

SRI GURU NANAK DEV KHALSA COLLEGE

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Project Report

on

AGRICULTURE IN UTTARAKHAND



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Teacher's signature

AGRICULTURE IN UTTARAKHAND

INTRODUCTION

Agriculture is one of the most significant sectors of the economy of Uttarakhand with diverse agro-climatic endowments, the plains and hills present differing scenarios for agriculture while commercial agriculture is practiced in the plains. The hill farmers mainly practice subsistence farming. The hills practice mixed cropping, while in the plains in a given season single crops are grown mostly. Irrigated land is freely available in the plains.

Basmati rice, wheat, soybeans, groundnuts, coarse cereals, pulses, and oil seeds are the most widely grown crops. Fruits like apples, oranges, pears, peaches, litchis, and plums are widely grown and important to the large food processing industry. Agricultural export zones have been set up in the state for leechi, horticulture, herbs, medicinal plants, and basmati rice.

MAJOR CROPS OF UTTARAKHAND

There are various crops which are cultivated in Uttarakhand. These can be broadly classified into four categories:

Cereals wheat and rice

Pulses gram ,moong, urad, lentil etc.

Commercial crop sugarcane, rapeseed, mustard etc.

Horticulture vegetables and fruit.

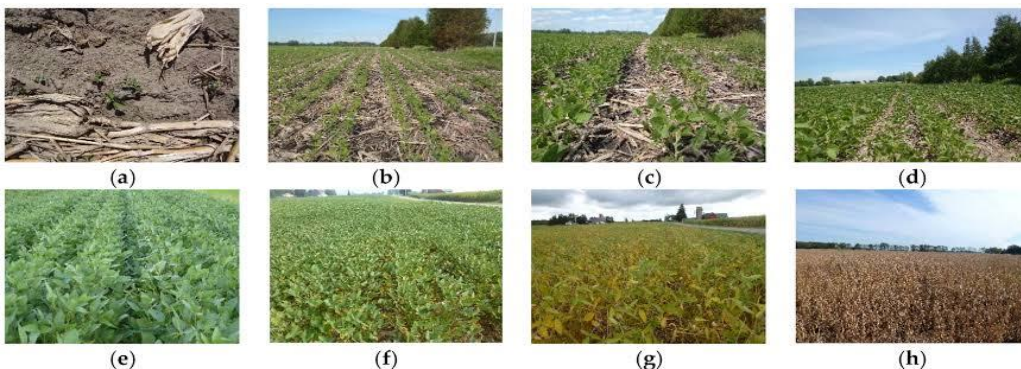


Image 1: crops mainly cultivated in Uttarakhand

RICE

It is the most important food crop of India. Rice is produce in high quantity in Uttarakhand and around one third of food production area is covered by rice. Rice is cultivated in 4 districts of Uttarakhand.

It is the predominant crop all over the country and produce in bulk as maximum population of India is of rice consumer



Image 2: An image showing the enrich rice crop

- The varieties grown during this season are mostly varieties of short duration ranging from 90 to 110 days.
- The main rice growing season in the country is the 'Kharif'. It is known as winter rice as per the harvesting time.
- The sowing time of winter (Kharif) rice is June-July and it is harvested in November-December.
- Uttarakhand is currently producing 330,000 quintals of basmati rice from 11,000 hectares of area, mainly in four districts . When the hill state was formed in 2000, basmati rice was produced only in an area of only 1,500 hectares.

WHEAT

Wheat is Cultivated as a rabi crop, wheat is Uttarakhand's main agriculture produce and the state contributes around 32 % of the country's total wheat production, followed by Punjab, Haryana, Madhya Pradesh and Rajasthan. Though wheat is grown in all districts of the state, western Uttarakhand remains the leader.



Image 3: An image showing the wheat crops ready to harvest.

