

Department of Agriculture,
Uttarakhand

Draft Annual Plan Agriculture



2013-14

AGRICULTURE

Introduction

As per the Land Use Statistics 2010-11, there is only 7.23 lakh ha area under agriculture in Uttarakhand, which accounts to 13 % of the total reported area. The cropping intensity in Uttarakhand is 161.75%, which is much higher to the national cropping intensity. Land Use statistics (2010-11) of Uttarakhand is given in **Annexure-1**.

A larger area under agriculture in the state is rain fed. The net irrigated area of the state stands at 3.36 lakh ha (2010-11). The ratio of net irrigated area to net sown area for the state is 45%. Being large area under hills, irrigation is available mostly in the plains and valleys. So there is a need to generate alternate sources, mainly the rain water harvesting. District-wise irrigation status is shown in **Annexure-2**.

Hardly more than 3 percent of land holdings are above 4 ha in size and cover about 22 percent of the total cultivated area. As large numbers of holdings (91%) are under small and marginal categories, the scale of economies cannot be availed of, and so the input cost per unit of output is higher. Therefore, it becomes a more difficult task to make agriculture a profitable occupation. Land Holding figures of the State are shown in **Annexure-3(a) & 3(b)**.

The State is producing cereals more than its requirement but there is deficiency of pulses and oilseeds. Wheat and rice are the main crops of the State as it covers 30.8 and 23.9 percent of the total cropped area respectively. Remaining area is covered by Mandua 10.9%, Sugarcane 9.1%, Sawan 5.4%, Maize 2.7%, pulses 2.5%, Oilseed 1.9% and others 12.8%.

Vision

Long term food, nutrient and economic security of farmers is the main vision of the department as well as the recognition of the State as Seed State, Organic State and Knowledge State.

Aims and Objects of the Plan

This Plan has the following objects;

- To maintain self sufficiency in cereals production and;
- To make efforts for increase in the production and productivity of pulses and oilseeds that the demand and supply gap may be reduced.
- Sustainable agriculture.
- Reduction in cost of cultivation and drudgery in agriculture.
- Dissemination of technical know-how and mass awareness.
- Improvement of economic status of farmers through various activities related to the field of agriculture.

Policy

Agriculture Policy 2011 is already in existence which is a road map for agricultural development in the State, The policy includes;

- Check on the shifting of agriculture land for other purposes.
- 24 hour electric supply for agriculture.
- Priority of soil and water conservation/ water harvesting activities and one time free soil testing for all the farmers.
- Development of marketing infrastructure.
- Promotion of farm mechanization.
- and other related issues for overall development of agriculture sector.

Strategy

Strategy includes the following practices;

- Agriculture input subsidy to farmers.
- Conservation of water and its proper utilization.
- Watershed management based development.
- Timely arrangements of inputs at Nyaya Panchayat level.
- Increase in area coverage under hybrid varieties and pulses.
- Promotion of organic farming, mix-cropping and inter-cropping where it is possible.
- Increasing production of local crops- *mandua, sawan, urd, gahat, rajma, ogal, ramdana etc.* specially in rainfed hill agriculture.
- Organization of Krishi Mahotsava before sowing kharif and rabi sowing.
- Soil health management for long term sustainability of farming,
- Organization of training programmes for farmers.
- Integrated Pest Management.
- Promotion of farm mechanization.
- Strengthening of market interventions through farmers interest groups or federations.
- Promotion of Post Harvest Management Technology.
- Insurance coverage in case of calamities.

Significant Achievements of Eleventh Plan period

In comparison to the earlier level of foodgrain production, new heights have been achieved during XI Five Year Plan period. Foodgrain production of Xth Plan level was 17.23 lakh metric ton whereas 18.51 lakh metric ton was achieved at the end of XII Plan. For this significant achievement the State is awarded by **National Krishi Karma Award**.

This is also significant that the State has produced 18.04 lakh metric ton cereals in 2011-12 against the demand of 17.27 lakh metric ton. The State is still self sufficient in cereals production, but there is a huge gap between demand and supply of pulses and oilseeds.

Year-wise foodgrain production status of XI Plan period is shown in the following Table which reveals the following facts:

- Since the Uttarakhand State came in existence, the area under foodgrain crops is reduced. In 2000-01, 9.85 lakh ha was reported under foodgrain crops whereas it is reported 9.52

lakh ha in 2011-12. This trend is also been reflected in net sown area which shows that a larger area is diverted to other usage, rehabilitation, roads, industrialization etc.

