



Doon university (School of Environment and Natural Resources)

Doubling Farmers Income Through Integrated and Collective Farming  
Approach in Uttarakhand

Quarterly Report

[Second] Quarter – 1<sup>st</sup> July– 30<sup>th</sup> September, 2020

Submission Date: 06<sup>th</sup> September 2020

Activity Start Date and End Date: 1st July – 30th September 2020,

[Program Manager] Name: Dr. vivek Joshi

Submitted by: Doon University School of Environment and Natural Resources

Mothorowala Road, Kedarpur, P.O. Defence Colony, Dehradun 248001

Telephone: +91-135-2533103 / FAX: +91-135-2533115

Email: [kusumdoon@gmail.com](mailto:kusumdoon@gmail.com)

## 1. Program Overview:

<b>Program Name:</b>	Doubling farmer's income through integrated and collective farming approach in Uttarakhand
<b>Activity Start Date And End Date: (from first allocation of funds)</b>	1 <sup>st</sup> July'2020 to 31 <sup>st</sup> March 2023
<b>Name of Joint Implementing Partner: (if any, this is an org. that may be helping you implement)</b>	Department of Horticulture, Department of Agriculture Uttarakhand Government
<b>Geographic Coverage (State, Districts, Villages)</b>	State – Uttarakhand District – Tehri-Garhwal, Almora, Pithoragarh, Champawat Block – Narendranagar, Bhilangana, Sult, Dwarahaat, Syeldey, Munakot, Didihaat, kanalicheena, Lohaghaat Villages (Nos.) – 95
<b>Reporting Period:</b>	July 2020 to September 2020
<b>Total Program Cost</b>	INR 2,01,52,356
<b>Total amount received from THE/FIRST</b>	INR nil



**Figure 1 . Preparation of land for potato cultivation in *Soni* village Tehri-Grahwal**

## 2. Program Introduction / Description:

Uttarakhand is a land of small peasants but every farmer is a proud owner of landed property and this is one such state of the Indian Union where very few persons are landless. But with increasing population pressure, there has been a continuous

increase in the number of holdings for the same piece of agricultural land in all the districts. During few decades, the number as well as area operated under marginal and smallholdings showed a marked increase while the number as well as area operated by the medium and large holdings decreased clearly

showing the perpetual sub-division and fragmentation of medium and large holdings into marginal and smallholdings mainly because of population increase. Agriculture is the mainstay of livelihood for the majority of the hill / rural population in Uttarakhand. Generally, two crops are taken from the land. Maize and Paddy are the main crops of the Kharif season and potato and peas are also sown, where the conditions so permit. Wheat and barley are the major Rabi crops. The period of sowing and harvesting of crops depends on the elevations. Millets and coarse cereals like *Ogla*, *Kangni*, *Cheaney*, *Chaulai*, and *Bathu* constitute important crops of the cold region where maize is not sown during the Kharif. Amongst the vegetables grown during the Kharif season are tomato, peas, potato and cabbage.

We have managed to combine the farmlands of individual farmers within villages and four to six villages have been unified to developed clusters. This has given us a very good opportunity, for the first time in Uttarakhand for the bulk production of agriculture and horticulture products. In this project, our team will collect the data from the agriculture income of each beneficiary of farmer Producer Company to assess the dependency of hill community/farmers on horticulture, agriculture, medicinal and aromatic plant production for their livelihood. This data will be evaluated against the income from farm produce after the intervention of The HANS Foundation and Doon University at the end of each financial year.

We are also developing concrete baseline information on the actual situation on the ground of irrigation, manure and other issues related issues in agriculture. In the first quarter, we have collected data from 12 villages in Tehri-Garhwal, and eight villages from Almora district. We will be collecting the data from ninety-eight (N=98) villages in four (N=4) districts Almora, Tehri-Garhwal, Pithoragarh, and Champawat during the tenure of the project.

## Goal

This project is aimed to support to farmer members of six farmer producer companies which have been formed in Uttarakhand. This project is working to resolve the issues involved in the horticulture, agriculture Map & NTFP sector through a holistic approach which is aimed at conserving the natural resources and to generate livelihood through developing natural resource-based enterprise in Uttarakhand to support the rural communities for agribusiness, horticulture, agriculture, medicinal and aromatic plants ( M.A.P) and non-timber forest produces (N.T.F.P) based livelihood options.

### 3. Summary of Results to Present

Deliverables / Indicators	Baseline FY	Annual Target	Q1 FY (July-October)20	Q2 FY (October-December)20	Q3 FY (January-March 20)	On Target? Y or N	Remark
Orientation Training of Farmer Producer Company at cluster level		1	N	Y		Y	Activity planned in 2 <sup>nd</sup> quarter
Training on internal management (Business plan, record keeping, legal accounting documentation & taxation, stock, etc.		3	N	Y	Y	Y	Activity planned in 2 <sup>nd</sup> and 3 <sup>rd</sup> Quarters of project
Training on Good Agri/horti practices e.g. field preparation, manuring, pruning, irrigation, pest & disease management, etc.		3	N	Y	Y	Y	Activity planned in 3 <sup>rd</sup> Quarter
Preparation of Fruit Orchards, and cultivation of aromatic plants (oregano, guava, pomegranate, citrus etc.)		100 hectare/ >500 farmers	Y	9 Hectare 49 farmers	Y	Y	Rest of Activity planned in 3 <sup>rd</sup> Quarter
Citrus spp.	556 plants		Y				Plantation activity was effected by covid pandemic
Pomegranate	1334 Plants		Y				
Guava	3330 plants		Y				

Mango	300 plants		Y				We will extend the orchard areas in winter season.
Meetings in villages for identification, preparation of land for cultivation of horticulture crops		95 Villages	Meetings were conducted 69 Villages			Y	Activity planned in all 3 Quarter of for first year.
Nursery Preparation		5 Nurseries		Y	Y	Y	Activity planned in 3 <sup>rd</sup> and fourth Quarter
Plantation of horticulture crops		190 hectare		Y	Y	Y	As seeds have be demanded by farmers and nursery will be operational by mid October all work seems be in time.
Training of farmers for Nursery development techniques		6			Y	Y	Activity planned in 3 <sup>rd</sup> and 4 <sup>th</sup> Quarter
Cultivation of oregano		20 hectare		Y	Y	Y	Activity planned in 3 <sup>rd</sup> Quarter
Organizing interface with line departments for dovetailing of govt. development schemes & for other convergences		Round the year	Y	Y	Y	Y	This activity will be done round the year.
Organizing market follow-		2		Y		y	One such Activity

up / buy back arrangements visit for strengthening forward market linkage							Completed in 2 <sup>nd</sup> Quarter
Exposure Visit on processing and packaging of value added products (production scheduling, manpower management, job role defining etc.)		1				Y	Activity planned in 3 <sup>rd</sup> quarter

#### 4. Changes to Deliverable / Indicators

Deliverable / Indicator	Change	Why change was made	Approved by
1. Trainings & Establishment of Nurseries 2. Cultivation of MAPs, development of orchards in Private Land and plantation, fruit trees in Van Panchayat	No changes were done		



## 5. Activity Implementation Process

### 5.1 Progress Narrative

#### A. Establishment of Nurseries and Soil sampling

As the project has been sanctioned from 1st July 2020 our team has identified two destinations where new nurseries for the production of seedlings of horticulture crops will be established in the third week of October. These nurseries are being prepared in Tehri-Garhwal in village *Soni* and *Guryali*. Village *Guryali* is situated at 1250 meters on a northeast-facing gentle slope, whereas village *Soni* is

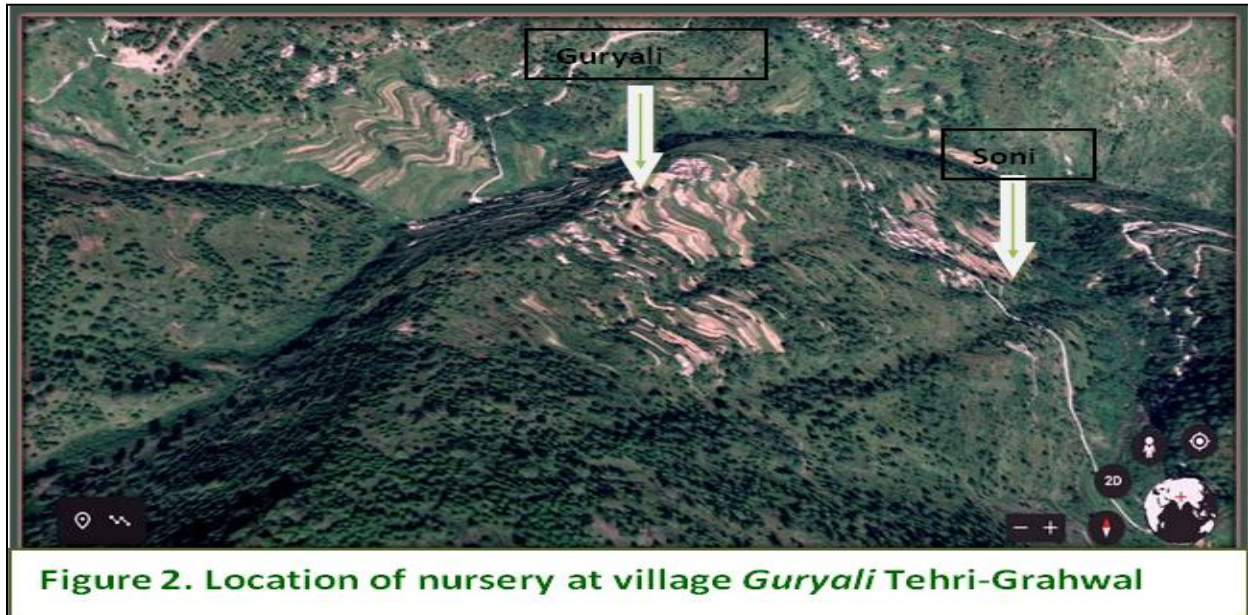


Figure 2. Location of nursery at village *Guryali* Tehri-Grahwal situated at 1000 meters at the north-facing slope. The location of the villages provides a good opportunity to establish a nursery in these villages as the northeastern slopes generally have a cooler temperature in comparison to south western slopes in the Himalaya.

These two villages are close to each other on the road heads and have an ample supply of natural water for irrigation purposes. The villages identified for horticulture, medicinal and aromatic plant intervention are situated on along the Gaza-Devpryag road at more or less equal road distance from these nursery locations; hence transport of seedlings will be easy for us.

