the alarming figure of farm accidents. Due to either negligible or over confidence operators of these machines give scant respect to safety. Many farmers have got their fingers cut, just for not ensuring cover over moving parts. And yes there are many tractor accidents as tractors and trolleys have become preferred mode of travel particularly for marriage parties. As far as micro irrigation systems are concerned all the advanced world class technologies in drip, sprinkle and other systems are available in India. Non-conventional energy sources like Gobar gas, wind energy, solar pumps and protection systems of electrified fences can be seen at many places. Thanks to IREDA and their state agencies. Agricultural engineering institutes in the country have developed various tools and invented new equipments to meet the needs of common farmer. Indian scientists and small entrepreneurs do not lag behind. They have developed many small tools, which are invented by scientists in developed countries. CFTRI, Mysore is a leading organisation in food processing. They have developed a host of technologies to

suit modern life style. Defense research organisation has developed various food technologies to meet the needs of defense personnel.

Impact of Modern Agricultural Techniques

1. Management of Tillage
2. Methods of Irrigation-Sprinkler, Drip, water Storage
3. Rain water harvesting
4. Selection of seeds and plants
5. Use of integrated weed management
6. Use of proper Fertilizers, pesticides and Herbicides-Nonorganic-Organic farming
7. Methods of Harvesting
8. Storage facilities
9. Greenhouse technology

Management of Tillage

10. To make soil loose and porous
11. To operate the soil
12. To have the repeated exchange of atmospheric air with soil air
13. To increase the soil temperature
14. To control the weed
15. To remove the stubbles of previous crops
16. To destroy the insect
17. To incorporate organic manure and fertilizers in the soil
18. To invert the soil to improve fertility

Methods of Irrigation-Sprinkler, Drip, water Storage

1. Flood Irrigation
2. Overhead Irrigation
3. Sprinkler, Drip
4. Water Storage

Rain water harvesting

1. To reduce run off loss
2. To avoid Flooding of roads

3. To meet the increasing demands of water
4. To raise the water table by recharging ground water
5. To reduce ground water contamination
6. To supplement water supplies during lean seasons

Rainwater can be mainly harvested by anyone of the following methods

1. By storing in tanks or above or below ground
2. By constructing pits, tube wells, lagoons, trench or check dams on small rivulets
3. By recharging the ground water

Advantages of Rainwater Harvesting

1. Low cost
2. Little maintenance cost
3. Helps in recharging aquifers, improves ground water quality.
4. Helps in improving soil moisture and reduces soil erosion by minimizing runoff water

Selection of seeds and plants

Any material used for planting propagation, whether it is in the form of seed of food fodder, fiber and vegetable crop or seedlings, tubers, bulbs, rhizomes, roots, cutting or grafts and other vegetative propagated material is defined as seed

Types of seeds

1. Hybrid seed
2. Composite seed
3. Mutants
4. HYV
5. Tissue culture
6. Nano culture

Use of integrated weed management

1. Prevent weed resistance to herbicides
2. Shift in crop-weed competition in favor of crops
3. Prevent weed shift towards perennial nature
4. Danger of herbicides reduce in soil or plant can be minimized

5. Minimum environment pollution.
6. Contributes to Economic crop Production

Use of proper Fertilizers, Pesticides and Herbicides-Nonorganic-Organic farming

Bio-fertilizers are the preparations containing live or latent cells of efficient strains of nitrogen fixing, phosphate solubilizing or cellulolytic micro-organisms used for application to seed or composting areas with the objective of increasing the numbers of such micro-organisms and accelerating those microbial processes which augment the availability of nutrients that can be easily assimilated by plants. Bio-fertilizers harness atmospheric nitrogen with the help of specialized micro-organisms which may be free living in soil or symbiotic with plants. 'Microbial inoculants' are carrier based preparations containing beneficial micro-organisms in a viable state, intended for seed or soil application, designed to improve soil fertility and help plant growth by increasing the number of desired micro-organisms in plant rhizosphere. Microbial Inoculants- In soil the activities of Nitrogen fixation, mobilisation of plant nutrients and degradation of ligno-cellulotic wastes are being carried out by a large number of micro-organisms. Artificially multiplied cultures of selected micro organisms augment the natural recycling of organic resources. There are different types of microbial inoculants.