- In spite of reduction in area, the total foodgrain production has shown an increasing trend. In the year 2000-01, total foodgrain production was reported 16.47 lakh metric ton whereas 18.51 lakh metric ton is reported in the year 2011-12.
- Per ha yield of all the crops has increased but the significant achievement has been received under wheat. In the year 2000-01, wheat productivity was reported 18.84 quintal per ha, whereas it is found 23.76 quintal per ha in 2011-12.

Trend of Area, Production and Productivity of foodgrain crops-

Crop		2000-01	2006-07	2009-10	2010-11	2011-12
Rice	Area (000ha)	288	289	284	285	280
	Prod.(000M.T.)	588	585	591	545	594
	Yield (q/ha)	20.39	20.21	20.78	19.09	21.20
Wheat	Area (000ha)	377	378	373	371	369
	Prod.(000M.T.)	711	796	829	883	878
	Yield (q/ha)	18.84	21.08	22.24	23.78	23.76
Maize	Area (000ha)	33	27	26	26	28
	Prod.(000M.T.)	48	36	36	40	41
	Yield (q/ha)	14.43	13.20	13.83	15.46	14.66
Pulses	Area (000ha)	52	53	51	54	56
	Prod.(000M.T.)	28	34	37	46	47
	Yield (q/ha)	5.39	6.47	7.22	8.51	8.52
Other foodgrains	Area (000ha)	235	220	207	212	219
	Prod.(000M.T.)	272	272	234	269	291
	Yield (q/ha)	11.57	12.36	11.30	12.68	13.28
Total foodgrains	Area (000ha)	985	967	941	948	952
	Prod.(000M.T.)	1647	1723	1727	1783	1851
	Yield (q/ha)	16.72	17.81	18.36	18.80	19.44

The above achievements have been received by regular efforts conducted in the field of agriculture extension, input management, Soil Health management, integrated pest management, Farm mechanization etc.

Main activities which had been undertaken during XI Plan period are shown in the following Table.

Activities	Unit	2007-08	2008-09	2009-10	2010-11	2011-12
Seed distribution						
a.Cereals	quintal	108948	101628	151068	152540	131278
b.Pulses	quintal	500	1884	1555	7024	3817
c.Oilseeds	quintal	1350	1500	1502	3183	958
Total seed distribution	quintal	110798	105012	154125	162747	136053
Fertilizer distribution - NPK	ton	150484	152443	155316	156864	174150
Distri. of Plant Protection Chemicals						
a- Chemicals	ton	595	494	618	444	458
b- bio-pesticides	ton	31	29	53	76	21

Farmers training through ATMA project	man days	14589	29749	25694	17304	25058
Distribution of farm machines, implements and tools	Nos.	48458	78057	56439	94620	108520
Area under organic ceertification	ha	24195	28480	45144	61443	29410
Soil testing (samples)	No.	71827	73267	61162	81944	95910
Area cosverage under crop insurance scheme (ha)	ha	37062	63679	70026	67806	

Proposed Targets for XII Plan period

At State level, total requirement of cereals is estimated 19.30 lakh metric ton at the end of XII Plan period, however, the programme is proposed for production of cereals is 22.70 lakh metric ton. Self sufficiency will be ensured under cereals.

About 55% of the agricultural area is hilly and rainfed and suitable for pulse production. The State is facing acute shortage of pulses, so the opportunities will be explored by area expansion and productivity enhancement programmes. At present 47 thousand metric ton pulses are being produced annually which is being targeted to be increased up to the level of 75 thousand metric ton at the end of XII Five Year Plan.

State is also facing the shortage of oilseeds, so the efforts will also be made to boost up the production of oilseeds. Soybean is the principal oilseed crop.

Crop-wise production programme for XII Five Year Plan is given in the following Table and the detail analysis is given at **Annexure -5**

Crops	2012-13 Anticipated Production	Production targets in 000metric ton			
		2013-14	2014-15	2015-16	2016-17
Rice	594	600	650	700	750
Wheat	890	900	940	970	1000
Maize	45	45	80	100	120
Other cereals	300	300	330	370	400
Total cereals	1829	1845	2000	2140	2270
Pulses	47	55	75	100	120
Total foodgrain	1876	1900	2075	2240	2390
Oilseeds	33	33	36	39	42

Year 20012-13 at a glance Kharif season-

As sowing of crop is influenced by the onset of monsoon, kharif crop was late due to this effect, but in the first fortnight of August and in later month well distributed rainfall occurred, resulting better crop in the field.