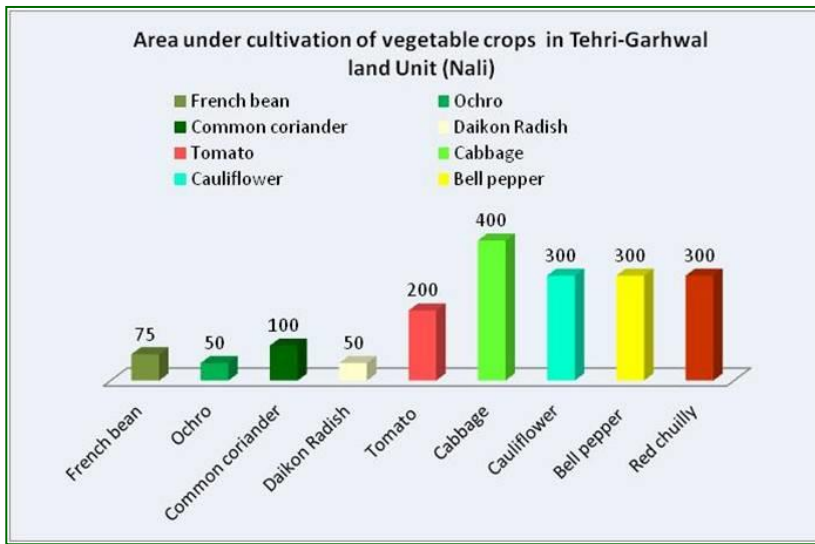
All the villages chosen for intervention comes under Narendra Nagar, Bhilangana, and Kirti Nagar Block, in district Tehri Garhwal. The branch road in which the villages are situated is connected with NH- 94 (Gajja-Devpryag) Tehri Garhwal, this will help us to supply the perishable crops in time to the markets such as Srinagar, Risikesh and Dehradun.

Similarly, the nursery of native shrub and tree species is being developed by women farmers of village *Binta* in *Dwarahaat* block of district Almora, seedlings of shrubs and trees will be planted in Van Panchayat forest areas which are jointly managed by the forest department and *Gram Sabha*. figure 4.

Soil samples from agricultural land will be collected in the month of October, and all the members of “Maa Chamrada Devi Krishak Producer Company . Ltd.” will be linked with the state government scheme to develop a “soil health card” of targeted agricultural land.

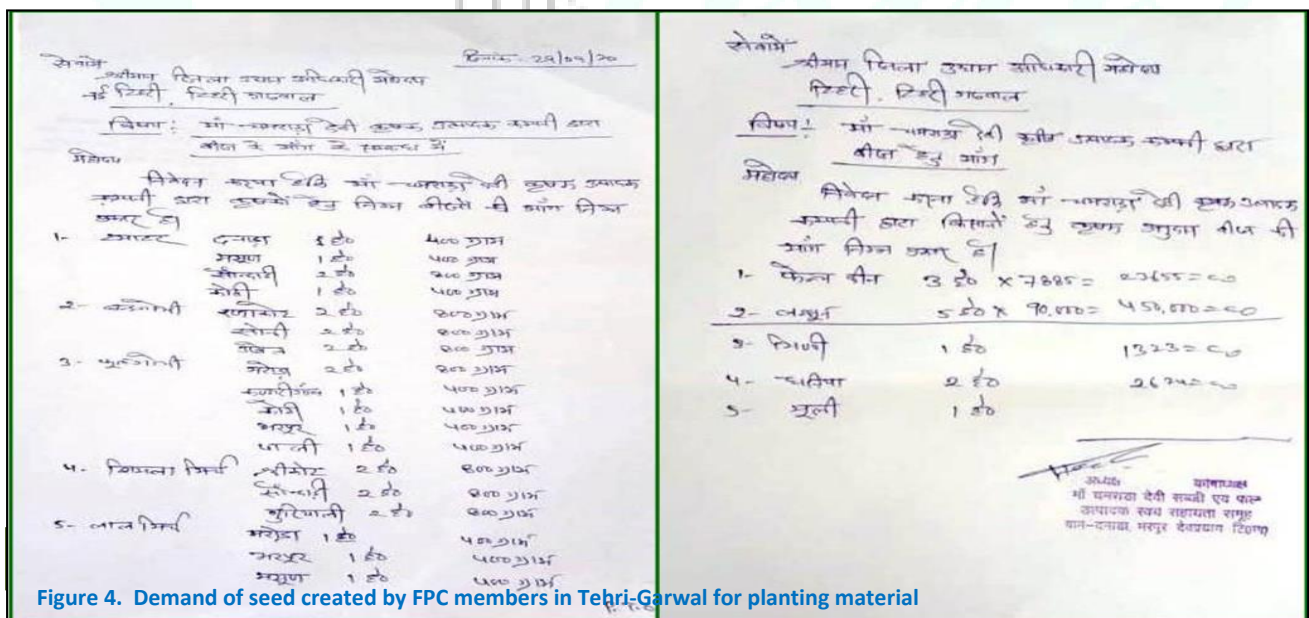
## B. Cultivation of Vegetables and Culinary Herbs

As mentioned in the concept note Due to the predominance of hills, subsistence agriculture, practiced on small terraced fields in Uttarakhand, forms the primary source of livelihood for a majority of



the state’s population. The small and scattered landholdings form a primary feature of hill agriculture. Under the project initiative, we have managed to combine the farmlands of individual farmers within villages and four to six villages have been unified to developed clusters. This has given us a very good opportunity, for the first time in Uttarakhand for the bulk production of agriculture and

horticulture products. To train the farmers in commercial cultivation of vegetables and spices we have linked the farmers with horticulture University at Bharsar Pauri-Garhwal and Krishi Vigyan Kendra



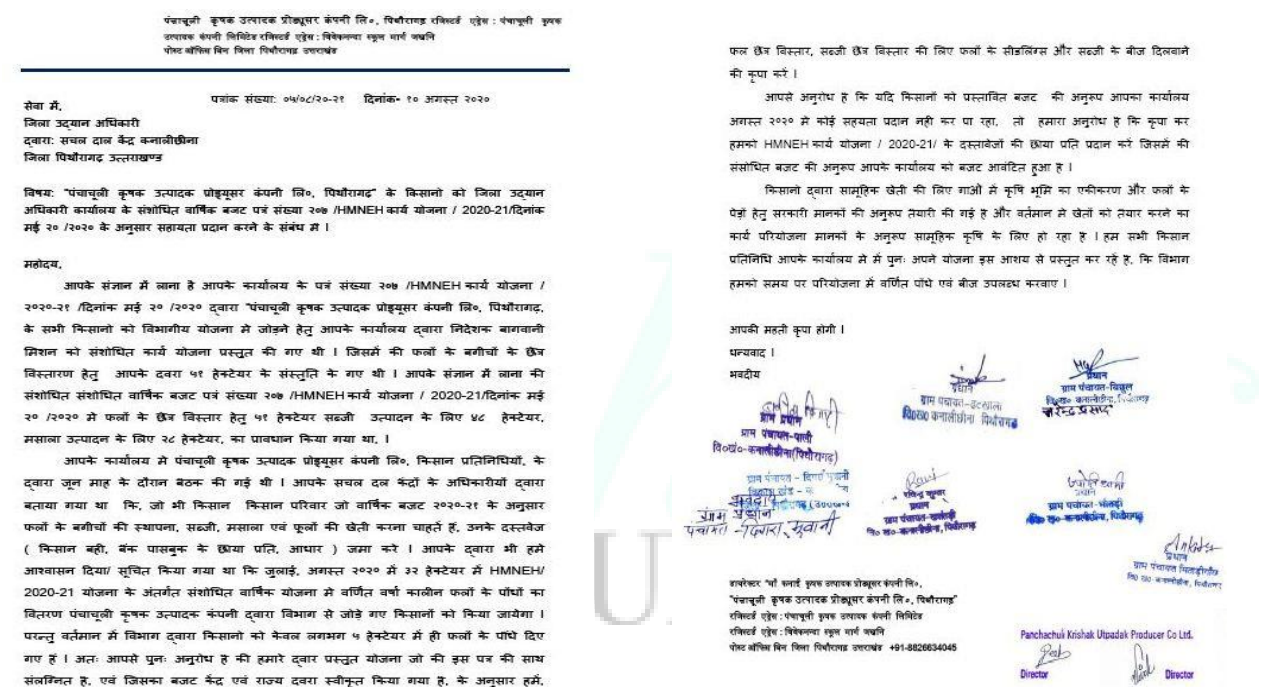
Ranichauri for the training of mass-scale cultivation. To receive the planting material in time members of “Maa Chamrada Devi Krishak Utpadak Company Ltd.” conducted several meetings in July, August, and



September in villages and with the horticulture department at unit offices and head offices. Farmers have already submitted the requirement of farmers for seeds under the “Horticulture Mission for North East and Himalayan States” scheme and hopefully, we will be getting seeds of winter horticulture crops by 15th October, and training will be arranged by 17th October in Tehri-Garhwal.

Similar demands have also been given to the unit offices of the horticulture department in respective blocks in district Almora and Pithoragarh.

Farmers in Almora district have also submitted a request to *Sachal dal Kendra of Dwaraahaat, Sult, Syeldey* block in the horticulture unit office, so that timely distribution of seeds could be ensured for winter crops. In Pithoragarh of requirements, seeds have to be demanded from the DHO office and three meetings have been conducted at the block level and hopefully, we will get seeds in all three districts by



**ifferent gram sabha to distribute HMNEH budget according to increased budget**

the end of thirds week of October. In all three districts tomato, cabbage, cauliflower, bell pepper, reddish, coriander, turmeric, french beans have been demanded by farmers for collective farming. In spices ginger, turmeric and red-chilly will be cultivated in winter and spring season.

### C.Cultivation of MAPs and Culinary herbs in Private Land

We have linked farmers from six villages for Oregano (*Origanum vulgare*) cultivation which is categorized as a culinary herb and is under being cultivation process in 20-hectare land in Tehri-Garhwal (1000 nail), [★nali is a land measurement unit in Uttarakhnad having 2160 sq feet area]. We did a thorough exercise for a feasibility assessment of land and attitude of farmers so that the identified

interested farmers could be develop a contract for trade of Oregano (*Origanum vulgare*) through “Maa Chamrada Devi Farmer Producer Company with Flex Foods Industries, Lal Tappad, Dehradun, Haridwar Road.



