Report on

Extension Activity on Learning of Soil Nutrient Enrichment through Green Manuring in-collaboration of KVK IARI, Shikohpur

Date: 01/06/2023
Venue: KVK, IARI. Shikohpur
Event Type: Extension Activity
Mode of Activity: Offline
Target Group: Nearby villagers/farmers of KVK IARI, Shikohpur
Organized by: School of Agricultural Sciences
Convener: Dr. S.S Sharma
Faculty organizers: Dr. Parita, Dr. Ambika Bhandari, Ms. Priyanshu Chaubey
Faculty coordinator: Dr. Deepak Kumar
Number of Participants: 32 (including SOAS students and farmers)

The School of Agricultural Sciences, KR Mangalam University, Gurugram, in collaboration with KVK IARI, Shikohpur, organised an extension activity on soil nutrient enrichment through green manuring at KVK IARI, Shikohpur, on June 1, 2023. The session started with a welcome note by Mr. LN Yaday, Farm Manager, KVK. Shikohpur. He talked about the importance of green manure crops in cropping practices. Green manure is an agricultural practice wherein plants are grown specifically to be tilled into the soil while they are still vegetative as a kind of fertilizer. These crops are often sown in the intervening spaces between the major crops. They function as a ground cover while they're growing, protecting the soil from erosion and nutrient runoff with their extensive root systems, stifling weed development, and adding nitrogen to the earth in the process. Further, he adds that sustainable agriculture relies on practices like crop rotation and the use of green manures to preserve soil fertility. The risk of land degradation may be eliminated by using green manure crops, which protect the soil, fertilize it, and increase its organic content. Improved, healthy soils also indicate more long-term food security because of the reduced demand for chemical fertilizers and intensive soil cultivation. He explained the types of green manure crops.

Legumes and non-legumes are the two types of green manure. Legumes are plants whose roots work with the soil's bacteria and trap nitrogen from the atmosphere. Non-legumes are mainly the cover crops that prevent soil erosion.

- Green manure is also distributed in the below-mentioned categories.

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- Cover crops, which cover the soil and prevent it from erosion. For eg, lentils, oats, clovers.
- Smother crops give competition to weeds and ensure that the nutrition is not lost. For eg. winter rye and buckwheat.
- Break crops are crops that interferes with the lifecycle of insects, diseases and pests. For eg. mustard, brassica, rye.
- Nitrogen-enriching crops enrich the soil with nitrogen. For eg. Clovers, beans, peas.
- Nutrient conserving crops, conserve nitrogen from wastage and ensure soil gets the maximum of it to be enriched. These include ryegrass, oil radish etc.

He further explained about **when to sow green manure crops?**

There are benefits associated with sowing green manure crops at any time throughout the growing season; these benefits are generally consistent across the board. Although manure is often used to cover the ground during the autumn and winter months to avoid erosion, it also provides comparable advantages during the summer months by shielding the land from the drying impacts of sun and wind.

The event was coordinated by Dr. Parita, Dr. Ambika Bhandari, Ms. Priyanshu Chaubey. They also explained about the various advantages of green manure crops. The following lists are the primary advantages of growing green manure crops instead of leaving the land uncultivated.

Elimination of weeds

Green manures work as a kind of natural weed control because they prevent the growth of weeds by making it hard for them to penetrate the thick biomass and reach the sunlight.

Pest and disease mitigation

The populations of the principal pests that endanger the cash crop may be reduced due to the ability of some crops to ward off pests and thwart the spread of diseases. Some plant species can even ensnare pests inside their own root systems.

Support from beneficial organisms

Flowering plants draw in pollinating insects, increasing the number of species that are useful to the ecosystem. For example, bees and bumblebees are drawn to the blossoms of phacelia plants.

As an added bonus, manure feeds the bacteria and other creatures in the soil. Soil aggregates, which increase the soil's porosity and organic matter, are mostly the product of these

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organisms' activity. Soil bacteria get their nourishment from the plant's roots. Plants that are buried help promote more microbial life in the soil as they decay.

Besides green manuring the students also learned about the running on farm activities at the KVK such as vermicompost unit, dairy unit and agro-meterological observatory.

The session was concluded with a word of thank you to staff of KVK, IARI, Shikohpur for giving all the valuable information through on farm activities and farmer for all the cooperation.