Due to delay in monsoon, area coverage under kharif crops was not remained up-to the mark and a shortfall of about 5% was reported. Input distribution was made in time with proper dissemination of technical knowledge. Attack of insect, pest and diseases remained under economic threshold level. NFSM –rice has played vital role to conduct cluster demonstrations in 2550 ha.

Per ha yield of kharif crops is anticipated at a higher level.

Rabi season-

Timely arrangements for the supply of input and delivery of technologies have been made as per the Rabi campaign 2012-13. NFSM wheat programme is implemented in 8 districts and the rest have been covered under Macro Management- Agriculture. Good crop production is anticipated.

Implementation of the following main activities is targeted or likely to be achieved for the year 2012-13.

Activities	Unit	2012-13
Seed distribution		
a.Cereals	quintal	160000
b.Pulses	quintal	7000
c.Oilseeds	quintal	3000
Total seed distribution	quintal	170000
Fertilizer distribution -NPK	000' metric ton	178
Distribution of bio-fertilizers	metric ton	154
Distribution of micro-nutrients	metric ton	2765
Area coverage under Plant Protection	000'ha	1100
Farmers training through ATMA project	man days	15000
Distribution of farm machines, implements and tools	Nos.	101012
Area under organic ceertification	ha	70000
Soil testing (samples)	No.	120000

New Initiatives taken during the year 2012-13

- National Food Security Mission for Rice and Wheat is initiated to boost up the productivity of rice and wheat in the State.
- To boost up the productivity of maize free demonstrations of hybrid varieties have been conducted in 100 acre area. This programme was sponsored by the Monsanto Company.
- To promote basamati rice 1995 minikits of seed PB-6 variety is distributed among famers of plain area.
- STEP-one programme under RKVY is introduced to create interest of the students of rural schools in soil testing programme and finally in agriculture by assisting lab materials costing up to Rs 1 lakh to the school chemistry labs.
- Integrated farming system based multipurpose water harvesting tanks (A RKVY Project) is introduced for each Nyaya Panchayat.
- Area specific programmes for integrated farming system based development Projects have been undertaken under the scheme Macro Management-Agriculture and RKVY.

Highlights of Annual Plan 2013-14

Annual Plan 2013-14 is prepared as per the guidelines issued by Govt. of Uttarakhand vide letter No. 1332 dated 05 December 2012. Considering the past performance and trend of foodgrain production, target of 2.5% annual growth rate is proposed for XII Five Year Plan as per statement shown in **Annexure-5**. For the year 2013-14, target of 19.00 lakh metric ton foodgrain productions and 33 thousand metric ton of oilseed production is targeted.

Annual Plan 2013-14 is prepared on zero base budgeting and only those programmes have been proposed in the Plan which are rational and useful.

Out of the total outlay ₹153.35 crore proposed under the Annual Plan, 115.64 core is under the centrally sponsored schemes or central sector schemes, hence the burden on State goes only for Rs 37.71 crore. The major outlay of the central share 81.50 crore goes to the Flagship scheme-RKVY which includes the various Projects of agriculture and likewise departments.

For the benefit of scheduled caste and tribes, the SCSP and TSP is also formulated under the Annual Plan.

Focus of Annual Plan 2013-14

To boost up the productivity of various crops of cereals, pulses and oilseeds, focus will be on the following activities;

- Area extension under hybrid varieties.
- National Food Security Programme Rice and Wheat
- Area extension and productivity enhancement programme under pulses and oilseeds
- Organic Farming

Main Physical Targets proposed for the year 2013-14 under the Annual Plan

Activities	Unit	2013-14
Seed distribution		
a.Cereals	quintal	170000
b.Pulses	quintal	8000
c.Oilseeds	quintal	4000
Total seed distribution	quintal	182000
Fertilizer distribution -NPK	000' metric ton	180
Distribution of bio-fertilizer	metric ton	160
Distributon of micro nutrients	metric ton	2800
Area coverage under Plant Protection	000'ha	1150
Farmers training through ATMA project	man days	16000
Distribution of farm machines, implements and tools	Nos.	1,00,000
Area under organic ceertification	ha	80,000
Soil testing (samples)	No.	1,20,000

Following Schemes/ programmes are being proposed under various developmental activities.

Centrally sponsored/Central sector schemes

1- Macro management- Agriculture (90%CSS) –

The major thrust of Macro-management programme is to increase productivity of the crops, natural resource management and development of infrastructural facilities. Programmes will be carried out as per the guidelines of Govt. of India and as per approval of the Work Plan. It includes following sub schemes;

- (1) Integrated Cereal Development Programme- Rice
- (2) Integrated Cereal Development Programme- Wheat
- (3) Integrated Cereal Development Programme - Coarse cereals
- (4) Crop Production Programme for Pulse, Oilseed and Maize
- (5) Integrated Nutrient and Pest Management Programme
- (6) Agriculture mechanization
- (7) National Watershed Development Programme for Rain fed Area (NWDPR)
- (8) River Valley Project (RVP) and Flood Prone River (FPR)
- (9) New Initiatives: Weed control, Operational Expenditure etc.

