Project Progress Report (Year-3)
(As on September 2020)

Project title:
Mitigating drought through sustainable agriculture in Bundelkhand (U.P)

Implementing organization:
Gramin Vikas Vigyan Samiti (GRAVIS)

Project Area:
Banda/Mahoba District in Bundelkhand (U.P)

Funding Agency:
People Progress in India (PPI) USA

1. Nutrition, food and fodder security

1.1 Establishment of Nutrition Gardens (NG)

During this reporting period of time the nutrition gardening establishment work are carrying by the community with the help of VDC in three villages. GRAVIS team oriented to the beneficiaries about put the tree and flower plants all over facing area where by shadow and good looking your unit. So people follow the suggested ideas, they are growing so many different type of vegetables in their gardening nearby home. Now they are getting good amount of green vegetable with in the near of their home. During occasions they serve fresh green vegetable to their guests, relatives and using the same in their home also. Now they are saving the money due to availability of the different vegetables like, Bottle gourd, Ridge Gourd (Luffa or Lufah), Bhindi (lady finger), Tomato, brinjal, Bitter gourd, cabbage, Cow pea, pumpkin, palak, spinach, fenugreek, radish, mogri, cluster bean, cucumber, watermelon, etc.

The impact of this type of NG out of 10 project units, established by 60 more family's people by themselves in the project villages; it means the community now fully aware the result of the nutrition value of the vegetable in their families. The vegetable seed old families, who grown the previous year such vegetables they keep good quality of vegetable seed with them and this year distributed to other 60 poor families to grow such vegetable at nearby home for nutrition security in their family. The extra surplus vegetables are selling in the market as well within the village. So, the NGs family's incomes are enhancing from these nutrition gardens.

They are giving thanks to MDSA project and PPI who support and trained them about vegetables small scale farming.

1.2 Establishment of Agri-Horticulture units

Under this project total 10 AHUs had established by GRAVIS team with the support of VDCs. The team of experts provide on farm trainings (which based on farmers field school) to the Agri-Horti farmers beneficiaries for digging of pit which is 2 ft. width and 3 ft. deep for plantations and their maintenance. The drip irrigation system introduce these horticulture units to reduce the water consumption and good growth of the plants due to direct intake of the, Bessel dose of nutrients, moisture by roots, because this area is under drought porn zone.

These all 10 AHUs are providing good amount of fruits and families are using the different type of fruits within the family for nutrition security and extra surplus fruits selling in the market as well within the village. Mr. Kedarnath told during our visit at their AHU, now his agi-horti unit providing full of fruits. He and other AHUs family's income are enhancing from these AHUs by INR 8,000 – 10,000 annually per AHU family. Now the families are very much happy and other families also demanding the new more AHUs in their farm land. Now these families reputation are increasing in the society as well in the village due to fruit garden (AHU).

Gua plants plantation providing full of yield with agriculture

1.3 Nutrition Education Session (NES)

During this period the nutrition sessions organized in different places. 60 Men and 47 women came for attended this training. Till end of the project total 10 NES successfully organized for community people and project beneficiaries under the MDSA project. Local medical service providers and other service provider i.e. ANM, Medical Doctor and Asha worker deliver the speech that health is very important. The said for healthy and wealthy life you would eat seasonal fresh fruits and green vegetables. During session experts explained about sowing the plants of and fruit whereby you get good thing no chemical any insects. The resource person tell to the participants please makes sure the nutrition for pregnant women and small children is must. If we provide a balance diet, meals to the pregnant women than the baby also become healthy and women can't suffer by anemia or anemic due to deficiency of nutrients in the body.

The resource persons also explained about COVID-19 pandemic in details about precautions, protecting them self and other to use of face mask, sanitizers, regular hand wash and maintaining social distancing with each other, No hand shake, etc. In the end of the session give thank you to all participants who attended in this session. They distributed fruit with breakfast and over this training.