- Wheat is the second most food crop of India next to rice.
- It is a rabi or winter crop. It is sown in the beginning of winter and harvested in the beginning of summer.
- Normally, the wheat is sowed in the month of October and November, and harvested in the month of March-April.
- It requires a cool climate being a mid latitude grassland crop. The ideal temperature varies between 10°C – 15°C at the time of sowing and 21°C – 26°C at the time of ripening and harvesting of crops.
- The important wheat producing districts of the state of Uttarakhand are Udham Singh Nagar, Nainital and Haridwar

LANDSCAPE AND CLIMATE

Uttarakhand mainly has two different climatic regions, namely, the hilly terrain and the smaller plain region. So, the weather is also quite varied, depending on the particular place.

Summers, in most of the Uttarakhand are mostly pleasant, but some places do have hot climate. The temperatures, in places like Haridwar, Rishikesh, etc. can reach the 40 degrees Celsius mark. Coupled with humidity, this can be pretty uncomfortable. The summer season of Uttarakhand extends from April to June.

Winters in Uttarakhand are very cold, with many places receiving regular snowfalls. Temperature during the winter season ranges from sub zero to about 15 degrees Celsius. The winter season in Uttarakhand generally extends from October to February. During the period of July to September, lies the monsoon season of Uttarakhand. The temperature ranges from 15 to 25 degrees Celsius at most of the places, during this time.. The state receives approximately 90% of its annual rainfall in this season.



Image 4: An image showing climate and landscape of Uttarakhand in Nainital district

IRRIGATION SYSTEM AND SOURCES OF WATER

Irrigation is simply the process of taking water from a nearby source and using it to irrigate the land where crops have been planted. There are many sources of water that can be used for irrigation

- Wells
- Surface water
- Rivers, lakes and mountain streams.

TYPES OF IRRIGATION:

1. SURFACE IRRIGATION

Surface irrigation is arguably the easiest and the most commonly used type of irrigation. It uses gravity to draw water from a higher area of land to the fields. The slopes need to be steep enough to allow the water to flow, but not too steep as to flood the field. The main advantage of this type of irrigation is that it requires no advanced technology to work.

2. SPRINKLER IRRIGATION

Sprinkler irrigation uses a series of pipes to move water from the source to specially designed spray heads. The water must be pumped through the pipes to gain the right pressure, which needs to be controlled so the fields are not over watered.



Image 5: surface irrigation



Image 6: Sprinkler irrigation

CHALLENGES FACED BY FARMERS

- ❖ **Instability** :Agriculture in India is largely depends on monsoon. As a result, production of food-grains fluctuates year after year.
- ❖ **Land ownership**: It is believed that huge area of land is under the moneylenders ,rich-farmers and landlords. As a result peasants cannot generate sufficient marketable surplus. So they are not only poor but are often in debt.
- ❖ **Inadequate use of manures and fertilisers**:Inadequate use of manures like cow-dung or vegetable refuse and chemical fertilizers makes Indian agriculture much less productive.
- ❖ **The use of poor quality seeds**: The main cereals (rice, millets and pulses) are still grown chiefly with unimproved seeds.
- ❖ **Inadequate water supply**: Ordinary varieties of seed can be replaced by better varieties if there is an assured supply of water but due to lack of water supply it becomes harder for farmers.
- ❖ **Agricultural Prices**: In order to increase food production, it is necessary to ensure that prices of Food-grains set by the Government from time to time give sufficient incentive to farmers so that they can earn reasonable incomes. In India, bumper crop leads to fall in revenue of farmers.
- ❖ **The excessively high rate of interest charged by the moneylenders**: In Uttarakhand there are majority of small farmers and small farmers suffer as the return generated from their farming is not that much high but moneylenders charge them high rate of interest which makes them into debt trap.
- ❖ **The manipulation of accounts by the lenders**: As the farmers are not that much educated so the moneylenders manipulates the account and take advantage of their illiteracy.
- ❖ **Conditions of Agricultural Labourers**: The conditions of most agricultural labourers in India are far from satisfactory. There is also the problem of surplus labour or disguised unemployment. This pushes the wage rates below the sub-sistence levels.
- ❖ **Climatic conditions**: Cope with climate change, soil erosion and biodiversity loss