**Figure 6. Agriculture fields identified for Oregano (*Origanum vulgare*) cultivation**

We have completed mapping/ geo-tagging of land which will be used in Oregano (*Origanum vulgare*) cultivation. We measured the length, the width of each one of the agriculture fields so that yield estimated could be documented from the beginning of the project. This exercise will also help us in:

- Comparison of out-put in terms of yield and income (tradition crop Vs Oregano)
- Developing the manuring and irrigation plan for each site.
- Developing a harvesting plan

Three village meetings have been arranged in the last three months in identified six villages of Tehri-Garhwal for identification of beneficiaries, development of contract between the Flex Food Industries and farmers, an inspection of the land, finalization of suitable farm areas for the crop. The total fresh quantity that will be supplied will be 100 metric tons. Oregano. Training on standard operating procedures of growing oregano has been provided to stakeholders and the final plantation process will be started from 12 to October 2020.



**Location of Cluster:** All villages come under Narendra Nagar Block, Tehri Garhwal. Branch road arrives from the NH- 94 towards Gajja, Tehri Garhwal. All selected villages are located adjacent to the branch road between Gajja and Ranakot markets. The cluster of villages is nearly 21 Km from Gajja



and 30 Km from Devprayag. Primarily following villages selected (All details of villages are given in table 1).

**Table 1: Details of Land Availability for Oregano Cultivation in Laser Cluster, Tehri Garhwal.**

Gram Sabha	Name of Village included	Land Available (Nali)	Total Land Available (Nali)	Altitude (masl)	Aspect	Geographical Location	Type of Forest Around and near Agricultural field	Type of Wild life threat for Agriculture	Road Proximity (Km)	Irrigated/ Non-Irrigated	Detail of Contact Person	Contact No.
Gram Sabha Payal- Gaon	Kot	199	299	1096	NW	N-30° 14' 27.40"	Pine Forest in Upper reaches and pine mix forest is around the agricultural field. Pine forest is located at a considerable distance which shall not affect the oregano cultivation	Monkey, Wild boar	0.1	Irrigated	Darmyan Singh & Pratap Singh Bist	a.90844156 63, & 735185220 4
	Kandarigaon	100		1080	NE	N-30° 14' 34.17"						
Saundadi	Saundadi	-	250	1127	NE	N-30° 13' 31.79"	Mix forest of pine and other fodder trees is existing at a considerable	Monkey, Wild boar	0.3	Irrigated	Anand Sati	941291313 8

						32.11"	distance					
Pali	Pali	-	300	1129	NE	-	Pine Forest in Upper reaches and pine mix forest is around the agricultural field.	Monkey, Wild boar	> 0.1	Irrigated	Vijay Singh Rana	9084857920
Gadeel	Gadeel	-	150	1026	NE	-	Mix forest exists around the agricultural field	Monkey, Wild boar	Approx . 0.1	Irrigated	Balbeer Rawat	9639377864
Kothi	Kothi	-	200	1086	NW	N-30° 13' 17" E- 78° 31' 54"	Mix forest found at a considerable distance, which shall not impact the cultivation	Monkey, Wild boar	0.2	Irrigated	Guru Prasad	9760874430
Guryali	Guryali	-	250	1102	NW	N-30° 13' 29" E- 78° 29' 18"	Pine forest exists around at a distance of 3.5 km, which shall be good enough for the cultivation of Oregano	Monkey, Wild boar	0.1	Irrigated	Kirtimani Bhatt	9411530843
Total			1449									

Data from all the villages were collected through survey and farmers were selected based on farmer's interest, land availability, regular water availability for irrigation, road proximity, forest proximity, adequate sunlight availability and extent of wild animal issues.

Available land in all villages was found appropriate for the cultivation of oregano. Availability of lands was analyzed and found suitable for the purpose of the three basic parameters viz-a-viz; i) farmers' interest, ii) road proximity, and iii) water availability.



**Figure 8. Rivulets available for Irrigation facility in village clusters.**

The following are the name of villages identified for the cultivation of Oregano (*Origanum vulgare*) in Tehri-Garhwal.

- Payalgaon,
- Saundari,
- Pali,
- Gadeel,
- Kothi- Taila, and
- Guryali

**Farmers' Interest & Training:** Success of the project lies within the idea that stakeholders must have a certain kind of motivation, either in terms of monetary or kind. The first kind of motivation for the farmers is that farmers were federated in a formal company namely “*Maa Chamrada Devi Krishak Utpadak Company Ltd.*” The company was established in the year 2019. Farmers of six villages are producer members of the *Maa Chamrada Devi* FPC. Five groups of this company were formed in the year 2019 and equipped them with Farm Machinery Bank (FMB). All FMBs shall be moved as per their requirements in other villages of FPC.

Secondly, farmers are being trained by the experts from Flex Foods Industries, Dehradun, and planting material that has been arranged free of cost Flex Foods Industries. Apart from planting material, cultivation & harvest training and techniques, and more importantly, direct buyback agreement shall be done along with transportation at the site, which shall reduce the cost to the farmers. Benefit in terms of money shall be transferred in the account of farmers through the FPC.

It is therefore found that farmers are interested in the cultivation of oregano and thereby increasing the livelihood.

Identification of crops was also done in these group discussions according to the site conditions. The mode of sharing the income and separation of operation cost from the profit was also discussed in detail, to avoid any dispute in the future it was decided that groups will have meetings in regular intervals every month to avoid confusion and get details of the cluster from the monitoring and reporting teams. One of the benefits of oregano cultivation is that this crop is not vulnerable to the loss due to wild animals. While doing a survey, the type of wild animal threats to agriculture was also compiled and found that after natural disaster major losses are being created by monkeys and wild boars. As a solution, the oregano crop shall not be affected by wild herbivores owing to its unusual acute fragrance. Therefore, there are no or very nominal chances, that crops shall be destroyed by wild animals.



## D. Creation of farmer machinery bank in five villages to achieve targets:

We have formed a team of farmers in all four districts in which women farmers have also been inducted for the identification and use of water resources for vegetable and spices production. After a thorough survey of the Van Panchayat area in all the villages, our teams in villages have identified water spring which could be used for irrigation and water storage where ever possible. This water will be used for irrigation during the peak summer period when the shortage of water will be acute. The farmers have



started work on the creation of a small check dam structure around the identified water source which will be used in the cultivation of horticulture crops.

Detail discussion was done on issues that generally hinder the actual work on the ground and ideas were discussed to overcome the problems identified. It was agreed by all stakeholders that the details of each member of FPC and its farm should be recorded at the beginning of the program. It was also agreed that meetings should be arranged in each village for and all farmer members should be made aware of all project activates for maintaining transparency. Based on this meeting a team was formed from the former members of the FPC which went to the villages and held meetings to communicate the mode of operation to fulfill their needs which have been communicated to partner organization by the farmers.



The total number of machineries required for the tilling of entire farmlands was not enough due to limited budget in the scheme in each block. Hence a rotation model that was discussed and agreed was based on the rotation of machines in the cluster after preparation of land in one cluster. This model will initially be

The image shows a meeting register with handwritten notes in Hindi and a list of equipment. The notes discuss the rotation of machinery and the formation of a 'Farm Machinery Bank'. The equipment list includes items like pumps, sprayers, and weeding machines.

S.No.	Particulars	HSN/ACs	Qty.	Rate	Per	Rs.	Amount	P.
1.	पंप	3917	05	244	Each	1220	00	
2.	फुलकी	3917	30	25.73	Each	771	90	
3.	पुलकरी	8413	01	16875	Each	16875	00	
4.	समता	8437	01	5200	Each	5200	00	
5.	सुझा	8437	01	5200	Each	5200	00	
6.	गिरी	8437	01	5200	Each	5200	00	
7.	वेनी	8437	01	5200	Each	5200	00	
8.	लक्ष्मी	8437	01	5200	Each	5200	00	
9.	सुझा	8437	01	5200	Each	5200	00	
10.	पुलकरी	8413	01	29831	Each	29831	00	

Figure 10. Meeting register of SHGs

under consideration for at least one year until additional pieces of machinery are claimed in coming one or two months from the budget of the central Government sponsored scheme “Farm Machinery bank”

Shri Enterprises List of equipment:

S.No.	PARTICULARS	HSN/ACs	Qty.	Rate	Per	Rs.	Amount	P.
1	HDPE PIPE (SECTION) 110mm for Jod Pump Section make - Dhara Industries	3917	05	244	Each	1220	00	
2	HOPE Flexible Pipe (15cm diameter) make - V.L. Packool	3917	30	25.73	Each	771	90	
3	Water Lifting Pump 45K-15 IS1 Petrol Starting; diesel starting IS11 make - India Marshall Model-445	8413	01	16875	Each	16875	00	
4	HDPE PIPE (SECTION) 50mm 5kg Pressure Cont make - Dhara Industries	3917	15	100	Each	1500	00	
5	Dhan Chakri 2HP electric make - M/s. Industries	8437	01	5200	Each	5200	00	
6	Atom Chakri 2HP 2 in 1 Horse wheel make - Constar	8437	01	5200	Each	5200	00	
7	Knapsack manual sprayer RM 20L make - Maxell	8421	01	1271	Each	1271	00	
8	Brush Cutter 236 P.L. 6HP make - Huskvarna	8467	01	24153	Each	24153	00	
9	Brush Cutter 113 P.L. 2.0HP make - Huskvarna	8467	01	29831	Each	29831	00	
Total Amount Before Tax							177621	70
CGST 12%							21314	56
SGST 6%							10657	28
TOTAL AMOUNT							197345	12

S.No.	PARTICULARS	HSN/ACs	Qty.	Rate	Per	Rs.	Amount	P.
1	Powder Weeder Huskvarna engine : 4 stroke, Petrol engine Displacement : 116cc, 1000rpm-5000 rpm, working width 21-22 inch Make - Huskvarna Model- TP-230	8432	01	65800	Each	65800	00	
2	Powder weeder CAM-100-11A engine : 4 stroke, Petrol engine Displacement : 116 cc, 1000rpm-5000 rpm - 1.2 Round, 1 Gear, working width 20cm, self-propelled with attachment Make - CAM Model - 100-11A	8432	01	65800	Each	65800	00	
3	Powder weeder Huskvarna-7F500 4HP, Diesel engine Displacement: 400 cc, 1500rpm working width 45-46 inch Make - Huskvarna Model- 7F500	8432	01	101357	Each	101357	00	
4	Water Lifting Pump 40P-30 BCL/IS1 4 HP diesel operated, 1000rpm, Air cooled engine, self priming Head 18m Make - India Marshall Model- 40P-30 BCL/IS1	8413	01	25179	Each	25179	00	
Total Amount Before Tax							271816	00
CGST 12%							32618	66
SGST 6%							16309	33
TOTAL AMOUNT							304428	32

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Subsidy forms were filled for each group and the details of the land record name of the group name of the village were filled and the form was verified by Gram Panchayat Vikash Adhikari at the block office. A supporting letter of the group was issued to the chief agriculture officer for providing a subsidy for the purchase of farm machinery under the central government-funded “Farm Machinery Bank Scheme”. Details of the bank account and passbook were presented to the chief agriculture officer in Tehri and Bhumi Sanrakshan Adhikari of Sult, Syeldey and Dwarahat block in Almora district. Photocopy of a minute of the meeting of the Self Help group was also presented as mentioned in guidelines.

