Department of Economics
DAV P.G. College
Varanasi

नवचेतना
खेत से किचन तक जैविक चेतना

EXPLORING AGRO-PROCESSING AND RURAL DEVELOPMENT PRACTICES: A FIELD SURVEY OF NAVCHETNA AGRO CENTER PRODUCER COMPANYLIMITED, SIKHAR, MIRJAPUR

Field Based Study

Dated: 19th November,2024

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TEAM MEMBERS

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Introduction

The Department of Economics D.A.V P.G. College has a long standing practice of conducting Field Survey's to enhance students practical understanding of economics concept and real world challenges these survey's provide an invaluable opportunity for students to step out of the classroom and engage directly with the economic reality with their communities.

The agricultural sector is undeniably the backbone of rural economies, serving as a critical driver for livelihood, food security, and economic stability in many regions. However, to ensure long-term sustainability and resilience in these areas, there is a growing need to explore innovative agro-processing techniques and rural development practices. This study, conducted in the rural setting of Sikhar, Mirzapur, aims to investigate and document key aspects of agro-processing, encompassing soil testing, compost farming, seed breeding, and other innovative approaches to sustainable agriculture.

Recognizing the vital role of education and engagement, this project actively involves postgraduate (PG) students in a blend of hands-on surveys, practical sessions, and community interactions. By immersing the students in real-world agricultural challenges, the study not only enhances their understanding of rural issues but also fosters collaboration with local farmers to identify practical and replicable solutions.

Through soil testing, the project examines the nutrient composition and fertility of the land, offering valuable insights into tailored fertilization strategies that can improve crop yields. Compost farming is explored as a cost-effective and environmentally friendly method to recycle organic waste into nutrient-rich soil amendments, reducing reliance on chemical fertilizers. Additionally, seed breeding initiatives focus on the development of resilient and high-yield crop varieties suitable for local climatic and soil conditions.

The findings of this study hold significant potential for driving sustainable agricultural practices and rural development. By synthesizing the data collected through fieldwork and analysis, this report aims to present actionable recommendations that can be scaled and adapted to other rural areas. Key objectives include enhancing agricultural productivity, promoting eco-friendly practices, and strengthening rural economies through value-added agro-processing initiatives.

This comprehensive report will summarize the methodologies employed, the insights gained, and the challenges encountered during the study. It will also propose strategic recommendations for policymakers, educational institutions, and agricultural stakeholders to further the cause of sustainable rural development. The ultimate goal is to contribute to a framework that empowers rural communities, ensures environmental sustainability, and paves the way for inclusive economic growth.

Report on Exploring Agro-Processing and Rural Development Practices: A Field Survey of Navchetna Agro Center Producer Company Limited, Sikhar, Mirzapur

Organized by: Department of Economics, D.A.V. P.G. College

Date: 19th November 2024

Overview

As part of the government's environmental conservation initiative, a dedicated group of 25 students from Department of Economics, DAV PG College visited the Sikhad block in Mirzapur. The event was guided was led by Prof. Anup Kumar Mishra, Dr. Ahuti Singh and Dr. Siddharth Singh along with Shri Anshuman Singh.

The program aimed to spread environmental awareness, promote soil conservation practices, and encourage sustainable farming methods.

Activities Conducted

1. **Tree Plantation Awareness**: Farmers were encouraged to plant more trees to combat deforestation and reduce soil erosion. The ecological benefits of afforestation were highlighted to ensure long-term environmental stability.

2. **Soil Conservation Advocacy**:

Farmers were educated on the importance of conducting regular soil tests to monitor soil health.

Practical insights on maintaining soil fertility and preventing degradation were shared.

3. **Promotion of Organic Farming**:

The benefits of shifting to organic farming were discussed, with a focus on the use of **vermicompost manure** as a sustainable alternative to chemical fertilizers.

Farmers were encouraged to adopt eco-friendly practices for improved soil productivity and environmental health.

4. **Emphasis on the 5J Principle**:

The interconnectedness of **Water (Jal), People (Jan), Forest (Jungle), Land (Jameen), and Animals (Jeev)** was emphasized.

The role of each component in maintaining ecological balance was illustrated to inspire holistic conservation efforts.

Impact and Participation

The event saw active engagement from the local farming community, who were receptive to the ideas presented. Students and faculty worked collectively to create an interactive and informative session, fostering a strong connection with the participants.

