Organic Farming

Vasa (Ardusi)

Sanskrit name – Vasa

Vernacular name – Ardusi

Botanical name –Adhathoda vasica

Family name –Acanthaceae

Plantation

- Block no. – 10/2
- Plantation date -08/12/2023
- Plantation technique – plants cutting
- Cutting size at the time of plantation – approx. 15-20 cm
- 4 plants was planted.

Observation (at plantation date)

- Plant was approximately 15-20 cm in length.
- Plant cutting was packed in polythene with it roots and soil.
- We made the land suitable for plantation after cleaning the block.
- Approx. 10-15 cm pit was digged for plantation.
- After removing polythene, plant was planted with its soil and covered with extra soil.

Photo (at plantation date)

Watering

- After the plantation plant were irrigated well
- No fertilizer or any other chemicals were added at the time of plantation.
- Plant size – 20-25cm
- Leaves was shrinked.

Observation (day -7)

- Plant was watered on same day.
- Leaves was in good condition not in shrunken condition.
- Stem was erected with itself.
- No insects was present.
- No fertilizer was added.

Observation (week 4)

- Well irrigated plant.
- No insects.
- Leaves was in good condition.
- No fertilizer added.
- Development was slow because of unknown reasons.
- No flowering and any other specific development.

Observation (Week 10)

- Plant was in good condition.
- Plant was erected was itself without any support.
- 1-2 flower was shown on 1 plant.
- On other 3 plants there was no flowering.
- No seeds was shown.
- No insects found.

Conclusion

- That was good experience of plantation.
- good apportunity to know about plant habitats. And their farming.

Thankyou

- Team members:-
- Vivek barad
- Lokendra Singh
- Anjali Khatri

Organic Farming

Student's name:

Gadhe Shital.

Gusai Asha.

Suva sejal

Dravya Guna department

Guided by :- Dr.Nita ma'am

Dr.Neha ma'am

Alloted plot :- 5/7

Starting date:- 23/ 12/ 23

Alloted Plant:- Unknown

Observation :

- **Seeds:**

Colour - Yellowish & brownish

Shape - bean

Size - small

1st week:-

- **After 1 weak seed are germinated**
- **Leaves are opposite, fleshy with entire margin**
- **Brownish stem**

2nd week:-

- **Hairy stem and leaf.**
- **Green stem**
- **End margin is toothed**
- **Trifoliate leaf**

3rd week:-

- **Length increases.**
- **Alternate Triafoliate leaf**

4th week:-

- **Yellowish ting in stem**
- **More growth of leaf**
- **Growth of stem**

5th week:-

· **Flower buds appear**

· **It seems in bunch**

6th week:-

· **Flower bud starts to bloom.**

· **At that time plant is identified as "Rajako".**

7th week:-

- **Purple colour flower seen on the plant.**

8th week:-

ORGANIC FARMING

ASHWAGANDHA

WITHANIA SOMNIFERA

FINDING THE PLOT

- IT IS THE VERY MOST IMPORTANT TASK FOR US AS WE FACED LITTLE BIT TROUBLE DURING THIS.
- AND FOR THIS TEACHER HELPED US A LOT
- AND FINALLY WE GOT A PLOT .
- AND OUR PLOT NO- R-12, C-8.

CLEANING THE PLOT

- SINCE WE ARE TEAM OF FOUR MEMBERS, SO WE EQUALLY DIVIDED OUR WORK .
- WE STARTED CLEANING THE PLOT ON 22ND OF DECEMBER 2023.
- AND IT TOOK ALMOST 2 DAYS OF CLEANING.

SOWING THE SEEDS

- AFTER CLEANING OUR PLOT, SEARCHING OF THE SEEDS OF ASHWAGANDHA BEGAN.
- INITIALLY WE DIDN'T GOT THE SEEDS DUE TO UNAVAILABILITY IN OUR GARDEN.
- SO WITH THE ADVICE OF CARETAKER OF GARDEN, WE GONE THROUGH THE SEED OF ASHWAGANDHA PLANT WHICH ARE ALREADY PRESENT IN OUR GARDEN.
- AFTER THIS, WE COLLECTED THE SEEDS FROM PLANT AND SOWED IN OUR PLOT ON 25TH OF DECEMBER 2023.