Application fees were deposited in the chief agriculture officer’s office at Narendranagar in Tehri and to Bhumi Sanrakshan Adhikari of Sult, Syeldey and Dwarahat block in Almora district of all the self-help

groups, which is a mandatory step of identification of group by the agriculture department for considering the group to provide the subsidy.

Details of FPC self-help groups of 6 FPC’s which have submitted files to Bhumi Sanrakshan Adhikari get for farm machinery are as following: (**10 lakh each group**)

- Dwarahaat Almora (1 Group)
- Syeldey Almora (2 Groups)
- Sult Almora (2 groups)
- Didihaat Pithoragarh (3 Groups)
- Munakot Pithoragarh (3 Groups)
- Kanalichhina Pithoragarh (3 Groups)
- Lohaghat Champawat ( 6 groups)
- Tehri (7 new Groups)

In total we have completed file work for 27 farm machinery groups in four districts and farmer groups are expected to get farm machinery of about ` 2.7 caror till March 2021.

To fulfill the requirement of the scheme our team acquired attested details of land records

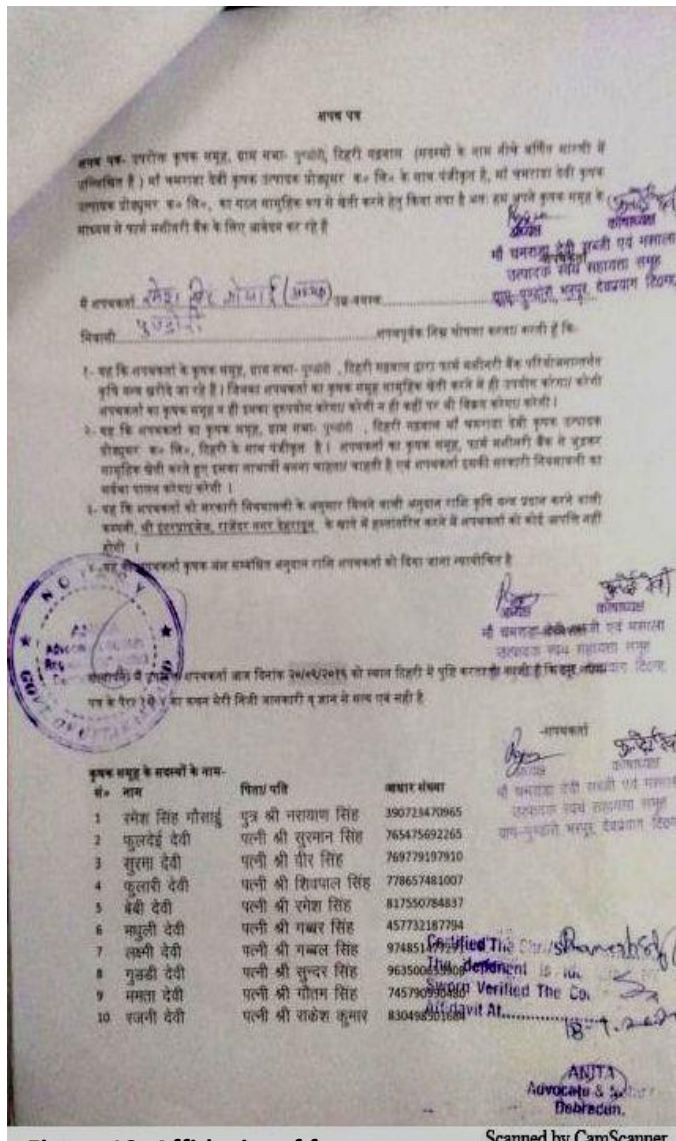


Figure 12. Affidavits of farmers



were attached with the file for proof as mentioned in the Subsidy form of the agriculture department.

For this, our team members have to visit *tehsil* offices in different blocks more than three times due to the present pandemic situation. Thereafter affidavits of each group were prepared on a non-judicial stamp paper affirming that the farmer group is part of a registered farmer producer limited company, and the machinery will be used for collective farming. It was mentioned that

the group will not sell out the farm machinery and will abide by all rules and regulations of government for the use of machinery which shall be provided to the farmer self-help group. Name and signatures of all group members were also mentioned in the affidavits. The delivery *challan* was issued by the service provider to the self-help group with details of machinery, it makes type quantity and prices including GST. The machinery was received by the farmer self-help group and was verified by the officer of the agriculture department in each block where the machinery was delivered.

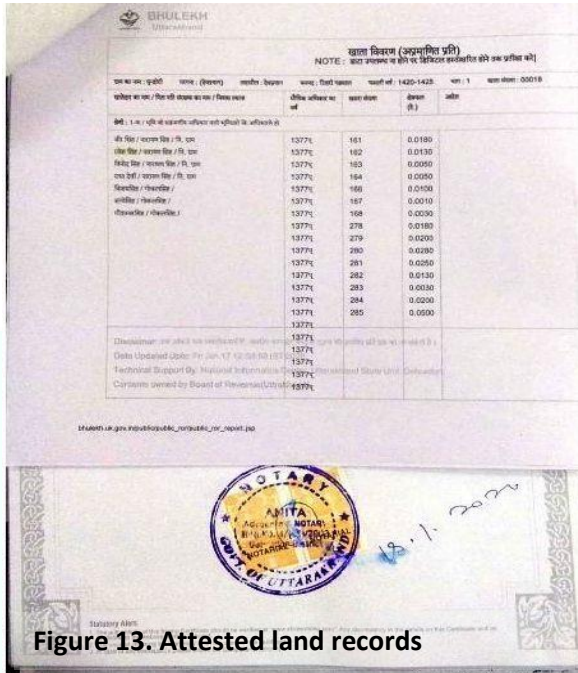
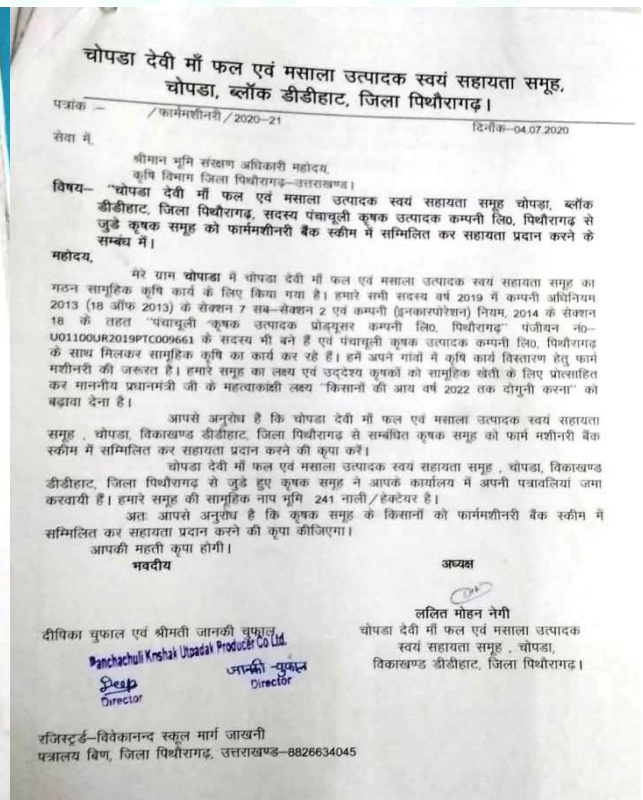
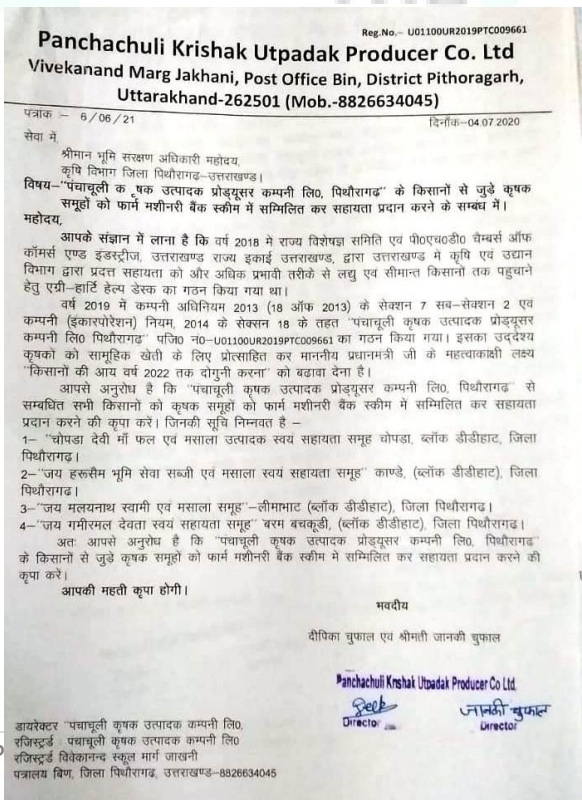


Figure 13. Attested land records



To continue the further work of FPC's and Self Help group to Bhumi Sanrakshan Adhikari for FMB scheme was working in the field since 2019 and we completed our file work in the un-lock one time period May and June 2020. Our teams visited all the villages where farmers have been linked with Farm Machinery Bank and then also visited the office of Bhumi Sanrakshan Adhikari of Sult, Syeldey and Dwarahat block in Almora, Didihaat, Munakot and in Pithoragarh, BSA office Champawat and BSA office at Narendranagar in Tehri-Garhwal district.