Conclusion

The environmental awareness and soil conservation program successfully disseminated critical information and inspired the local community to adopt sustainable practices. Such initiatives play a pivotal role in fostering ecological responsibility and creating a lasting impact on the environment.

The event underscored the importance of collaborative efforts in environmental conservation and set a benchmark for future endeavours.

Student's Report

Sr. No.	Topic
1.	**Report on Agroforestry and Navchetna Approach for Sustainable Vegetable Farming**
2.	**Vermicompost : A Boon for Agriculture and Holistic Village Development**
3.	**Survey Report of Navchetna FPO Renewable Energy**
4.	**Field Visit Report: Insights into Organic Farming Practices at Sikhar Village, Uttar Pradesh**
5.	**Field Visit Report on Navchetna FPO's Role in Community Empowerment**

Report on Agroforestry and Navchetna Approach for Sustainable Vegetable Farming

Prepared by :Rajesh Kumar, Manish Toppo, Parikshit Mahto

Navchetna agro center producer company limited is a FPO in Shikhar, Mirzapur (Uttar Pradesh) , established in 2019 with support from NABARD. It has been actively promoting agroforestry as part of its sustainable agriculture initiatives. Agroforestry is a sustainable land-use system that combines agriculture and forestry practices to optimize land resources. The Navchetna Agroforestry approach emphasizes modern techniques tailored to local conditions, promoting the coexistence of trees, shrubs, and crops. This method provides ecological, economic, and agricultural benefits, making it an ideal solution for enhancing vegetable farming.

Navchetna's Agroforestry Project - Integrating trees with crops! the SGIPL-funded agroforestry project promotes sustainable farming and environmental benefits. Partnering with SGIF, they're launching agroforestry projects. This combines trees with crops for a sustainable farming approach.

Here are few flagship Agroforestry Projects launched by Navchetana FPO

- **Navchetna Neem Project**

The Navchetna Neem Project, an innovative initiative designed to promote sustainable livelihoods through the cultivation and utilization of neem. The project adopts a cluster approach, believing in the power of small Farmer Producer Organizations (FPOs) evolving into large, impactful entities.

- **Miyawaki Plantation**

Restoring native forests with Aditya Birla Group! Miyawaki plantation creates biodiverse havens with fast-growing native trees. The Miyawaki plantation is a Japanese technique for planting native trees, shrubs, and ground cover plants in high density to create a dense canopy layer.

- **Afforestation Projects**

Over 3.2 crore tree saplings have been planted as part of ongoing efforts to combat deforestation and climate change while providing timber, fruit, and medicinal resources.

2 Afforestation project by Navchetna

- **Banana Farming Project**

Banana farming project underway with funding from 4S. This initiative supports cultivation of a nutritious and profitable crop for small land holder farmers. This project includes key aspects like advance farming techniques, market access and sustainability.

1 Agroforestry Navchetna

The Navchetna Agroforestry approach integrates:

- **Tree crops orchard development**: Fruit, medicinal trees and timber trees that enhance biodiversity and provide additional income (Mango, guava, citrus & moringa, jamun, karanja).
- **Vegetable farming**: Seasonal and perennial vegetables for regular revenue (Bottle gourd, pumpkin, dragon fruit, strawberry, spinach & coriander).
- **Sustainable practices**: Soil and water management, crop rotation, and organic farming techniques.

3 Lemon plants

4 Cabbage farms

These initiatives reflect Navchetna's commitment to leveraging agroforestry for climate resilience and sustainable rural development. Navchetna has also done great job in promoting organic farming like using of cow dung cake, neem oil, neem khali cake, vermicompost, bio fertilizer etc. which enhanced the soil quality. In addition to this maintaining the same level of fertility or quality of land, irrigation of the land and its moisturiser is important else the land will lose its fertility (ground water irrigation

Vermicompost: A Boon for Agriculture and Holistic Village Development

By- Ujjwal Jaimini, Manish Kumar, Ayush Rai

What is vermicompost?

The vermicomposting project of Navchetna Farmer Producing Organisation (FPO) is one of brilliant initiatives taken by them for giving a manifold impact to the village economy. Under this project the FPO converts the cow dung into an organic manure which helps to increase the productivity of soil in a natural way without increasing any harmful chemicals in the soil and hence in the crops.