ICDP for rice and wheat will be conducted only in non-NFSM districts

2- National Food Security Mission for Rice and Wheat-

This is 100% centrally sponsored scheme to boost up the productivity of rice and wheat. 5 districts of the State namely- Pauri, Haridwar, Almora, Pithoragarh and USNagar fulfill the criteria of selection for NFSM-Rice and 8 districts namely Dehradun, Haridwar, Pauri, Tehri, Almora Nainital, Pithoragarh and USNagar fulfill the criteria for NFSM-wheat. Cluster demonstration, seed distribution, plant protection and soil management, distribution of improved machinery and implements are the major components of the scheme.

3- Support to State Extension Programme for extension Reforms (90% CSS)

This is 90% centrally sponsored scheme to support state extension services. A policy for extension reforms has been derived by the Ministry of Agriculture, Govt. of India. The five major guiding elements of the Policy framework are as follows;

1. Reforming Public Sector Extension
2. Promoting private sector to effectively complement, supplement and wherever possible to substitute public extension.
3. Augmenting Media and Information Technology Support for Extension.
4. Mainstreaming Gender Concerns in Extension.
5. Capacity Building/ Skill up-gradation of farmers and extension functionaries.

4-Rashtriya Krishi Bima Yojna (RKBY) (50% CSS)

The scheme RKBY was introduced in the year 2002-03. This is a centrally sponsored programme equally funded by the resources from the Center and the state. The objective of this scheme is to give insurance coverage to the selected crops against natural calamities like flood, drought, pest attack and epidemics etc. Paddy, wheat and Mandua are the main crops covered under this scheme. This programme is implemented by Bhartiya Krishi Beema Company Ltd.

5- Agriculture statistics (100% CSS)

Two schemes i.e. Timely Reporting Scheme (TRS) and Improvement of Crop Statistics (ICS) are being run as per the guidelines of Ministry of Agriculture, GoI on 100% Centre sharing basis. Expenditures under the heads salary of staff and other miscellaneous expenses are being covered under this scheme.

6- Promotion of agriculture mechanization through testing and demonstration (100% CSS)

Under this programme advanced machineries for use of agriculture can be tested, demonstrated in the field to make them popular. The programme is very much useful for introducing advanced machineries which are useful for reducing drudgery in agriculture and can give advantage in production process of the crops.

7- Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds (100%CSS)

Seed is the basis and most critical input for sustainable agriculture. The response of all other inputs depends considerably on quality seeds. In order to maintain a sustainable growth rate in agriculture sector during the Eleventh Plan, highest priority has to be accorded to seed production so that the adequate supply of quality seeds of relevant major crops is available at reasonable prices and at the right time.

This scheme will help in increasing Seed Replacement Rate and ultimately overall production of the State.

8- Rashtriya Krishi Vikas Yojana – a flagship scheme (100% CSS)

The scheme has the Project approach. The Project approach will mean that all the essential ingredients of a good Project are properly considered and included, i.e., feasibility studies, competencies of the implementing agencies, anticipated benefits that will flow to the farmers, definite time lines for implementation, etc. The Nodal Agency will satisfy itself that the project fulfills the objectives of the RKVY before recommending the detail Project Reports (DPRs) to the State Level Sanctioning Committee.

17 new Projects have been approved by SLSC in the meeting held on 08 Dec.2012 which will likely to be completed in 2013-14.

9-Post Harvest Technology Management-

To give support to farmers and to use the by-products, the proposal for requirement of funds is being submitted under the Central Sector Scheme of Post Harvest Technology and Management. This programme is 100 percent centrally sponsored and subsidy up to the limit of 40% of the cost is admissible under this scheme for post harvest machinery.

10- National Programme on Soil Health and Fertility Management-

Under this scheme, the soil testing labs will be strengthened for testing of micro nutrients. Proposal for 100% grant will be submitted for strengthening of the labs where micro nutrient facility is not available.

State sector schemes

11-Seed production programme (State sector scheme)

To run the seed production programme on government farms, this scheme is underway.

12- General establishment of agriculture (State sector scheme)

This scheme is supporting to crop estimation programme to reimburse the expenditure on crop cutting experiments and the expenditures which cannot be covered by any of the ongoing schemes.