Few glimpses from the activity

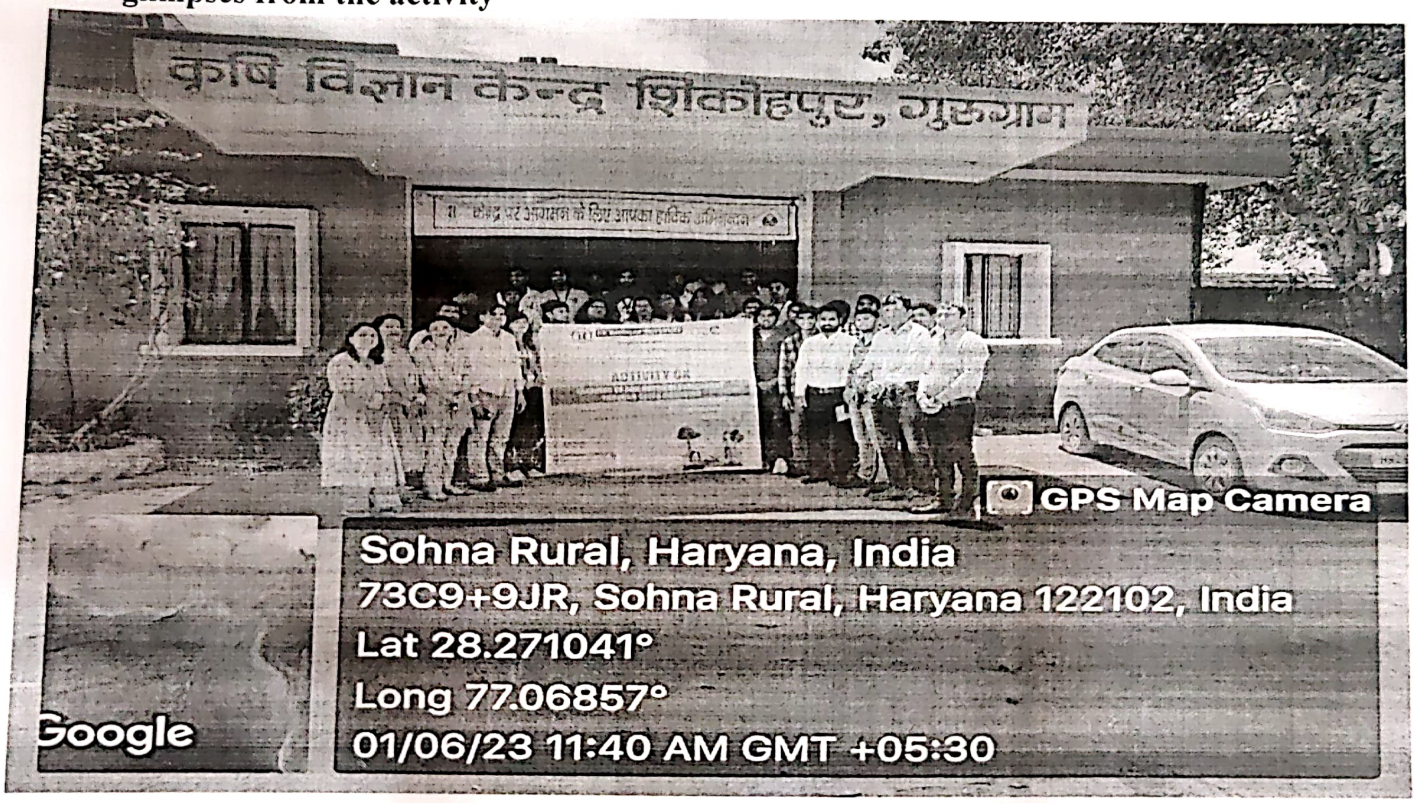

Photo 1: Faculty of Agriculture and Students along with the staff of KVK, IARI, Shikohpur

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Photo 2: Faculty of Agriculture and Students along with the farmers of Shikohpur village

Photo 3: Faculty of Agriculture interacting with the farmers of Shikohpur village.