Sr. No.	Village Name	Female	Male	Resource person
1.	Bambori	15	12	Manju Thakur
2.	Sinchora	9	17	Ravindrasingh
3.	Maheva	11	13	RanjanaVarma
4.	Baghari	12	18	Ravindrasingh
	Total	47	60	

1.4 Introduction of contour farm bunding- *Khadin (dyke)*:

During this reporting period we selected the 4 khadin beneficiaries for construction of contour bunds at farm level by the VDC. But same time we observe the previous years the 6 khadin bunds also constructed under this project in year 1 and year 2 and they have good crops this year. People are very much happy to harvest different type of crops in their farm field first time, because of khadins construction. The khadin help to conserve the moisture and stop the soil and water erosion from their field. The farmers harvesting good amount of production yield from their farm in kharif and rabi season. More than 70 percent farmers of khadin got 1.5 to 2.0 time more multiple crop production in same land after construction of khadin structure.

Impact of khadin:

When talked with the beneficiary of khadin *(Mr. Ranvijay Brahmin, Mr. Ramavtar singh, and Bardani Dhuria Jatav)* about their crop production and other benefits from khadin, he told this year my crop production just more than double in the same area of land its 3.30 hector field. then we aske again what do you do this production, he said I borrowed the loan from money lenders, so I pay back this loan keep the food grain for use at my house hold family consumption. This year we don't need to purchase from any more from the market for our family consumption.

The summary of production;

- Village: Singhanpur Baghari dist. Mahoba (Bundelkhand)
- Total Land : 3.30 hector
- Family members: 5 persons
- House Type: Mud house
- Livestock: 3 cows and 1 buffalo
- Activity : Khadin construction
- Production yield of crops:

Session	Crop name	Production in kg.	Rate per kg	Amount in INR	Remarks
Kharif crop:	• Moong bean	80	72	5760	
	• Til (sesame)	100	68	6800	
	• Udad bean	150	60	9000	
	• Arhar (Tur)	100	60	6000	
Sub total				27560	
Rabi crop:	• Wheat	800	19.75	15800	
	• Chana (Gram)	100	51	5100	
	• Mutter (pea)	50	55	2750	
Subtotal				23650	
Total annually gross income from production				51210	

He also shares the neighboring families also getting wages from my khadin through harvesting and threshing. He also give the thanks to project whole team and supported and implementers as well VDC members to select their family and built this unique structure and now this structure serve for long live my family food security and fodder security and my family now hunger free. I have now much reputation than earlier due to Khadin production. My family has employment at their farm land by agricultural best practices. I am also engaging other labors during sowing, harvesting the crop and threshing the crop yield time.

Rain water harvested in the Khadin farm land and cultivating kharif i.e mung bean, sesame, Udad bean, Tur etc. crop in the upstream of the khadin area and where is the water stand there farmer will able to grow Rabi (winter crop) i.e Wheat, mustered, chickpea, etc in conserved moistures. Farmer's field fenced use of barbed wire and deadwood poles to protect their crop by wild animals.

1.5 Fencing of fields:

- **Fencing**

During this period farmers fenced their farming land to protect their kharif and winter crops from wild animals and free grazing animals. The result sows of the fencing work done under this project during last years with the 16 group of small farmers. This is a big example for others, because these 16 farmers come together and form a farmers group and take initiative and do wire fencing all 16 farmers field together and now fully secured their farm and their inside crops from wild animal and pigs. The total land is come under cultivable about 64 hector of land. These farmers started again the crop farming because they have fenced farm now. These groups of farmer's now fully secure and harvested good amount of crop without any harm from the wild animals. Now people looking this model and tried to apply in their farms to secure farming from wield animals in day or night time. This problem solution model the group of farmers become self reliant.

This year also we introduce and replicate this model with other group of 6 farmers to secure their farming. We discussed within the VDC meetings about selection of group of farmers for fencing the farm land. During the VDC meeting they selected the neediest group of adjoining farmers and fence their farm through this project fund for securing their production of crop and check their migration, because they come back to farming on their fertile land long time back and become more progressive and inter duce innovation in their farming practices.

Framer having the fencing with barbed wire and deadwoods of pole to protecting their kharif and rabi crops in the farm land from the wild animals i.e blue cows, pig, free grazing animals, etc

1.5 Renovation of community pond/Johad for sustainable agriculture through group farming with innovative techniques

Pond Digging Work

During this year 2 ponds (Johad) renovated. As we did 4 Pond (Johad) renovation work till this year. These ponds are now full of rain water and is very useful for a group of 22 farmers who are very much associate with this pond (Johad) and other neighboring small farmers also taking this water for cultivating drip based farming. This year because of these ponds water they are cultivating their farming land and sowing multiple crops in both seasons. These 22 direct beneficiaries' families are not doing farming before renovation of these ponds (Johad) last 5 years; because they don't have deep tube well and they don't have rainwater harvesting system to conserved moisture in their farm.