ENVIRONMENTAL IMPACT OF AGRICULTURAL PRACTICES

➤ Land transformation

- Deforestation to create gardens
- Drainage of wetlands to grow crops like rice

➤ Water pollution

- Soil erosion
- Disposal of animal waste and chemicals waste into water

➤ Loss of biodiversity

- Slash and burn
- Use of agrochemicals
- Monoculture cropping
- Water eutrophication from agricultural fertiliser

➤ Air pollution

- High use of fossil fuels and pesticides
- Pressure on non- renewable resources
- Green house gas emissions of methane by cattle

➤ Endanger to aquatic life

- Dumping chemical and agricultural waste into water leads to decline in fisheries
- Aquifer depletion



Image 7: An image showing Soil erosion Slash and burn and Deforestation

GOVERNMENT INITIATIVES FOR FARMING

There are various schemes given by state government and central government to promote farming

1. Deendayal Upadhyay SahKarita Kisan Kalyan Yojana

Under this scheme the state government has been started to provide financial assistance to the eligible farmers. Under this Kisan Kalyan Yojana/Agriculture Loan Scheme, the government will provide easy loans up to one lakh rupees to small and marginal farmers and farmers living in border areas at only 2% interest rate.

2. Pradhan Mantri Kisan Samman Nidhi

Pradhan Mantri Kisan Samman Nidhi is one of the important schemes of the Government of India. Under this scheme, it provides financial assistance to small and marginal farmers who have less than 2 hectares of land. Under this scheme, all the farmers are getting 6 thousand rupees per year as minimum income support.

The poster features Prime Minister Narendra Modi and Chief Minister Bhupendra Patel Chaudhary. It announces the start of the Deendayal Upadhyay SahKarita Kisan Kalyan Yojana on 14th February 2019. The scheme provides financial assistance of ₹3340 crore to small and marginal farmers. It lists several beneficiaries: Shivendra Singh Dabholkar, Ram Mohan Singh, Chander Chet Mahalwal, Bhagat Singh Kohliwadi, and Rajendra Singh. It also mentions that 55,000 farmers will benefit and 60 lakh rupees will be distributed.

The poster features Prime Minister Narendra Modi and is titled 'On the birth anniversary of revered Atal ji. Devoted to the trust and self respect of farmers'. It announces that Prime Minister Narendra Modi transfers benefits under PM-Kisan Samman Nidhi of Rs. 18,000 crore to bank accounts of 9 crore farmer families. The scheme is implemented through video conferencing on 25th December 2020 at 12 Noon. It includes testimonials from farmers like Ranjeshwar Prasad and Ran Singh Rajput, and a list of key features: annual payments of ₹2,000, inclusion of all land-holding farmers, direct transfers during the COVID-19 pandemic, and a total of ₹95,000 crore transferred to 10 crore farmers.

Image 8: these are the posters of schemes by the government.

3.Kisan credit card scheme

This scheme has short term credit limits for crops, and term loans. KCC credit holders are covered under personal accident insurance up to ₹50,000 for death and permanent disability, and up to ₹25,000 for other risk.



Image 9: An poster showing Kisan credit card scheme

4.Pradhan Mantri Fasal Bima Yojana

The Pradhan Mantri Fasal Bima Yojana (PMFBY) launched on 18 February 2016 by Prime Minister Narendra Modi is an insurance service for farmers for their yields. It was formulated in line with One Nation–One Scheme theme by replacing earlier two schemes NATIONAL AGRICULTURAL INSURANCE SCHEME (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS) by incorporating their best features and removing their inherent drawbacks (shortcomings). It aims to reduce the premium burden on farmers and ensure early settlement of crop assurance claim for the full insured sum

कृषि एवं किसान कल्याण मंत्रालय
भारत सरकार

प्रधानमंत्री फसल बीमा योजना

प्रधानमंत्री फसल बीमा योजना से फसलों की शत-प्रतिशत सुरक्षा

अधिकतर राज्यों में रबी 2017-18 के लिए बीमा कराने की अंतिम तिथि 31 दिसम्बर है

किसान भाइयों से निवेदन है कि यथा शीघ्र अपने निकटतम बैंक/पैक्स/
जनसेवा केंद्र / बीमा एजेंट या सीधे बीमा कंपनी से बीमा कराये