The major effect seen in the Sikhar village due to the FPO's vermicompost initiative is:

Purchase of Cow Dung: Cow dung which was the wasteful resource for the villagers some years back is now a **source of earning for the villagers**. When we visited the village we found visuals of stocks of dried cow dung on the doorsteps of every house which they have kept to sell to the FPO.

It also becomes a **source of income for gaushalas** in the nearby periphery.

The process of formation of vermicompost:

1. **Collection of raw material (cow dung)**:

Collecting cow dung from different sources like villagers, gaushala's and many other sources.

The cost of collection of this cow dung is around ₹2 per KG for dry cow dung and ₹1 to 1.5 per kg for wet cow dung, not only this the transportation cost is borne by the FPO where they send their tractor to village and collect cow dung.

The payment to the villagers is done timely, only sometimes there are issues otherwise the payments are made on immediate basis.

2. Tetra pack storing: They keep the dry cow dung in the tetra pack packaging because:

1. This packaging makes it easy to mix the whole mixture from time to time.
2. To daily water the whole tetra pack.
3. Easy to cover it.
4. Air is circulated in a proper way.

In this tetrapack other organic substances like banana leaves etc. are also added.

Not only this, this type of packaging also enables the FPO to put earthworms in it so that the mixture becomes rich in humus and organic matter.

The mixture is kept for around 20 days in this packaging and things are added looking at the practical requirement of the compost.

3. Sieveing:

After 20 days this compost, which is formed is taken out from those bags and with the help of 2 people it is sieved on this sieve and the tiny particles which falls down are then packed and delivered.

Sieve is of 2 types:

1. **Tiny Particles**: In this, the sieve with very small pores is used. This manure is used when the air is not flowing very fast, because these tiny particles flow with the wind and reduce the efficacy of the manure.

2. **Small particles (comparetively bigger than 1st)** : A sieve with bigger pores is used so that the particles which fall on surface are bigger in size. These bigger particles can be used in windy places because of their heavy weight they

will not blow away with wind and will fall where applied.

4. Packaging:

This compost is then packed in different packings like pack of 1kg, 2kg, 5kg, 10kg and 20 kg.

The production cost is ₹5 per kg and the output is sold through different mediums like B2B (Business to Business) medium where the FPO has a tie up with a private shop which is their biggest buyer and the other medium is B2C (Business to Consumer) through online listing of their products.

Usage of this compost:

It is used before sowing of the seeds to make the soil fertile and also during the cultivation of the crop. It is suitable for all types of crops and vegetables.

Real world efficiency:

According to the head of FPO: The farmer has to use this compost with chemical fertilizers when he is first time using it.

Then, in next season the farmer has to increase the proportion of this compost and reduce chemical fertilizers and then, in the third season the farmer can completely rely on this organic manure for cultivation. Using this technique the productivity of the field will not reduce and will yield good long term benefits.

On the other hand, substituting this organic manure completely in the first season will drastically reduce the productivity of the soil.

According to farmers: The farmers say that the organic manure costs them ₹400 for 1 bag and on the other hand a bag of Urea post subsidy costs ₹300 to farmer also, this Urea is used less as compared to our organic compost, this makes it costly for farmer to buy it and use it. Moreover the demand for organic products is also very less due it its high cost in the market, this also demotivates the farmers to use this compost.

Overall, the impact of the FPO is very positive and is in right direction only the acceptance rate between the farmers is to be increased so that agriculture in our country can become non-polluting and sustainable.

Survey Report of Navchetna FPO Renewable Energy

BY: Ashutosh Kumar, Jitendra Kumar, Kishan

➔ **Renewable Energy**

The term renewable energy is used for the sources of energy production which replenish after its use over period of time. Examples such as the solar , wind , hydro, tidal, and geothermal heat energies are prime sources of renewable energy.

They are much more efficient than the fossil fuels as they do not produce any harmful impacts for the environment and do not releases any toxic substances in to the surrounding during its production.

They are indeed a better because even if the fossil fuel are easy to procure but at the cost of environment health, which is a deep concern as our future generation also need and deserves a clean an pollution free environment.

In current scenario where most countries are suffering from environmental issues renewable energy is a secure substitute for the fossil fuels. Renewables are now cheaper in most countries, and generate three times more jobs than fossil fuels.

➔ Types of Renewable energy:-

1. Wind Energy
2. Hydropower
3. Geothermal Energy
4. Biomass Energy
5. Solar Energy

Wind Energy refers to the type of energy produce by using the wind velocity to generate electricity(power).