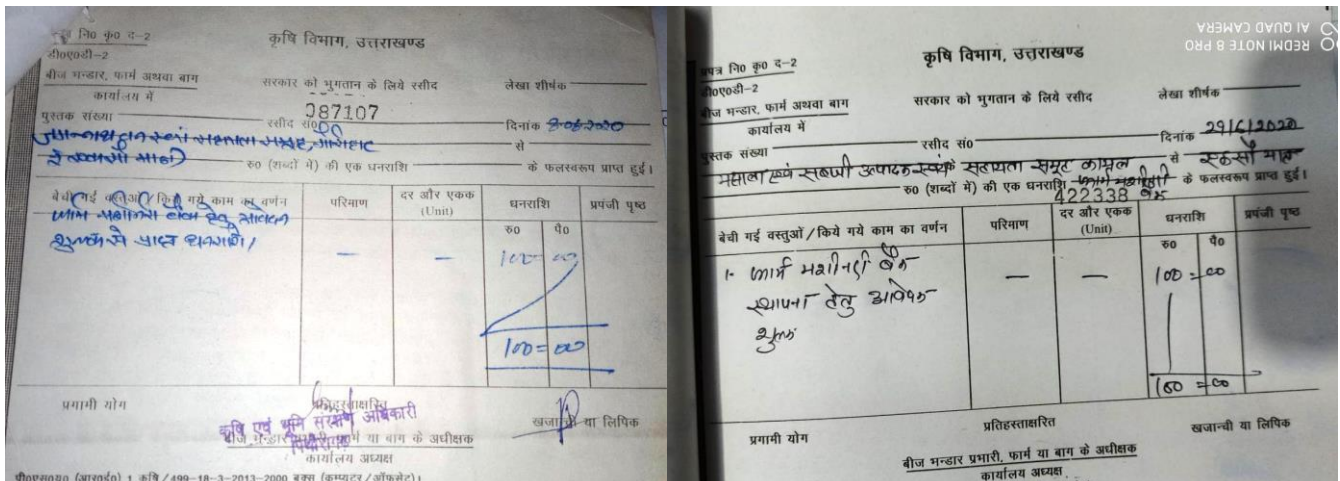


Figure 15. Fees accepted by BSA office for FMB scheme

After the entire process was completed a *challan* of ` 100 was issued to all the groups who have applied for farm machinery bank and the final delivery process may take a month or two.

### E. Meetings in villages to discuss the mode of operation of collective farming through FPC.

These meetings are very important as in Uttarakhand the idea of collective farming have not been implemented on the ground, and the members are for the first time discussing the issues which



need to be resolved before collective farming and, production and trade could be done. Issues related to shareholding, roles and responsibilities of each member, establishing a fruitful communication with the line department were the main issues in these meetings. Our Team conducted meetings with the farmers registered within our farmer producer companies in all four districts,

Figure 16. Meeting to discuss mode of operation of FPC



for formation of self-help groups in all those villages which have previously contacted us while the farmer producer companies were being registered.

The guidelines of the central government supported the “Farm Machinery Bank Scheme” required the establishment of registered self-help groups having the account in the bank. We conducted monthly meetings for four months in each village and mentioned the minute of the meeting in the register for the record. In the first month, the agenda of the meeting was the identification of farmlands for collective farming inside villages. Because the farmers have small and marginal landholdings entire month the format of exclusion of individual farmer's land for the creation of collective farmland was discussed, after finalization of land in the village next meetings were held. In the second meeting groups decides to open the account of self-help groups for fulfilling the guidelines mentioned in the “Farm Machinery Bank Scheme”. Details of each farmer their land record were collected to be submitted in the bank. President and Secretary of the group elected by the voting process.

## F. Buy Back Agreements:

We have also arranged a buy-back agreement for Oregano (*Origanum vulgare*) with Flex Foods Industries *lal-tappar* Dehradun. The prices of oregano have been finalized between ` 15-17 / Kg depending on the quality of the material. Around Rs. 1500 is expected from each nali of land in four months. The total expected income from the hectare is around ` 75,000. A registered agreement is being drafted by lawyers and this agreement will be signed by both parties and will be registered in the office of registrar New-Tehri, this procedure is currently under process.

## G. Feasibility study

One of the considerable factors after cultivation and harvest shall be the transportation of the product to the final destination. Reduced proximity shall save the time of transportation and cost of labor and maintain the quality of fresh produce. Hence analyzing the data (table 1), it was found that the available lands are almost adjacent to the road head and at a distance of between 0.1 to 0.3 Km which shall very purposeful in the cultivation of oregano.

## H. Mapping of available water resources:

The entire area chosen for vegetable and Oregano (*Origanum vulgare*) has availability of water resources through perennial rivulets and spring, and could be covered under irrigation with the use of water pumps and pipes. We also surveyed the seasonality of water resources and it was found that there is ample amount of water is available for irrigation round the year in three clusters in Tehri-Garhwal out of four clusters. . In most of the areas arrangements for water irrigation have been developed by proper

canal establishment, pipes for irrigation are already provided. In *Kot, Guryali, Soni, Gadeel, Kothi, Saundari, and Kandarigaon* canal has been made for irrigation. In some areas of *Kot* village arrangement shall have to be made for water e.g. there shall be a requirement of water pump during the irrigation. Rest in all villages water canal is developed.

## I. Documentation of Aspect of Agricultural Fields :

The aspect of the agriculture field was also noted down, this parameter was kept in view to ensure that cultivation land shall exist in such a region where maximum light hours are available. Due to topographical conditions shade, hours in crops could hamper their proper growth trees, which can be a negative impact on existing vegetation. It was observed that the entire selected area for cultivation is situated more towards on northern aspect of the hills, which shall be an added advantage, and this shall positively affect the productivity. As per a fact northern aspects due to less exposure to the sun, retain more moisture than southern aspects comparatively.

## J. Forest Proximity:

During the survey it was observed that all the agricultural fields are at a considerable distance especially from Pine forest however, on the higher reaches dominant pine forest is found., which can negatively impact productivity more specifically during leaf (Pine needle) fall season. Pine needles harm productivity. Mix vegetations (Bheemal, Fig tree) are also found but on the edges of the agricultural fields, which might have nominal impacts on productivity at present these trees are being used for fodder and fuelwood.

## K. Availability of manure:

There is an ample supply of animal waste in all village to use it for the maintain the productivity of agricultural fields. Farmers store animal dung in the close vicinity and use it as and when required, however, some villages farmers have installed vermin compost units adjacent to their cattle-shed. These units are being used regularly.

## L. Increment in District Budget of horticulture Mission for North East and Himalayan State Scheme in four districts.

As we were continuously in touch with honorable agriculture minister Uttarakhand, Agriculture secretary Uttarakhand, Mission Director Horticulture Uttarakhand, District Horticulture Officers we resubmitted documents of all 6540 farmers to unit offices which are known as *Sachal Dal Kendra* in April and May 2020 during the lockdown period. Our teams collected documents of farmers from each village and financed the entire process so that farmers could not be burdened for the printing

of documents, developing photocopies, travelling till *Sachal Dal Kendra* in different blocks where villages are situated. In total We submitted documents of 6540 farmers in 15 unit offices (*Sachal Dal Kendra*) and also communicated the same to Mission Director Office Dehradun. This process took 2 months as due to the lock-down we faced many challenges, to peruse the Mission Director Horticulture Uttarakhand, District Horticulture Officers to resubmit the Annual action plan which was already sent in February 2020, making provision of extra budget for the horticulture sector, in four district under the central Government scheme “Horticulture Mission for North East and Himalayan State” (HMNEH).

We also communicated with the office of the Union agriculture minister and Prime Minister’s Office and had a conversation with secretaries responsible for the HMNEH project, with the intervention of sectarian of Union Agriculture Minister and office of Mission Director Horticulture Uttarakhand, we asked to resubmit the annual action plan according to our needs in all four District

Horticulture Mission for North-East Himalayan States, Uttarakhand Proposed Annual Action Plan 2020-21 (Rs. In Lakh)																		
Maa Chamrada Devi FPC Tehri-Garhwal Uttarakhand																		
S.No.	Name of Cluster	Components	Unit/Hact.	Rate of Assistance	Proposed AAP 2020-21													
					General			SC			ST			Total				
					Physical target	Financial Outlay			Physical target	Financial Outlay			Physical target	Financial Outlay				
						Gol Share %	State Share %	Total %		Gol Share	State Share	Total		Gol Share	State Share	Total		Gol Share
B2.		Establishment of new gardens (area expansion)																
i.		Fruit Crops (for a max. Area of 4 hact./ beneficiary 1st year)																
b.	Hindolakhil Bhilangana, Narendernagar, Chamba	Kiwi-integrated package with drip irrigation and trills	Ha.	1.2	1	1.080	0.120	1.2	1	1.08	0.12	1.2			2	2.16	0.24	2.40
d.	Hindolakhil Bhilangana, Narendernagar, Chamba	Papaya-(75:25) without integration	Ha.	0.225	1	0.203	0.023	0.225	1	0.2025	0.0225	0.225			2	0.405	0.045	0.45
		Total																2.85
(i)	Hindolakhil Bhilangana, Narendernagar, Chamba	High Density Planting fruits (60:20:20) with integration																
a		Guava	Ha.	0.300	5	1.350	0.150	1.5	1	0.27	0.03	0.3			6	1.620	0.180	1.80
b		Pomgranate	Ha.	0.300	6	1.620	0.180	1.8	2	0.54	0.06	0.6			8	2.16	0.24	2.40

Horticulture Offices. Our Team developed these annual action plans following all norms of HMNEH scheme and made it obligatory to DHO office to accept the proposal by presenting documents, land records, Aadhar and consent letters of *Gram Sabha* for collective farming.

														0	0	4.20			
(ii)		Total Normal spacing (60:20:20)wit hout integration																	
a.		Mango	Ha.	1.200	4	4.320	0.480	4.8	1	1.08	0.12	1.2				5	5.400	0.600	6.00
d.		Citrus	Ha.	1.200	4	4.320	0.480	4.8	1	1.08	0.12	1.2				5	5.400	0.600	6.00
e.		Walnut	Ha.	1.200	4	4.320	0.480	4.8	1	1.08	0.12	1.2				5	5.400	0.600	6.00
g.		Peach	Ha.	1.200	4	4.320	0.480	4.8	1	1.08	0.12	1.2				5	5.400	0.600	6.00
h.		Pomaganarate	Ha.	1.200	1	1.08	0.12	1.2	1	1.08	0.12	1.2				2	2.16	0.24	2.40
i.		Apricot (Khumani)	Ha.	1.200	4	4.32	0.48	4.8	1	1.08	0.12	1.2				5	5.4	0.6	6.00
j.		Strawaberry	ha.	1.200	4	4.32	0.48	4.8	1	1.08	0.12	1.2				5	5.4	0.6	6.00
k.		Orange	ha.	1.200	4	4.32	0.48	4.8	1	1.08	0.12	1.2				5	5.4	0.6	6.00
		Total																	40.80
(iv)		Vegetables ( for a max. Area of 2 hact. / benefi.)																	
a.		Tomato	Ha.	0.250	3	0.675	0.075	0.75	1	0.225	0.025	0.25				4	0.9	0.1	1.00
b.		Cabbage	Ha.	0.250	5	1.125	0.125	1.25	1	0.225	0.025	0.25				6	1.35	0.15	1.50
i.		Cauliflower	Ha.	0.250	5	1.125	0.125	1.25	1	0.225	0.025	0.25				6	1.35	0.15	1.50
j.		Capsicum	Ha.	0.250	5	1.125	0.125	1.25	1	0.225	0.025	0.25				6	1.35	0.15	1.50
l.		Cucumber	Ha.	0.250	5	1.125	0.125	1.25	1	0.225	0.025	0.25				6	1.35	0.15	1.50
m.		Brocclii	Ha.	0.250	6	1.35	0.15	1.5	2	0.45	0.05	0.5				8	1.8	0.2	2.00
		Total																	9.00

This exercise was done in all four districts and finally, the DHO Offices accepted the revised Annual Action Plan approved by the District Magistrate office to be sent to the Mission Director Horticulture Uttarakhand office. The Mission Director Horticulture office then submitted the revised district plan with the state horticulture plan 2020-21, with the revised budget to the Ministry of farmers welfare for final approval. In total, an additional budget of ` 3.78 caror was increased according to the Annual Action plan developed for farmer's four districts.