प्रधानमंत्री फसल बीमा योजना हेतु
आवश्यक दस्तावेज

- आधार नंबर
- बैंक खाता
- जमीन व फसल सम्बंधित दस्तावेज

न्यूनतम प्रीमियम दर - सम्पूर्ण सुरक्षा

| फसल/उपज | प्रीमियम दर |
|--------------|-------------|
| रबी फसल | 1.5% |
| खरीफ फसल | 2% |
| याण्डियक फसल | 5% |
| बागवानी फसल | 5% |

f SinghRadhaMohan | RadhaMohanBJP | radhamohanbjp | radhamohansingh.in

Image 10: A poster representing PMFBY

WAYS TO MAKE FARMING MORE SUSTAINABLE

There are various ways to make agriculture more sustainable

1. Crop rotation

Crop rotation is one of the most powerful techniques of sustainable agriculture. Its purpose is to avoid the consequences that come with planting the same crops in the same soil for years in a row. It helps tackle pest problems, as many pests prefer specific crops.



Image 11: This image shows that farmer should produce different groups everytime

2. Permaculture

Permaculture is a food production system with intention, design, and smart farming to reduce waste of resources and create increased production efficiency.



Image 12: image of farming in a smart designed manner

3. Cover Crops

Many farmers choose to have crops planted in a field at all times and never leave it barren; this can cause unintended consequences. By planting cover crops, such as clover or oats, the farmer can achieve his goals of preventing soil erosion, suppressing the growth of weeds, and enhancing the quality of the soil.



Image 13: image showing cover crops

4. Use of wind energy and solar energy

As farmers are using nuclear energy to use their tubewell which takes huge amount of electricity so as the agriculture is done on a big field so they can use wind energy solar energy this one time investment will give them a long term return and also reduces the cost of electricity. This will not only help farmers to make agriculture sustainable. This will also reduces the cost of agriculture.



Image 14: An image shows how solar panel and wind fan can be set up in agricultural field.

CONCLUSION

After analysing and understanding the above topic we are come across with the importance of agriculture not only in a single stage but also all over the world.

Agriculture is the main stay of India's economy. It accounts for 26% of the gross domestic product. It ensures food security for the country and produces several raw materials for industries. Agricultural development is therefore, a precondition of our national prosperity

We get to know that landscape and climate of an area how affects the agriculture of state and there are many modes of irrigation. Farmers can use any type of irrigation system which would be suitable as per their climatic and geographical condition.

For example there are many different crops which needs different temperature carrots and spinach require cold temperatures, rice, wheat, maize and millets are those which need moderate temperature.

As food is the basic requirement of every individual to be alive but there are many grievances which are still faced by the farmers. To cope up with those grievances government has brought many schemes to provide help the farmers like Pradhan Mantri Fasal Bima Yojana and Kisan kalyan mission etc. The main objective of these schemes are just to help the farmers.

The sources states in this project that we can grow more and nutritional crops by using sustainable agriculture.

Let say, with the help of solar energy(solar panel) and hydro energy(hydro electric dam) we can generate enough electricity to irrigate crops in the field and by this source we can prevent our environment through pollution too.

Finally,in the end we would like to say that there have been numerous actions taken by the government to aid the farmers but only government can not do everything so everyone should support and contribute with the government and their scheme

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- [Schemes launched by state government](#)
- [challenges faced by farmers](#)
- [ways to make agriculture more sustainable](#)

Sources for Images

- Image 1: [crops mainly cultivated in Uttarakhand](#)
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- Image 4: [An image showing climate and landscape of Uttarakhand in Nainital district](#)
- Image 5: [surface irrigation](#)
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- Image 7: [soil erosion](#) [Slash and burn deforestation](#)
- Image 8: [Pradhan Mantri Kisan Sammann Nidhi](#)
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