In current time wind energy is produced by using the turbines(generally scene in distant paddy fields in villages or barren lands) in the areas where speed of winds are very fast. The turbines are rotated by wind connected to motors which in turn generates electricity.

2022	Wind supplied energy = 2304 TWh(approx.)[7.8% of world's electricity need]
2023	Global wind Capacity generation reached 1000 GW

Wind energy is the best alternative to use the barren lands or the unused lands such as the deserts etc.

Wind energy is sustainable as it does not have any deteriorating impact on the environment as whole.

Wind energy are now being implemented at larger scale in all over the world which has led to it become relatively cheaper than burning coal or other fossil fuels at the cost of environment.

In India , the wind generation has a great potential having a production capacity of 700gw (approx.) which is at present at 43773 MW.

2. Hydropower

Hydropower refers to the energy production which involves the use of water as means of production. When the running water is left to fall from a height (mainly dams) on turbines it rotates the turbines and allows the production of electricity.

Hydropower projects are generally built/planned in area of high water flow and it bears a large capital investment.

Since Hydropowers don not produces or releases any type of carbon, pollutants it is better source of energy than fossil fuels such as coal.

The hydro power are a great source of energy since ancient time, but at that time it was on lower or local level. Such as in ancient times turbines were installed in local canals to power the local needs of the people.

The total hydropower production in world was 1220 GW which was 22.2 GW increased from 2021 production (China is top producer of hydropower). The hydropower constitute the major area in renewable energy production field.

India is also a major hydropower producing country with production capacity potential of 148700MW at 60% load factor, while current production is 42105 MW (harnessed).

3. Geo-thermal Energy:-

Geo thermal energy production refers to the process of generating power using thermal heat merging from the interior of the earth's core.

Geo thermal energy production is very ancient way of using the earths inner thermal power for use of energy production. Such as in ancient times the pressure from the large hot springs were used in variety of ways from daily household activities to small businesses also performed on the use of energy derived from these small geo thermal vents.

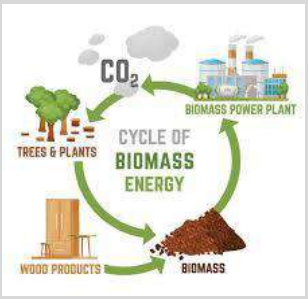
With the technological advancement during mid 1980 and 90s the production cost of producing Geo- thermal energy reduced relatively(but still it requires

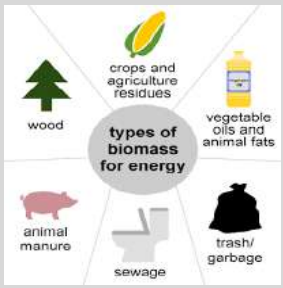
heavy investment and large tract of land for the infrastructure).

Total Geothermal Energy Production (Global Level)	>16335 MW(2023) >US having the highest production (3900 MW) >Indonesia(2418 MW)
Geothermal Energy Production (India)	> Estimated 10000 MW(approx.) >Currently no operational geothermal plant

4. Bio-mass Energy

Biomass energy production refers to the process of using the biomass(total mass of the organism at a given time) of the dead and decay material for the production of





There are various sources of the biomass such as agricultural waste or residues such as crop remaining parts (straw) husks , animal waste such as manure human sewage and animal dead remains, forest residues such as dead leaves and dry plants etc are the primary sources of biomass production.

Raw biomass can be upgraded into higher grade fuels by method of thermal, chemical and bio chemical etc. and these fuels doesn't have a negative impact on the environment and do not create environmental issues such as pollution.

The Indian Government has promote the use of biomass through various initiatives along with the help of various government agencies and programmes such as FPOs.

Annual Availability of biomass in India	>750 million metric tonnes(MMT) >With Surplus 230 MMt

5. Solar Energy:-

Solar Energy refers to the use of solar radiations to generate electricity.

It is a major form of generating electricity globally. In this process solar panels made from a mixture of variety of materials such as silicon, aluminium, copper etc. are installed on the roof or open spaces facing the sun, the sun rays are caught by panels and are converted in to electricity by a process called **photovoltaic effect.** Which can be stored in the batteries and can be used for daily consumption needs.

Solar Power is the most efficient and reachable source of energy production which can be achieved even by the individuals at home having limited resources .It is the best renewable energy in the sense that it is easily accessible and easy to process without having any negative impact on the environment.