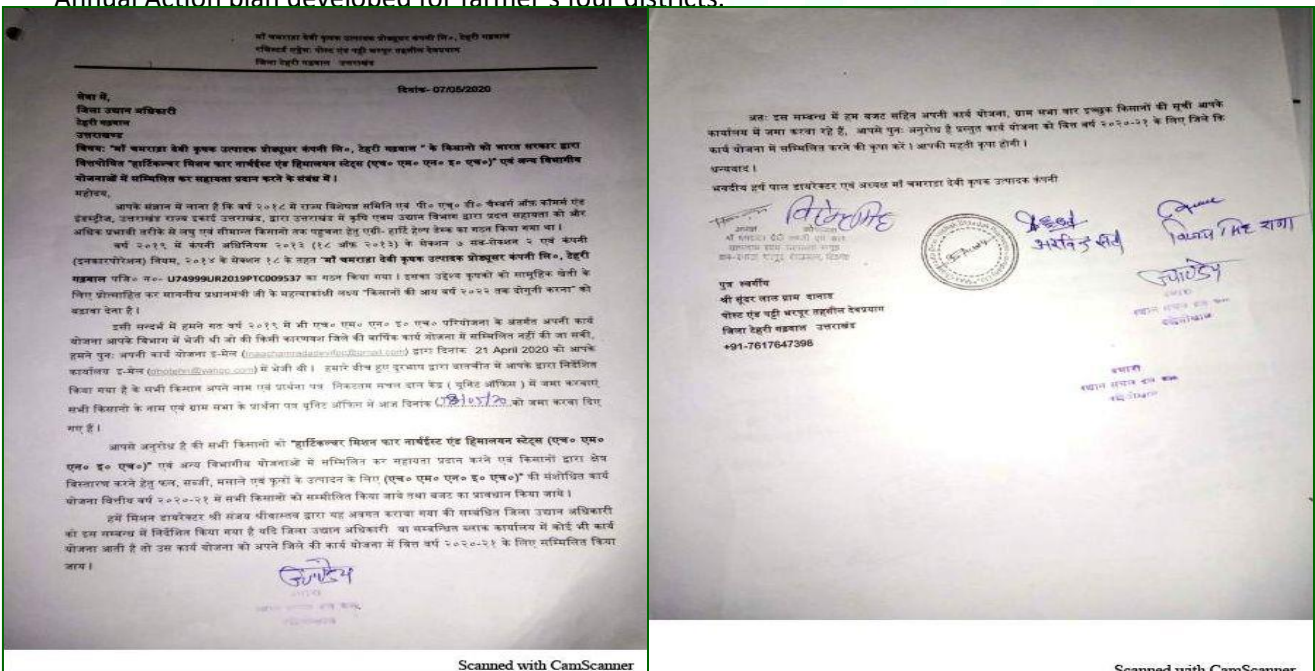


Figure 17. Letter to DHO by FPC and village members to provide budgetary support in HMNEH scheme



**कार्यालय – जिला उद्यान अधिकारी, चम्पावत।**

पत्रांक.....84...../HMNEH/एकी0बा0मि0/2020-21 दिनांक 13 मई /2020

सेवा में,  
निदेशक,  
बागवानी मिशन उत्तराखण्ड,  
राजकीय उद्यान सर्किट हाउस – देहरादून।

विषय :- एकीकृत बागवानी मिशन के अन्तर्गत बागवानी मिशन कार्य 2020-21 की कार्ययोजना का पुनः प्रेषण।

महोदय,  
उपरोक्त विषयक के संदर्भ में श्री ललित मोहन कुँवर, डायरेक्टर, मॉ कडाई कृषक उत्पादक कम्पनी लोहाघाट द्वारा एकीकृत बागवानी मिशन के अन्तर्गत कार्ययोजना इस कार्यालय को प्रस्तुत किया गया है तथा अग्रिम कार्यवाही हेतु लिखा गया है के संदर्भ में निदेशक बागवानी मिशन उत्तराखण्ड देहरादून के कार्यालय पत्रांक 92/HMNEH/का0यो0/2019-20/दिनांक 24 अप्रैल 2019 के परिपालन में प्रस्ताव को विभागीय की कार्ययोजना में जोड़ते हुए वर्ष 2020-21 की कार्ययोजना पुनः संलग्न कर सेवा में प्रेषित की जा रही है।

संलग्न – कार्ययोजना 2020-21

भवदीय  
जिला उद्यान अधिकारी,  
चम्पावत।

पत्रांक.....84...../उक्तदिनांकित।

प्रतिलिपि :- श्री ललित मोहन कुँवर, डायरेक्टर, मॉ कडाई कृषक उत्पादक कम्पनी लोहाघाट को उनके उक्त संदर्भित पत्र के क्रम में सूचनाई प्रेषित।

जिला उद्यान अधिकारी,  
चम्पावत।

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कार्यालय-मुख्य उद्यान अधिकारी, पिथौरागढ़।  
दूरभाष-05964-228279  
ई-मेल-[chopithoragarh@gmail.com](mailto:chopithoragarh@gmail.com)

पत्रांक 207 /HMNEH-कार्ययोजना/2020-21 दिनांक 20 / मई / 2020

सेवा में,  
पंचाधुनी कृषक उत्पादक कम्पनी लिमिटेड,  
शिवोकावन्द स्थित मार्ग आबानी,  
पो-विष्णु,जिला-पिथौरागढ़।

विषय-पंचाधुनी कृषक उत्पादक प्रोड्यूसर कंपनी लिमिटेड पिथौरागढ़ को किसानों को भारत सरकार द्वारा वित्तपोषित एक्सएमएनएच ईएफए/अन्य विभागीय योजनाओं में सम्मिलित कर सहायता प्रदान करने के सम्बन्ध में।

उपरोक्त विषयक आपके कार्यालय दिनांक 07 मई 2020 के परिपालन में इस अधिकारण को प्राप्त आपके आवेदन पत्र एक्सएमएनएचईएफए योजना के अन्तर्गत वर्ष 2020-21 की कार्ययोजना में सम्मिलित कर निदेशक, बागवानी मिशन, राजकीय उद्यान, सर्किट हाउस, देहरादून को विन्यस्तित विवरणानुसार स्वीकृत हेतु प्रेषित की जा चुकी है। कार्ययोजना स्वीकृति के पश्चात् योजनाओं का संचालन विभागीय मानकानुसार किया जायेगा।

1-फल क्षेत्रफल विस्तार-44.00 हे।।  
2-सब्जी क्षेत्रफल विस्तार-61.00 हे।।  
3-पुष्प क्षेत्रफल विस्तार-10.00 हे।।  
4-मसाला क्षेत्रफल विस्तार-28.00 हे।।  
अतः सूचना सूचनाई प्रेषित।

भवदीय  
मुख्य उद्यान अधिकारी,  
पिथौरागढ़।

पत्रांक...../उक्तदिनांकित।

प्रतिलिपि -निम्नलिखित को सूचनाई एवं आवश्यक कार्यवाही हेतु प्रेषित।  
1-संयुक्त निदेशक, उद्यान एवं खाद्य प्रसंस्करण,कुमायूँ, देहरादून, बागवानी नैनीताल को सूचनाई प्रेषित।  
2-निदेशक, बागवानी मिशन, राजकीय उद्यान, सर्किट हाउस, देहरादून को इस निवेदन के साथ कि पंचाधुनी कृषक उत्पादक प्रोड्यूसर कंपनी लिमिटेड को द्वारा इस कार्यालय को प्रेषित योजनाएँ एक्सएमएनएचईएफए की कार्ययोजना वर्ष 2020-21 में सम्मिलित कर स्वीकृति हेतु महोदय की सेवा में प्रेषित की गई है।  
3-निदेशक, उद्यान एवं खाद्य प्रसंस्करण, उत्तराखण्ड, उद्यान भवन, चौबटिया, रानीखेत।

मुख्य उद्यान अधिकारी,  
पिथौरागढ़।

Figure 18. Increased budget on request of farmers and FPCs District Champawat and Pithoragarh

कार्यालय मुख्य उद्यान अधिकारी,  
अल्मोडा  
/HMNEH कार्य योजना/2020-21 दिनांक 01 जून 2020

पत्रांक 307 /सेवा में,  
निदेशक,  
बागवानी मिशन  
राजकीय उद्यान सर्किट हाउस, देहरादून

विषय:- वर्ष 2020-21 HMNEH की संशोधित कार्य योजना प्रेषण के सम्बन्ध में।

महोदय,  
उपरोक्त विषयक वर्ष 2020-21 की HMNEH योजनाअन्तर्गत जिला स्टेटियम कमेटी द्वारा अनुमोदित रू 34042300.00 जो इस कार्यालय के पत्रांक 2662/दिनांक 17 फरवरी 2020 को प्रेषित की गयी थी, परन्तु निम्न कृषक समूह द्वारा अतिरिक्त कार्य योजना प्रेषित की गयी जिसे विभागीय कार्य योजना में सम्मिलित करते संशोधित कार्य योजना संलग्न कर सेवा में प्रेषित की जा रही है।

क्र0स0	उत्पादक संघ का नाम
1	Gered golu Deveta Krishak Utpadak Co.Ltd Dwarahat District Almora
2	Bhairaw Baba Krishak Utpadak Co.Ltd Sylde District Almora
3	Sult Kridhak Utpadak Producer Co.Ltd Sult District Almora

संलग्न- उपरोक्तानुसार

भवदीय,  
मुख्य उद्यान अधिकारी,  
अल्मोडा

पत्रांक.....351...../उक्त दिनांकित,  
प्रतिलिपि:- संयुक्त निदेशक, उद्यान एवं खाद्य प्रसंस्करण, कुमायूँ मण्डल नैनीताल को सेवा सूचनाई प्रेषित।