These 22 groups of farmers' families are very poor and belong from SC, OBC. So gram panchayats allow using pond (Johad) water for farming on 1-1 bigha (less than ½ acre) land to each family for all 22 families and they can use the pond water on about 11 acre of land for farming after monsoon in winter and Sumer as well. These farmers are very happy to receive the pond water to cultivate their sustainable organic farming. Now, in this area people are seeing this model as a transformation of the farming community. VDC are asking to the gram panchayats to pass resolution to adopt such great model for other farmers and other villages as well.

"Pond renovation to harvest rain and use for life saving irrigation for small and marginal 22 groups of farmers and for other neighboring farmers"

After renovation/construction of Johad (Pond) with full of rain water

After renovation of Johad (pond) with full of rain water

1.7 Introduction of village level breeding centers:

During this period, the VDC bring the pure improved breed of bull for breed improvements in Karvai village of Mahoba district. This bull keeps in Community gaushala. Bull taking care of by the village development committee. The committee decided 200 rupees charges per animal per day for their nutritional feed. Now this bull provided full of service to the villages all cow timely conceived and deliver good breed of calves male and female and lactation period now not going to empty. Because when caws become in the heat, so farmers able to cross their cows immediately any time very closely.

During this year on villagers demand one more buffalo bull also provided during this year. This buffalo bull murra breed, which is very much popular for high yield of milk and good for transporting the male castration bull for farmers for their farming perspective. This bull is now serving to cross average 40 to 50 female buffalo per month. Now, pure good breed also coming with newly female calf and people also thinks this bull's calf as a breeding bull.

People saying this good innovative imitative taken by project in favor of farming/ pastoral community. Many farmers now start their livestock rearing again. So many new milk animals purchase by the farmers with good yield and start their dairying milk business.

1.8 Seed bank and fodder bank on household level

- **Seed Bank**

During this year recent kharif season the more than 60 farmers use seed to cultivate their farm from getting seed from these seed banks. This year the rains are very good and on time so farmers also get the different crop seed i.e Mung bean, Till, Udad, Chickpea, Mustered, Tur (Arhar) and vegetable seeds from their community level established seed bank easily on time without any further delayed. Because of these seed banks provided more than 100 farmers and cultivate their farm on time and harvest good crop in their farm land. People harvested good amount of crop yield this year and they are very much happy to use of these seed bank seeds.

All farmers decided to pay back in to seed bank again to put the seeds in the seed bank after harvesting the crop and threshing. The seed store properly, because they know very well how the stored the seed in the seed bank during training under the project. But our staff further helps during the storing time of the seed banks. Generally seed breeders develop their seed and store with ash, neem leafs, and put weeds of moisture absorber seed in the seed containers.

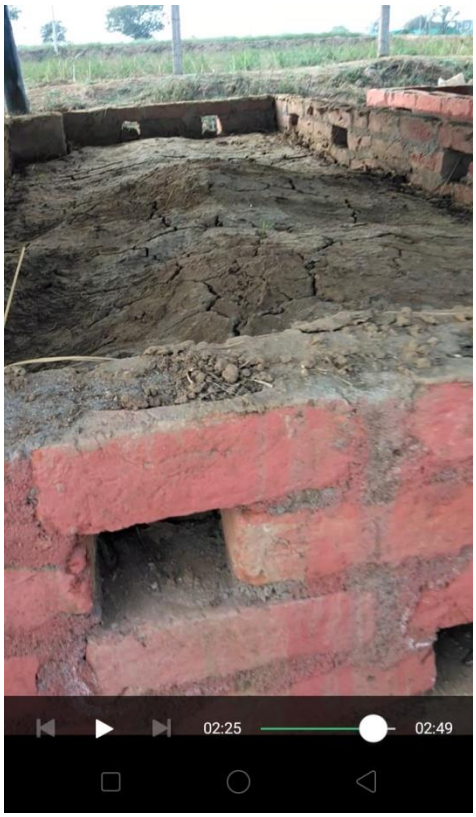
Community Seed Bank established under MDSA project at farmer's village

1.9 Farm yard manure composting for bio fertilizer >

During this reporting period the four farmers prepared the composting pit at their home with the help of the project in direction of the project team of expert.