Solar radiations received by earth **(at upper atmosphere)**	>174 petawatts(PW) >Approx 30% is reflected back to space.
Solar Radiations absorbed by clouds, oceans etc	➢ 122 PW

The **International Solar Alliance,** an initiative launched by The Indian Prime Minister Narendra Damodar Das Modi on November 2015. The Initiative aims at creating a group of countries having a goal of creating solar energy at mass level treating earth as a whole family and production of renewable energy for this family at whole global level.

In his speech PM welcomed the membering countries(sunshine countries) those having a ambient amount of solar energy as ***'suryaputras'*** and confronted them of having the responsibility of our solar family.

Navchetna FPO

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Navchetna Agro Centre Producer Company Limited is a professional organization registered under the Companies Act, 2013. Our mission is to promote sustainable farming practices, agroforestry, and organic farming. We aim to mitigate the impacts of climate change and empower vulnerable communities to combat its effects.

Navchetna has a proven track record of accomplishment, having delivered over 10 successful projects.

Navchetna collaborates with a global network of partners, having partnered with more than 5 international agencies.

Navchetna is committed to environmental stewardship, having planted over 3.2 crore tree saplings.

Navchetna promotes sustainable practices, having manufactured more than 2 Lacs metric tons of vermicompost.

Various Projects of Navchetna FPO

Renewable Energy

Solar Energy Production at Navchetna FPO

1. Total Number of Panels 	54 Each Panel Producing 2Kwh of energy per day - 54 panels produces = 54 X 2 = 108 kWh per day - 108 X 30 = 3240 kWh per month - 3240 X 12 = 38840 kWh per year
2. Energy production 	Approx 38840 kWh of energy per year.
3. Setup Cost	50 Lakh (One Time Setup Cost for Industrial Production and supplier)
4. Setup time taken	25 Days (It is the total time to fully establish the Connection from the electric pole the required connection destination).
5. Processing capacity (inverters)	8Kw 16w (Storing Capacity of 1st unit) 7Kw 49w ((Storing Capacity of 2nd unit)

Usages Of Solar power by Navchetna

1. Supplying to the nearby factory for production use (supplied approx. 22Kw per day)
2. Supplying to nearby companies local enterprises for office use.
3. Supplied to villagers at affordable rates.

Field Visit Report: Insights into Organic Farming Practices at Sikhar Village,Uttar Pradesh

By: Anaisha Varshney, Ahana Kumar, Namita Singh, Tanishka Verma, Pallavi Kumari.

Introduction

In the context of a semester-long study on rural development and sustainable agricultural methods, the MA Economics Semester 1 class conducted a field visit to Sikhar village in Uttar Pradesh on 19th November 2024.The primary focus of this visit was to examine organic farming practices at the Navchetna Centre, which serves as a center for innovative and sustainable agricultural techniques. This report summarizes the valuable insights gained during the visit, emphasizing the production of organic manure, the cultivation of a variety of crops, effective waste management, soil testing, and the overall impact of these practices on local farmers and laborers.

Vermicomposting

Converting Waste into Nutrient-Rich Fertilizer:

The visit commenced with an examination of the vermicomposting facility at the Navchetna Centre, where organic manure is produced using advanced methodologies. Vermicomposting is a process in which the earthworms convert the organic waste into manure rich in high nutritional content. The production of vermicompost at this facility utilizes tetra bags, creating an efficient and controlled environment for the process. Witnessing the presence of earthworms—essential to the vermicomposting process—provided us with a practical understanding of their vital role in decomposing organic matter and enhancing soil quality.

Navchetna makes Vermicompost of ₹5 /kg after packaging. They produce 7.3 Lakh quintals of vermicompost and it is exported to South Korea. In the process of making the vermicompost 40% males are involved whereas 60% of females are involved. Now vermicompost has replaced 400 lakh + kgs of chemical fertilizers.

Biochar- Biochar is a solid, carbon-rich material made from organic waste or biomass that has been partially combusted at high temperatures. The process of making biochar is called pyrolysis, and it involves heating the material in a limited oxygen environment to temperatures of 600-700°C. It is made in area to minimize the oxygen.

Navchetna has the patent for the compost used to made the biochar.