मुख्य उद्यान अधिकारी,  
अल्मोडा

कार्यालय जिला उद्यान अधिकारी, टिहरी गढ़वाल।  
फोन एवं फैक्स 01376-232156, ई-मेल [dhotehrn@yahoo.com](mailto:dhotehrn@yahoo.com)

पत्रांक 302 /HMNEH/2020-21/दिनांक मई 23 2020

सेवा में,  
निदेशक,  
बागवानी मिशन  
राजकीय उद्यान सर्किट हाउस  
देहरादून।

विषय:- मॉ चमराडा देवी कृषक उत्पादक प्रोड्यूसर कम्पनी जिला टिहरी के कृषकों की एक्सएमएनईएफए परियोजना का प्रेषण विषयक।

महोदय,  
उपरोक्त विषयक आपके पत्र संख्या 92/HMNEH/का0यो0/2019-20/दिनांक, 24.04.2019 का सन्दर्भ ग्रहण करने की कृपा कीजियेगा।  
उपरोक्त सन्दर्भित पत्र के द्वारा प्रस्तुत औद्योगिक कार्यो के सम्पादन हेतु कार्य योजना प्रस्तुत करने के निर्यस इस कार्यालय को दिये गये है। उपरोक्त विषय के संदर्भ में अग्रिम कार्यवाही करते हुए निदेशक बागवानी मिशन उत्तराखण्ड देहरादून के कार्यालय पत्रांक 92/HMNEH/का0यो0/2019-20/ दिनांक 24.04.2019 के परिपालन में कृषकों द्वारा दिये गये प्रस्ताव को विभागीय कार्ययोजना में जोड़ते हुए वर्ष 2020-21 की संशोधित कार्ययोजना पुनः संलग्न कर प्रेषित की जा रही है। कार्य योजना स्वीकृति के पश्चात् योजना का संचालन विभागीय मानक के अनुसार किया जायेगा।  
अतः आपसे निवेदन है कि HMNEH योजना वर्ष 2020-21 की कार्ययोजना में उक्त प्रस्ताव को सम्मिलित करने की कृपा कीजियेगा।  
संशोधित कार्ययोजना में फल क्षेत्रफल विस्तार – 55 हेक्टेयर  
संशोधित कार्ययोजना में सब्जी क्षेत्रफल विस्तार – 48 हेक्टेयर  
संशोधित कार्ययोजना में पुष्प क्षेत्रफल विस्तार – 12 हेक्टेयर  
संशोधित कार्ययोजना में मसाला क्षेत्रफल विस्तार –15 हेक्टेयर

संलग्न-उक्तानुसार।

भवदीय  
जिला उद्यान अधिकारी,  
टिहरी गढ़वाल।

पत्रांक...../उपरोक्त दिनांकित।  
प्रतिलिपि:- श्री हर्षपाल निदेशक एवं अध्यक्ष मॉ चमराडा देवी कृषक उत्पादक प्रोड्यूसर कम्पनी लि0 ग्राम-दानाड पट्टी-मरपुर जनपद टिहरी गढ़वाल को सूचनाई प्रेषित।

जिला उद्यान अधिकारी,  
टिहरी गढ़वाल

Figure 19. Increased budget on request of farmers and FPCs District Almora and Tehri-Garhwal



to pandemic-related issues, there was a delay in plantation activity in July and August. DHO offices have conveyed to us that the budget will be utilized in the winter plantation of fruit plants. Additionally, we will be received vegetable seeds till the third or fourth week of October in Almora, Pithoragarh, Champawat and Tehri-Garhwal.

During the entire process, our field team visited *Sachal Dal Kendra*, in respective blocks more than three times on average. Our team was also involved in liaising between progressive farmers and DHO offices in all the districts so that DHO's could validate the data submitted by our team in *Sachal Dal Kendra*, of the horticulture department. All four DHO's validated the authenticity of the entire process, before increasing the budget for the district in the HMNEH scheme.

We have been asked by all four DHO's to utilize the budgets that have been increased under the recommendation of 6 farmer producer companies. Our team has developed orchards in district Pithoragarh and Almora and the cultivation process of Oregano (*Origanum vulgare*) have been initiated in District Tehri-Garhwal.

## M. Mapping of Agriculture fields: Under this project, we had been

working with farmers for the last one and a half years, we started geo-tagging and mapping of every agriculture land of an individual farmer so that we could develop a site-specific management plan. For this,

गांवका नाम	किसानकानामपरविवरण		उपजाऊखेतीकीसंख्या	घासवानेखेतीकीसंख्या	खेतीकीलम्बाईऔरचौड़ाई(मीटर)		खसलनंबर	देशांतरपरवअक्षांश	
	महिला	पुरुष			लम्बाई (मीटर) (Bमी)	चौड़ाई(मीटर)		देशांतर	अक्षांश
रामपुर	महिला	पुरुष	✓	X	खेतसंख्या: 60	1. 10मी 2. 12मी 3. 10मी		30°-12'-60"	78°-24'
11	महिला	पुरुष	✓	X	खेतसंख्या: 4 लंबा - 55मी	1. 8मी 2. 10मी 3. 2मी			
11	महिला	पुरुष	✓	X	खेतसंख्या: 62 लंबा - 65मी	1. 10मी 2. 10मी 3. 10मी			
11	महिला	पुरुष	✓	X	खेतसंख्या: 63 लंबा - 28मी	1. 10मी 2. 10मी 3. 10मी			
11	महिला	पुरुष	✓	X	खेतसंख्या: 64 लंबा - 30मी	1. 10मी 2. 10मी 3. 10मी		30°-12'-59"	78°-24'
11	महिला	पुरुष	✓	X	खेतसंख्या: 66	1. 10मी 2. 10मी 3. 10मी			

Figure 20. Data format used for collection of geo-location and other details of cultivation land.

we have formed a team of our staff in Tehri-Garhwal and Pithoragarh after the field joint field visit by The HANS Foundation and Doon University team in the month of

February 2020. We trained our staff to organize village level meeting to develop a field team in each village for mapping (GPS location, altitude, aspect), measurement of each agriculture field (length and width) in each village which this data will be used for the management of collective farming in all ninety-five (95) villages. This data is essential for developing the management and information (MIS) system and app-based database and maintaining an interactive website as discussed in the concept note submitted to The HANS Foundation. The login and password of this database could be checked on a real-time basis by The HANS Foundation, Doon University and Government departments involved. This database will also be utilized to develop a management plan of each crop of MAP, NTFP, vegetable,

spices and flowers. This data is also essential for developing the irrigation plan for crops as the production is highly dependent on irrigation facilities.

At present, a two-member team in each district has been recruited by the Doon University for the training of a farmer's field team in each village. Details of the village, farmer, length, and width of each agriculture farm its GPS location, and khsara no. are being recorded for the MIS system as discussed in the meetings. A format was developed for recording of agriculture field and no objection certificate



Figure 21. Measuring of farm land.

was also obtained from the community so that an inclusive approach could be developed for further actions in the proposed project.

Our team has completed work in 32 villages in Tehri-Garhwal, Pithoragarh, and Almora as this exercise. As there will be thousands of individual agriculture fields this exercise will take months before completion due to the large no. of villages and agricultural fields involved in the program. This data will also help us to develop codes for each

agriculture field so that the production cycle could be controlled according to the demand of buyers as mentioned in the concept note. Need assessment study would also require this data so that a harvesting plan could be maintained and proper management of produce could be done at the time of harvest in all ninety-five villages. In addition to this land, preparation is also being done in many villages using farm machinery for proper implementation of the plan of action designed by the partner organization for completing goals on time. We



Figure 22. training of women farmers on farm machinery

have ensured that women farmers are also trained well in handling the farm equipment, a majority of members are women farmers in our FPC. Training is also been provided in changing filters, use of Mobil oil, and changing blades of power tiller according to need.



## N.Orchard Development:

Due to the mass migration of the village population in search of livelihood to near-by town and cities large agriculture areas that were previously under cultivation have turned into wastelands dominated by wild shrub species. To develop these wasteland areas into productive lands where multi-cropping could be done farmers were motivated to clear the wild shrubs and remove grasses. The approach of collective farming and the collective benefit was explained to the stakeholders. Farmers were facilitated



**Figure 23. Clearing wild shrubs for orchard of Guava in village *Khetar Kanyal* in Pithoragarh**

by provided with the necessary equipment, transport facilities for transport of seedlings from the unit office to villages and then till plantation areas. We followed all the standards for preparation of plant pit, the arrangement of manure, spacing within each plant etc. A two feet deep and two feet circumference



plant pit was prepared; manure for each pit was also carried in head-loads by farmers at the site of the plantation of orchards.



**Figure 24. Seedlings of Amla at Unit office Bikiyasen Almora**

The entire exercise took about six days in the villages after this chosen team member went to the nearest unit offices for the collection of planting material, shared taxis were hired for this purpose. Special care was taken while handover of planting material so that only healthy plants could be received. Care was also taken that the seedling was planted within the time frame of 48 hours so that

the survival of plants could also be ensured. In villages, *Koli Kanyal* block *Didihaat* district Pithoraghar our teams also involved the school children during Independence Day celebrations figure 15. In some village *Nagchula Khal* in *Sult* block, Almora Plantation was done in the *Van-Panchayat* area as the



**Figure 25. Plantation of pomegranate in agriculture fields in Koli Kanyal block Didihaat district Pithoraghar.**

agriculture fields were not available for plantation of orchards. In the coming month winter time orchards will also be developed in all four districts. In total orchard have been developed in nine hectare in July and August, in nine villages of Pithoraghar, Almora and Tehri-Garhwal.





Figure 26. Plantation activity in Pithoragarh and Almora

## O.Meetings for orientation of newly formed producers Ggroups for institutional strengthening



Village levels orientation training have been arranged in 14 villages in district Tehri-Garhwal. The main focus was to provide training on handling different formats, enhancing



**Figure 27. Motivation for orchard development and plantation activity in Almora and Pithoragarh**





**Figure 28. nursery development and fodder plantation in Almora**

communication skills, data entry and communication with members of farmer Producer Companies in different villages. We provided literature on standard operating procedures on collective farming, documentation, handling mass-scale production, through the structured meeting. Besides, farmers also briefed on the collective farming approach in a uniform pattern, marketing management (like demand, supply chain) and the systemic process of organizing monthly meetings of PGs. The major intent of these orientations was to sensitized newly formed producer groups on streamlined group-based activity e.g. Selection of farmers & site selection for community farming production planning for upcoming activities, collective decision process, supply chain and marketing related operations. During the PGs meeting, the main thrust was given majorly on basic planning capacity to formulate strategies to scale-up quality production & strengthening the pro-poor market-led supply chain.