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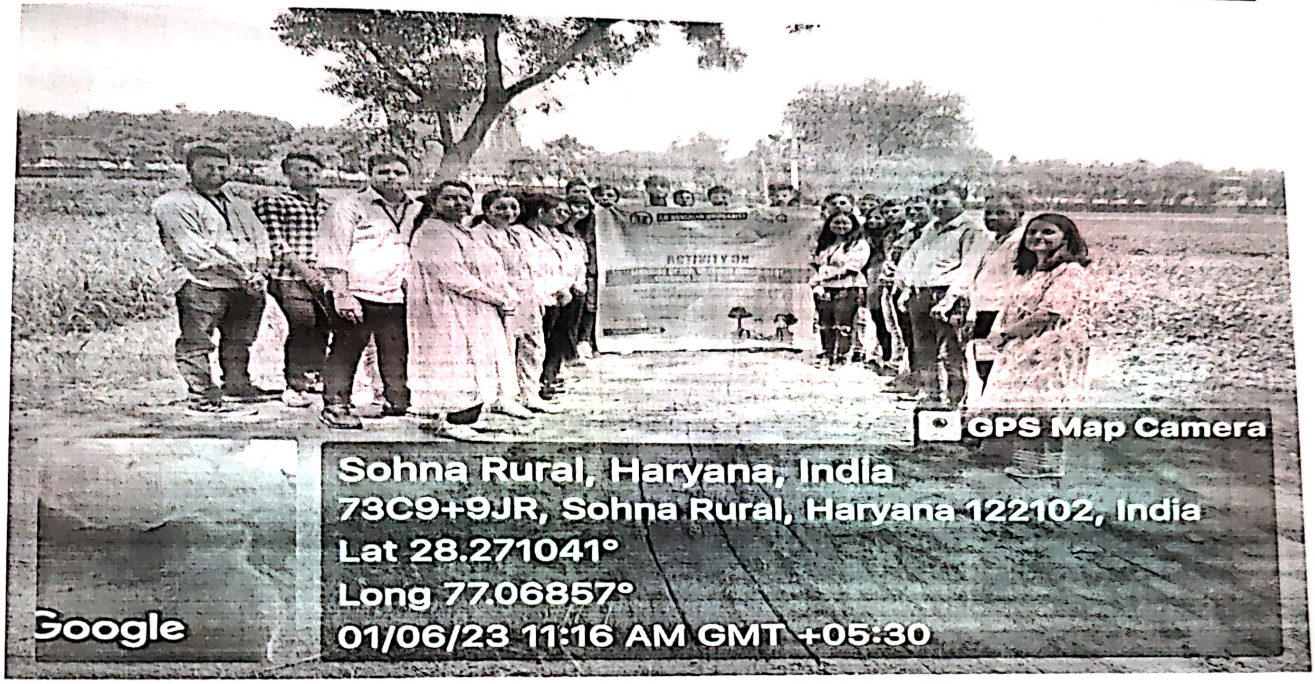

Photo4 : Visit to green manured fields of Agriculture at KVK, IARI, Shikohpur

Photo 5: Agro-meterological Observatory at KVK, IARI, Shikohpur

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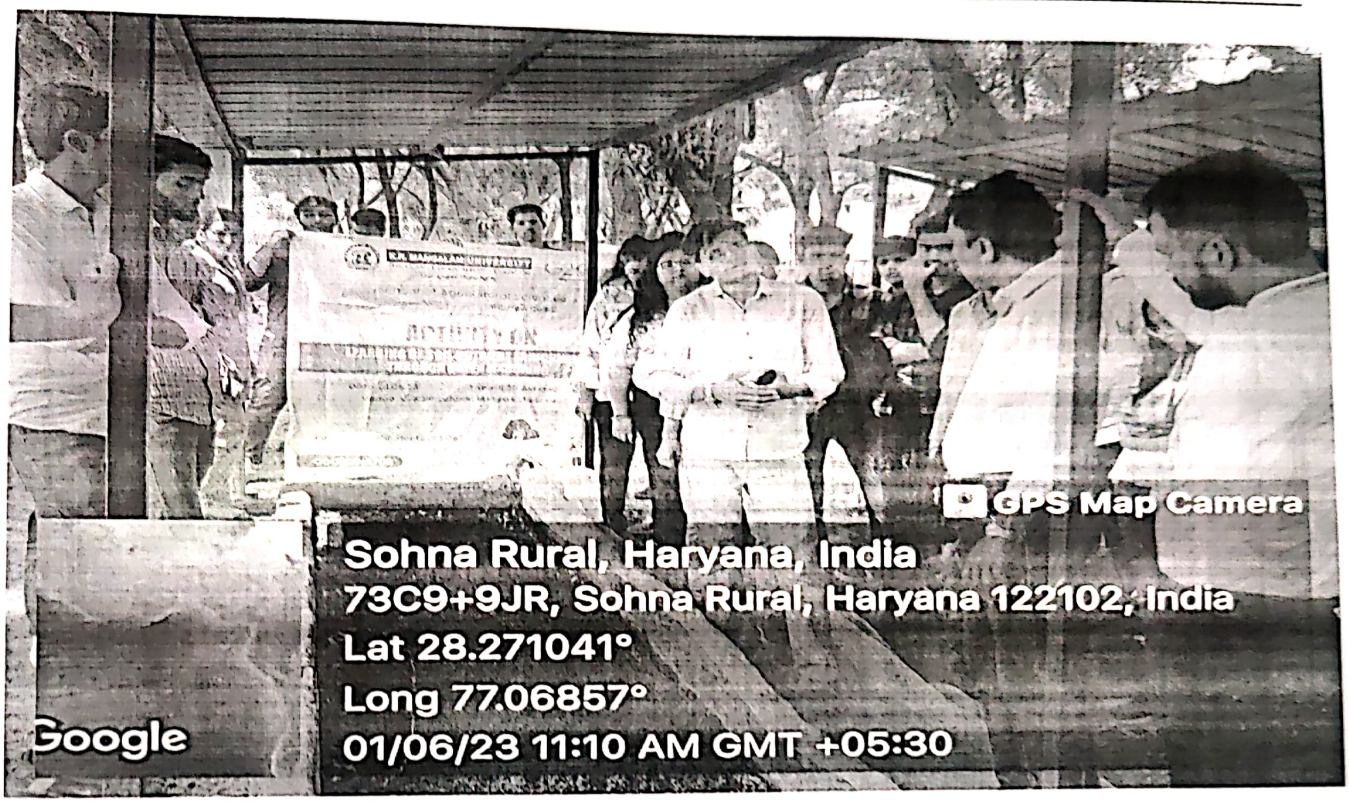