Key observations regarding vermicomposting at Navchetna Centre include:

- Organic waste is gathered and processed in tetra bags with the assistance of earthworms.
- The resulting manure is rich in nutrients and enhances soil fertility without the use of chemical fertilizers.
- This process effectively utilizes agricultural waste, contributing to improved waste management practices.
- <u>Organic Cultivation:</u>
- A Diverse Array of Crops
- The Navchetna Centre exemplifies the successful organic cultivation of a wide variety of fruits and vegetables.
- During our visit, we noted the growth of:
- Exotic fruits such as strawberries and dragon fruit.

–Local crops including gourd and neem.

- Staple crops like wheat, cultivated with timely and balanced irrigation practices.

The centre's focus on crop diversity not only promotes soil health but also fosters a resilient agricultural system. The integration of organic manure and natural pest management strategies further supports sustainable farming practices.Helping farmers to increase their production capacity,exposing them with the new techniques of farming diversification of crops like from wheat to paddy to papaya banana farming.

Waste Management: Optimizing Resource Utilization

A notable feature of the Navchetna Centre is its exemplary waste management system. The centre effectively utilizes waste generated from neem seeds during neem oil production, underscoring its dedication to zero-waste initiatives. The by-products from neem processing are creatively repurposed, showcasing an innovative strategy for resource management.

- Neem oil production- It is made from neem seeds which are bought from farmers at ₹20/kg and 30-40% neem oil. This oil is mostly bought by farmers and sick people. The oil is sold at ₹300/kg to the farmers.

A Methodical Approach to Soil Fertility:

The centre employs scientific techniques to improve agricultural practices, particularly through extensive soil testing. An app for testing the quality of soil recognised by ICEAR.With state-of-the-art equipment, the soil testing facility offers:

- Assessment of carbon content and other essential soil nutrients.
- Comprehensive reports provided to farmers within a three-hour timeframe.
- Tailored recommendations for enhancing soil fertility by modifying carbon levels.

This methodology equips farmers with the necessary knowledge and resources to refine their agricultural practices, rendering organic farming both feasible and lucrative.

Holistic Impact:

The Benefits of Organic Food on Mental Health:

A compelling observation is the significant impact of consuming organically grown food on the workers and farmers at the Navchetna Centre. The intake of natural and chemical-free produce has been associated with fostering positive thoughts, thereby creating a harmonious and tranquil work atmosphere. Workers have reported increased energy levels and a reduced tendency towards negative emotions, contributing to their overall well-being and productivity.

Due to organic farming, there has been a significant increase in income of farmers working at the centre as well as farmers who are associated with the centre ,as farmers have started selling their cow dung as well to manufacture vermi compost that has improved their standard of living to a great extent.

So , Navchetna Centre is very efficiently and optimistically living the famous saying of “Thinking Globally and Acting Locally.”

Field Visit Report on Navchetna FPO's Role in Community Empowerment

Our team comprising of Divye, Saurav, khushi, Akash visited to Navchetna Agro centre FPO in sikhar village on 19/11/24. Navchetna's mission is to promote sustainable farming practices, organic farming, income generation for farmers and renewable source of energy.

We observed on following aspects about the community building through Navchetna's mission.

Capacity Building:

Capacity building refers to the process of empowering the farmers and organization leadership to function as a prosperous and independent farmer producer organization by giving them training and support to improve their skills, knowledge, and abilities in managing the FPO effectively. This is done with a special focus on sustainable agriculture practices like organic farming, vermicomposting, and agroforestry, which are important components of Navchetna's mission. The FPO requests cow dung from local cattle owners, purchases it from them, and provides labor for the transportation of the cow dung, which is then utilized for vermicomposting. Additionally, the organization has highlighted neem trees throughout the neighborhood and

purchases neem seeds from locals, which are then used to make neem cake and oil, it enables locals earn some extra cash. In addition to offering specialized training for using neem oils and neem cakes in farms. They give locals neem oil at a set price also sell proper packaged and government certified organic neem oil on online marketplaces that help people from far places to get access to it. Local people are getting employed as labour,agricultural worker, helper and for many other services, the organization has provided certain set of employment opportunities in the localities that has helped small farmers and daily wage workers a lot. The organization is set to introduce micro cold storages that could reduce post-harvest losses and increase access to markets. Navchetna FPO's overarching goal is to assist farmers and society in developing the agricultural sector as a structured industry so that all involved can benefit from increased revenue and amenities that could raise their level of living.