13-Running expenditure of Soil testing labs, Quality control labs and AGMARK labs (State sector scheme)

There are 13 Soil testing labs, 2 fertilizer quality control labs, 2 pesticide quality control labs, 2 AGMARK labs functioning in the State and IPM and Bio-control labs are ready to function. To run these labs, the scheme is underway.

14-Strengthening of Seed stores, farms and training centers (State sector scheme)

The infrastructure available at Seed stores, farms and training centers needs to be upgraded and well maintained. So the scheme is underway.

14- Construction of residential/ non residential buildings (State sector scheme)

There are several departmental buildings at State, District and Block level which need proper maintenance or construction. For this purpose, the scheme is underway.

15- Uttarakhand Organic Commodity Board (State sector scheme)

Uttarakhand organic commodity board is established with the following objects;

- to provide the critical support system in product development,
- to set up Internal Control System in context to the organic certification
- to set up market linkages and scout for innovative diversifications.

To achieve the above goal, the board is managing the service providers and providing facility to deliver the technical know-how through master trainers. The board is maintaining the forward linkages for farmers to bring them in close contact of the exporters. Only administrative expenditure, staff honorarium and other operational expenditure is being funded by the State Government.

16- Distribution of Water pump, sprinkler set, agricultural implements etc(State sector scheme)

Farm mechanization has a tremendous scope in Uttarakhand, so improved implements, tools, machines; water pumps etc are being popularized. Farm machinery and tools are mostly very costly and beyond the purchase power of small and marginal farmers. The subsidy admissible under Macro management –agriculture scheme does not fulfill the requirement of the farmers, so the supplement pattern of subsidy is approved by the Government of Uttarakhand, which allows a maximum limit of subsidy upto 50% but not more than a limit as prescribed earlier by machinery department of Government of India.

New Proposals:

17- Incentive to farmers to purchase for hybrid seed

Hybrid seeds are very costly but they give very high return. Long time food security can be ensured if hybrid varieties are popularized. In the State level meeting of NFSM, it is advised that 50% subsidy on purchase of hybrid variety seed should be considered. So the programme is being proposed for distribution of 1250 quintal hybrid seed.

18- Strengthening of agriculture planning and crop estimation programme in the State

In the review meeting of Chief Minister, held in the month of July-Aug 2012, directions have been made to the department that the agriculture planning should be strengthened and necessary action should be taken. A proposal for strengthening of planning and statistics is being proposed under the Annual Plan 2013-14. This will include micro planning, strengthening of data centre, updating of departmental website etc.

Scheduled Caste Sub Plan (SCSP) and Tribal Sub Plan

There are only 14% Scheduled caste farmers who holds only 8% agriculture land in the State, therefore, most of the farmers lays under the small and marginal category. The tribes shows different pattern. There are 3% farmers of tribal community but holds 6% agriculture land. This is the reason that scheduled caste community holds very poor infrastructure for their livelihood and need additional attention of developmental activities.

The programmes which were running previously had not been remained very effective. So a new programme at state level is being proposed on the basis of advice of Planning Commission of Government of India. The advice is;

A group of 5 to 10 SC-ST farmers may be constituted for skill development by the State Agriculture Department/ Extension Agencies. This group may be provided a package of small tractors with accessories, tube wells in the electrified villages and pump sets on non-electrified villages may be provided with other agricultural inputs like quality seeds, pesticides, fertilizers, etc. This farmers group may also be given training for cultivation of suitable crops and for undertaking activities in the sectors of fisheries, animal husbandry and horticulture etc.

For this purpose, an outlay of ₹ 9.50 crore is being earmarked in the Annual Plan 2013-14.

In addition to the above mentioned programme an outlay for SCSP and TSP under the centrally sponsored schemes is also being earmarked under the Annual Plan 2013-14. Same process is applicable for the District Plan scheme.

Scheme-wise outlay proposed for SCSP and TSP is shown in the following Table.

Sl.No.	Name of Scheme	Outlay proposed under SCSP (lakh ₹)	Outlay proposed under TSP (lakh ₹)
Ongoing schemes			
1	C-DAP based agriculture development programme (Distt.Plan)	128.00	25.00
2	Macro Management- Agriculture (CSS)	42.00	84.00
3	Rashtriya Krishi Vikas Yojana (CSS)	800.00	275.00
New Schemes			
4	Agricultural Development Programme for SC majority villages	950.00	
5	Incentive for hybrid seeds	25.00	4.50
	Total	1945.00	388.50