Photo 6: Visit to Vermicompost unit of KVK, IARI, Shikohpur

Report prepared by	Dr. Parita, Dr. Ambika Bhandari, Ms. Priyanshu Chaubey
Report verified by Event Coordinator	Dr. S.S Sharma
Report Seen by Dean / Club Coordinator / Activity Coordinator/ IQAC Director / Registrar	Dr. S.S Sharma Dean SOAS
IQAC, Office	Dr. Shikha Dutt Sharma

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Attendance Format

1. General

Title of the event Learning of Soil Nutrient enrichment through Green Manuring

Date 01/06/2023 **Venue** KVK, IARI, Shikohpur.

School of Agricultural Sciences/ **Club/Societies/IQAC/Registrar Office**

Sr. No.	Roll Number	Student Name	Program Name	Program Code	Signature
1.	2113820002	ARBAJ	B.Sc (H) Agr.		
2.	2213820009	Mohit	BSc (H) Ag		
3	2213820007	Anzar khan	"		
4.	2113820008	Qadir	"		
5.	2113820022	Rihan	"		
6	2113820009	Goutam	"		
7	2113820006	sagar	"		
8.	2213820014	Mustakeem	"		
9.	2213820010	Mujahid	"		
10	2213820004	Bradyumna Roy	"		P. Roy
11	2013820006	Alish	" 6th		
12	2213820003	Nitin	2nd Sem		
13	2113820014	Yogesh	4th Sem		
14	2113820020	Mayank	"		
15	2113820011	Partth	"		
16	2113820006	Jyoti	"		
17	2213820013	Harsh	2nd Sem		

Verified by:
Signature:
Date:

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Date 01/06/2023 **Venue** KVK, IARI, Shikohpur

School of Agricultural Science **Club/Societies/IQAC/Registrar Office**

Sr. No.	Roll Number	Student Name	Program Name	Program Code	Signature
18	21138200801	Yash Sharma	BSc (Agri)		
19	20158200007	Pradeep Sutha	"		
20	21138200008	Gopal Goyal	"		
21	21138 20007	Khushi Kalra	"		
22	20138 20002	Abhishek	"		
23	2213820015	Riddhi	B.Sc Agri 2nd Sem		
24	2213820005	Sakshi	Bsc. Ag. 2nd Sem		
25	20138200 09	Aamir	" 3rd		

Verified by:
Signature:
Date:

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ATTENDANCE OF FARMERS

Title:- Ext. Activity on Learning of Soil Nutrient Enrichment through Green Manuring in collaboration with KVK, IARI Shikohpur.

Date: 01/06/23 **Venue:** KVK, IARI, Shikohpur

Organized By: School of Agricultural Sciences

S. No	Name	~~No. of Animals at Home~~ cultivated crops
1	Dharmveer	Paddy, Jwar, Maize, cotton
2	Azad Singh	Paddy, Bajra, cotton
3	Sarla Chaudhary	Maize, Paddy, Bajra
4	Santosh	Paddy, cotton
5	Harpal	Bajra, Paddy
6	Diwakar Singh	maize, Bajra
7	Hareshwar Singh	Paddy, Maize.

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