1. Smt. BrijRani w/o KatRam 65 Vishwkarma village vdhari
2. Smt. Sudha w/o Ramovtar 56 Brahmin village vdhari
3. Mr Suresh Singh s/o Sitaram Singh 58 Bambhori Kashi
4. Smt. Bhagwati w/o Dwipendra 70 Nigam village Maheba

These four compost beneficiaries started the compost making at their own and using in their kitchen garden as well as in the crop farming area. They are very sure about the result of the compost as previously other farmers getting the benefit of the use of composting in their farms. Now they are putting the all wastage and manure in the pit and every day keep systematically things as taught during training. Every 3 months they are ready to use the prepared compost from their pits. As on date total 10 compost making pit developed under this project period.



Farmers are happy to prepare composting at their home and using in their horticulture plants in AHUs, kitchen/nutrition gardens (NGs) as well in their khadin (dyke) land. Other farmers are also adopting this technique in the project villages. Smt Birjrani said, because the compost manure improve soil fertility and increased crop production and also reduce the termite attack in their farm crops and plants.

2. Diversification of water sources and availability of sustainable and safe water

2.1 Education session – water quality and its purity

During this period the 4 training organized during this year out of total 10 numbers of trainings as on date, total more than 155 men and women from VDC members and other community people male and female including children and Panchayats representatives and community leaders, mother and fathers also attended this program on regular basis. We are also doing with the help of school children and gram Panchayats the garbage free society.

2.2 Demonstration of underground water recharging pits

Project team members during meeting explained about clean water and their benefits. All participants after discussion they all are fully agreed and say we make a recharge pit for holding this west over flow water for recharging in to the soil back and we will safe and our small kids also safe and protect from different diseases and water table will be increased. Total 4 water recharge pit constructed for demonstration and till date total 10 number of recharge pits constructed in the project villages.

Water recharge pit nearby hand pumps and educating people on purity of water as well as mosquitoes free area.

Training of preparation of Bio sand filter:

GRAVIS has organized 4 training during this year out of total 10 organised as on till date on preparation and introducing a Bio-sand water filter (BSWF) in the village on piloting basis to know about its acceptance and results. Total more than 152 participants participated in these training sessions including 66 female out of total. The participants are very much confident to learn about bio sand water filter techniques. They are now using such wonderful techniques for filtrations of rain water.

Bio-sand water filters making

3. Formation of CBOs – The Village Development Committees (VDC) and Self Help Groups (SHG), and their trainings

3.1 Village Development Committee (VDCs) Field Level Trainings:

We already formed Village Development Committee (VDCs) in all three project villages. We organize 4 trainings on regular basis to them to capacitate on different topics and issues as well the ne innovative technologies. The members of VDC are fully aware about the project goal and its objectives. Also know how will achieve through implementing the different activities in project targets villages. As on date till project end total 10 trainings organized under this project period for VDCs. In each VDC 10 to 12 people participate in the meetings/trainings including women.

Organizing Village development Committee (VDC) in project villages

3.2 Women Self-help Groups (SHGs)

We formed as on date 10 SHGs in project villages and provided the training on different topic of SHGs. Mainly on the record keepings; inter loaning, repayment, trust building and linkages with banks. Each SHGs having 10 to 12 members and each member participating in the monthly meeting of the SHGs. We trained on panchsutra of SHGs. The total 102 women in the 10 SHGs as on date represent. They are also participating in discussion of village development and also monitor the implementation work in the field.

During this year 4 trainings organized for SHGs women on various topics, i.e. sewing, designing and cutting, embroidery, pickles making and dairying to enhancing their income to start their entrepreneur at their house hold level in the villages. Total 58 women participated in these 4 trainings during this year. The total 102 SHGs women participated in all 10 trainings as on date under the project. Now more than 70 percent of women of SHGs start their own entrepreneur business and earning approx. 800 to 1200 INR per month.

SHGs women participating in the vocational training in project villages

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