## 5.2 Main Challenges to Implementation

The main challenge to the implementation process was beurocracy and non-supportive attitude of staff in government departments. Our team faced challenges to get the budget approved, to receive the help for farmers according to the budgetary provisions in Annual Action Plan 2020-21. We faced challenges in receiving documents related to schemes of the government and in the agriculture and horticulture

department. We also faced challenges to convince the line departments about our work and the outcome of the project. In nutshell the following challenges were faced by our team:

- Non-transparent system of implementation of government schemes.
- No communication regarding the increased budget in HMNEH schemes with respective FPCs.
- Lack of Funds for the training of farmers.
- Remote geographical locations.
- Non-supportive and non-transparent way of working in government offices at a lower level.

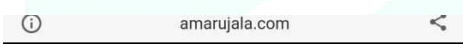
### 5.3 Monitoring and Evaluation Update

We experienced that monitoring in remote villages of identified agriculture areas is not an easy task and all the field staff and volunteers need to be utilized for proper monitoring and data collection in all four districts. Due to some technical delays in signing the MoU process we faced financial challenges in this quarter. We hope that in the third quarter we will be able

to develop the MIS system and this will help us to monitor the entire process physically as well as virtually.

### 5.4 Stakeholder's Participation and Cooperation

The main stakeholders are the farmers in this project and our experience with the main stakeholder's farmers have been encouraging as despite the crunch of funds over since last one year farmers are supporting our program. During the months April- October about 1/4<sup>th</sup> of the expenses were done by our progressive farmers to implement the program on the ground. We believe the financial support from The HANS Foundation will be helpful to achieve the targets on time.



नैनीताल हाईकोर्ट ने दून विश्वविद्यालय के कुलसचिव की नियुक्ति को चुनौती देने वाली जनहित याचिका पर सुनवाई के बाद कुलसचिव की नियुक्ति को अवैध बताते हुए उनके समस्त वित्तीय अधिकार सीज कर उन्हें पद से हटाने के आदेश दिए हैं।

कार्यवाहक मुख्य न्यायाधीश रवि कुमार मलिमथ एवं न्यायमूर्ति एनएस धानिक की खंडपीठ के समक्ष मामले की सुनवाई हुई। मामले के अनुसार देहरादून निवासी शांति प्रसाद भट्ट ने हाईकोर्ट में जनहित याचिका दायर कर कहा था कि दून विश्वविद्यालय के कुलसचिव की नियुक्ति नियमावली को ताक पर रखकर की गई है। याचिका में कहा कि यूजीसी की नियमावली के अनुसार कुलसचिव पद के पात्र व्यक्ति के लेक्चरर या प्रोफेसर होने की योग्यता रखी गई है।

याचिकाकर्ता का कहना था कि दून विश्वविद्यालय के वर्तमान पदासीन कुलसचिव के पास ऐसी कोई भी योग्यता नहीं है और वह उस पद के लिए अर्हता पूरी नहीं करते हैं। याचिकाकर्ता की ओर से उनकी नियुक्ति विधि विरुद्ध बताते हुए कुलसचिव को पद से हटाने के लिए विश्वविद्यालय प्रबंधन को आदेश देने की प्रार्थना की गई थी। पक्षों की सुनवाई के बाद हाईकोर्ट की खंडपीठ ने कुलसचिव की नियुक्ति को





## 5.5 Management and Administrative Issues



Due to the removal of registrar Doon University by the high court of Uttarakhand, we faced an internal technical issue. This resulted in the late signing of MoU with The HANS Foundation. The pandemic also caused problems as the Doon university campus was closed more than three-time because of COVID-19 cases. The delay in the project due to administrative issues put a financial burden on the program manager, senior district coordinators and project coordinator. We have spent from our saving accounts for implementation of project activates on time in all four districts. The travel expenses of the

**Figure 29. Administrative delays**

field team were managed by our team

at Doon University, hopefully, this issue will not become a serious problem in the third quarter as we are expecting advance from The HANS Foundation as the MoU has been signed and uploaded on the portal of THF.

## 5.6 Lessons Learned:

**कृषिकरण से सम्बंधित सूचना**

- कलक्टर का नाम एन.म. चौधरी डी.एम.ओ. कलकत्ता
- मास्टर कृषक का पता: नाम कामल कुमार डी.एम.ओ.आवास/आवास, इन्द्रम चौक (Baridwa)  
विकासखण्ड कलकत्ता जनपद बलरामपुर
- मास्टर कृषक का मोबाईल नं० 991541416 ई-मेल kamal.kumar@991541416
- संगन्ध फसलों की खेती करने वाले कृषकों की संख्या 50
- संगन्ध फसलों की खेती हेतु उपलब्ध कुल क्षेत्रफल (है) 4 (160 नाली)
- आवेदित भूमि की वर्तमान स्थिति खेती में उपयोग्य है
- पूर्व में ली जाने वाली मुख्य फसलें सोया, जल, धान
- आवेदित भूमि के आसपास उपलब्ध वनस्पति/पेड़-पौधों के स्थानीय अथवा प्रचलित नाम सोया, जल, धान
- आवेदित भूमि की समुद्रतल से ऊँचाई (मीटर में) 1200 वाटरशेड
- सिंचाई की सुविधा/वर्क का गिरना (हाँ/नहीं), यदि हाँ तो माहों का नाम साली, काठम, गीह
- आवेदित भूमि तक आवागमन के साधन सड़क मोटर मार्ग से दूरी (किमी) 50 गैटर
- अन्य विवरण \_\_\_\_\_

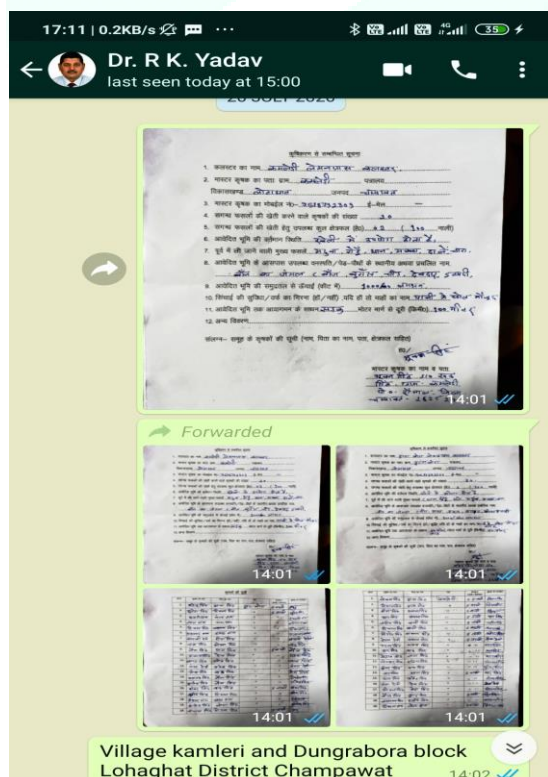
संलग्न- समूह के कृषकों की सूची (नाम, पिता का नाम, पता, क्षेत्रफल सहित)

हो/कामल  
मास्टर कृषक का नाम व पता.  
कामल कुमार पुत्र  
डी.एम.ओ. आवास

**कृषकों की सूची**

क्र.सं.	कृषक का नाम	पिता का नाम	पता	क्षेत्रफल (वर्ग मीटर)	कृषक की संख्या
1.	कामल कुमार	एन.म. चौधरी	इन्द्रम चौक	50 मीटर	50
2.	मुनिषा मठपाल	सुनील कुमार	...	...	...
3.	सुनील मठपाल	सुनील कुमार	...	...	...
4.	प्रकाश मठपाल	सुनील कुमार	...	...	...
5.	सुनील मठपाल	सुनील कुमार	...	...	...
6.	विजय कुमार	सुनील कुमार	...	...	...
7.	विजय मठपाल	सुनील कुमार	...	...	...
8.	उमेश मठपाल	सुनील कुमार	...	...	...
9.	विजय मठपाल	सुनील कुमार	...	...	...
10.	विजय मठपाल	सुनील कुमार	...	...	...
11.	सुनील मठपाल	सुनील कुमार	...	...	...
12.	सुनील मठपाल	सुनील कुमार	...	...	...
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Figure 31. Documents of farmers submitted to Center for Aromatic Plants for lemongrass cultivation



We observed that continuous communication with line departments such as *Sachal Dal Kendra*, *Bhumi Sanrakshan*, *Adhikari*, Chief Development Officer, Minor Irrigation Office, district Horticulture Office is key to success as the planting materials, machinery are procured

Figure 32. Communication with scientist at Center for Aromatic Plants for lemongrass cultivation

and distributed on-demand. The head of the departments does not inform about budget allocations to



farmers hence our team must be in continuous touch with all line departments. Any delay in communication from our side is not entertained hence our team needs to travel a lot in all districts to be a bridge between members of FPC and the Government department. We also tried to link eight villages (2 in each district)

**Figure 33. DHO Pithoragarh denied to have a formal meeting for implementation of increased budget, with the farmer representatives and having a casual conversation at his office premises**

with the Center for Aromatic Plants, a state government agency authorized for promoting aromatic plant cultivation; about 80 farmers were linked with the department for the first time for lemongrass cultivation, but the department denied our request despite sending all details in the prescribed format because the time of plantation was the month of July. The department also asked us to develop an MoU with Doon so that Doon University may provide details to CAP on the following issues:

- Identification of cluster and farmer
- Training of farmer
- Documentation of farm area (time to time)
- Linking progressive farmer/ group leader with CAP, selaqui.
- Arrangement of buy Back agreement.

Despite sending the details our farmers did not receive support from CAP in the July cultivation season. We will again try to link farmers in the third quarter for chamomile production with CAP, hopefully, we will get funds by then. The key to success is to follow the time line of government schemes so that timely implementation of the scheme could benefit the farmers, which is the main aim of this project.

We also tried to arrange meetings of farmer representatives with DHO in Pithoragarh but the DHO did not entertain the farmer representatives as shown in Figure no. . Though this project we have to put forward the demands of farmers to respective Government department so that the targets set could be achieved timely.

## 5.7 Looking Ahead to Next Quarter

We are looking forward to arranging, orientation training, nursery establishment, mass-scale cultivation, documentation training, GACP training, cultivation of vegetables and spices, medicinal and aromatic plants in more than 150 hectares in the next quarter. We are also looking forward to the distribution of farm machinery to some of the new farmer's groups in the next quarter.