Nitrogen fixers

Symbiotic- Rhizobium, inoculants for legumes.

Non-symbiotic- For cereals, millets, and vegetables.

Bacteria-

1. Aerobic- Azotobacter, Azomonas, Azospirillum.
2. Anaerobic- Closteridium, chlorobium
3. Facultative anaerobes- Bacillus, Eisherichia

Blue green algae-

1. Anabaena, Anabaenopsis, Nostoe
2. Phosphate solubilizing micro-organisms.
3. Cellulolytic and lignolytic micro-organisms.

4. Sulphur dissolving bacteria.
5. Azolla.

Rhizobium Inoculant

Agronomic importance- Response to Rhizobium inoculation has been amply demonstrated with most of the legumes- ahar, urd, mung, gram, soybean, etc. Besides, legume cultivation also leaves behind a naturally nitrogen enriched soil for subsequent cultivators.

Azotobacter Inoculants

Azotobacter inoculants on onion, wheat, rice, brinjal, tomato, cabbage, sugarcane, oat, barely, maize, potato can increase 7-12 % crop yields.

Blue Green Algal Inoculants

These algae also possess photosynthetic activity. Besides they excrete vitamin B12, auxins and ascorbic acid which contribute to growth of rice plants.

Azolla-an Organic Manure

Crop response- Soil application is more beneficial than dual culture method; 10 tonnes fresh Azolla/ha is equivalent to 25-30 kg N/ha and increasing application rate from 5-20 tonnes/ha has direct response in grain yield of paddy.

Pesticides and Herbicides

Role in agriculture to improve crop yield, role of controlling disease
Herbicides- The chemicals used for Killing the weed or inhabiting growth weeds are called Herbicides

Nonorganic-Organic farming

Organic farming for reducing the cost of cultivation and to increase the profitability could use acid-delinted seeds in order to avoid seed borne pathogenic infections and achieve optimum plant stand. If fuzzy seeds are used, however, higher seed rate is to be used in order to achieve the same goal.

Methods of Harvesting

Harvesting is the process of gathering mature crops from fields, physically removing the crop, cooling, storing, cening, soaring, packing up to the point of farm processing or shipping to the wholesale or consumer market, Tractor harvesting.

Storage Facilities

1. Room Storage- The room should have high plinth and good ventilation.
2. Pit Storage- 60-75 cm deep, 2.5 m long and wide, some cool, shady places, water sprinkled inside the pits to cool it.
3. Cold Storage- This is the best method of storing as temp and humidity can be regulated in such storage. R.F. for cold storage.

Greenhouse Technology

This technology is advanced artificial and manmade technology that technology is any season any crop production available for any time green house technology a very important present day

Conclusion & Suggestions

After adapting the modern techniques of agriculture, the productivity of agriculture has been increased. Due to the increase in the productivity, it has been possible to fulfill the need of food of increasing population. Taking agricultural practices the farmers should aware the land as a natural resource to be transmitted the next generations in the healthy form. The traditional farming farmers are unable to get the production as per the requirement. Due to the lack of knowledge about properties of soil, fertilizers, irrigation facilities to over come these problems modern agricultural practices are introduced which consists of following things-

1. Use of modern equipment's for plugging.
2. Selection of proper seeds, irrigation facilities.
3. Use of proper fertilizers, pesticides, manures.
4. Use of machines for harvesting.
5. Use of modern methods for storage of seeds, farm products.
6. Use of organic agriculture should be followed on large scale.
7. Use of Green House technology.
8. Use of integrated weed management.
9. Use of Bio-fertilizers, Bio-pesticide.

Reffrences

1. Agricultural Geography- Majid Husain

2. Green Revolution- Farmer B. H.
3. Agro one newspaper
4. www.britahnica.com
5. www.wikipedia.org
6. www.google.com