Women Empowerment

Navchetna FPO has a number of initiatives aimed at empowering women both inside the FPO and in society at large by giving them jobs and trainings to improve their skills in sustainable and organic farming. There are several SHGs that are mostly run by women, such as their solar panel power plant, which is run by a group of women. Additionally, there is a soil testing lab where women known as "mitti didi" work to determine the fertility and nutrient levels of the soil, which are crucial for farming. Additionally, women serve as agricultural workers on the FPO farm, tending to the crops, fruits, and vegetables . As women get training and employment, they gain social empowerment, and their increased income also helps them and their families live better lives.

Infrastructure development

Navchetna Agro centre focused on building a sustainable infrastructure which focused on their key objectives of

- Diversified Farming
- Organic Farming
- Plantation Projects
- Assisting Farmers in the state.
- Research and Development
- Multilayer Farming

Fig. :- Women getting employed and training in different fields

Vermicompost Facility

The agro centre built a vermicompost facility which they use as an organic manure supporting organic Farming. The vermicompost making procedure is well specified and in proportions there were tetra bags installed in the agro centre, the production of it is of 2,00,000 kg.

Nursery

The agro centre has built a nursery under them which has taken a plantation project of 3 crore plants around 3 districts. There are a total of 14,00,000plants registered in the nursery. This provides the farmers an opportunity of diversified farming through which they are more profit oriented and diversify their cropping patterns.

Solar Energy

The agro centre has built a solar power electricity generation facility aiming towards renewable energy, their working machines and devices works through solar energy thus also providing electricity in the nearby locality.

Soil testing lab

The Agro centre has a soil testing lab which tests the soil on 12 parameters, preparing a report of the deficiency in soil and how it can be improved and soil quality maintained and enhanced.

Neem oil processing unit

The neem seed is processed to make neem oil and neem cake(khali) which is used for medicinal purposes and natural substance. The neem khali powder is used as a pesticide in farms which enhances the productivity of farms. This generate a income for farmers also by them selling neem seeds to the agro centre.

Cold Storage Facility

The Agro centre has started a cold storage solution plant where there is a storage of 5 to 30 metric tons of supplies. Thus helping the farmers in keeping their production safe and not incurring losses on crops getting perished. They also mentor other FPO's regarding organic farming, diversified farming etc.

Data Centre

They have a data centre under them which is working on research and development by surveying the areas of farming and working towards how to improve the farming activities and how to generate more income for the farmers.

At NAVCHETNA Shikar

आर्गेनिक खेती अपनाने के लिए किसानों को किया जागरूक

छात्रों ने पर्यावरण की अलख जगाई

वाराणसी। डीएवी कॉलेज इको क्लब के सदस्यों ने शुक्रवार को मिर्जापुर के सीखड़ में पर्यावरण संरक्षण की अलख जगाई। इस भ्रमण का आयोजन अर्थशास्त्र विभाग की डॉ आहुति सिंह के संयोजन में किया गया। विद्यार्थियों ने क्षेत्रीय निवासियों को पौधरोपण करने और किसानों को समय समय पर मृदा परीक्षण कराने के लिए जागरूक किया। आर्गेनिक खेती की ओर बढ़ने का भी सुझाव दिया। भ्रमण दल में पर्यावरण समिति के समन्वयक प्रो. अनूप कुमार मिश्रा, डॉ. सिद्धार्थ सिंह, अंशुमान सिंह, स्तुति, सुकन्या आदि शामिल रहे।

अन्य समाचार

पर्यावरण संरक्षण के लिए मिर्जापुर के गांवों में पहुंचे छात्र

जीएसटी और टैली पर तीन दिवसीय

सीखड़ गांव में पहुंच कर Agroforestry, Renewable energy, Vermicomposting, Organic farming, community Empowerment, women Empowerment जैसे महत्वपूर्ण विषयों पर अध्ययन की शुरुआत की। इस बावत सर्वे और निरिक्षण के माध्यम से हमने गहन अध्ययन हेतु प्राथमिक डाटा भी एकत्रित किया। इस वैज्ञानिक कार्य की कोआरडिनेटर डॉ आहुति सिंह के साथ डॉ सिद्धार्थ सिंह और अंशुमान सिंह ने अहम भूमिका निभाई। नवचेतना के श्री रजनीकांत और सुकेश त्रिपाठी ने अपने सहयोगियों के साथ सारी जानकारियाँ साझा की।