STEPS OF INCORPORATION

- APPROXIMATELY WE HAVE TAKEN 12 RIPENED YELLOW FRUIT OF ASHWAGANDHA.
- WE DIRECTLY SOWED WHOLE FRUIT.
- WE SPRINKLED WATER ON AREA WHERE FRUIT HAS BEEN SOWED.

OBSERVATION-JAN6

- AFTER ONE WEEK OF SOWING, THERE WAS NO ANY SEEDLINGS OF ASHWAGANDHA PLANT.
- SO WE GOT OVERTTHINKED AND DECIDED TO DISCUSS IT WITH NEHA AND NITA MA'AM.
- AND THEY TOLD US TO COLLECT THE FRUITS AND LEAVE IT FOR 6 TO 7 DAYS UNDER SUNRAYS UNTIL IT GETS DRY AND THEN SOW IT ON THE PLOT.
- WE DID IT SAME AS THEY TOLD US AND WE SOWED IT ON 6TH OF JANUARY 2024.

OBSERVATION –JAN 13

- NO TRACE OF SEEDLINGS SOWN ON JAN 6
- AT THE SAME TIME WE FOUND SEEDLINGS OF ASHWAGANDHA MATURE FRUIT SOWN ON DEC 22.
- THAT SEEDLINGS APPEARED IN CLUSTER (4-5 IN NUMBER)
- WEEDICIDE AND HERBICIDES WERE NOT USED
- WEEDS ARE REMOVED MANUALLY.

IRRIGATION

- WE HAVE DONE IRRIGATION OF PLOT ON FOLLOWING DATES
- 1ST – DEC 25
- 2ND – JAN 6
- 3RD- JAN 15
- 4TH-JAN 30
- FEW IRRIGATION WERE DONE BY GARDEN CARETAKER ON REGULAR INTERVAL

ACTIVITIES IN PLOT




OBSERVATION – FEB 21

- THERE WERE AROUND 10 TO 15 BABY PLANTS OF ASHWAGANDHA REPORTED.
- LENGHT- APPROXIMATELY 5-7CM
- LEAVES- 4TO 5 IN NUMBER, FINE HAIRS
- STEM- GREEN, FINE HAIRS
- THERE ARE 5 TO6 PLANTS WHICH ARE PRESENT IN A CLUSTER.

THANK YOU

Team members

- Surajdeo
- Sanjeev
- Akshay
- Shivam

Department Of Dravya Guna

Organic Farming

Organic Farming

Guided by :- Nita ma'm and Neha ma'm

Plot No.: R-5,11

Student Name: 1) Gajera Parthiv, 2) Chitroda Pooja

Plant Name: चन्द्रशूर - Asheliyo - Lepidium sativum L.Cruciferae

Plantation date :- 8/12/2023

Observation :

12/12/2023
Plant is started growing. There are produced buds.

27/12/2023
Plant is growing like shrub.

16/1/2024
First flower is shown in this plant.

25/1/2024
A moth are shown in this plant. It is destroyed some plant.

3/2/2024
First time fruting is shown in plant.

Seed collection from Dravya Guna Department

Plantation 8/12/2023

GERMINET 12/12/23 (5 DAYS)

AFTER 1 WEEK

After 2 week

After
3 week

After 1 month

Flowering

Fruting

Infected by microorganism

Thank you

Methi and Brahmi Growth Journal

(January 7th – February 14th)

Garden Land Alloted :-
Row 7 , Column 7 (7,7)

Chityala Saikumar
Ajay jadav
Mehul Vajani

Firstly , We dig the land.

We allowed the land to dry for 2 days.

Then we'd levelled the garden and the mass of clay.

Then We'd spreaded the Methi seeds and Sown the brahmi plant.

After that we supplied water to the plant and Observed the growth in regular weeks.

Week 1 (Jan 7th – 13th):

Methi: Seedlings emerged quickly, with tiny green stems through the soil within days. Leaves were delicate and round, growing slowly but steadily.

Brahmi: Plant took a little longer to spread compared to Methi, but by the end of the week, small, thin leaves appeared. Growth seemed slower than Methi initially.

Week 2 (Jan 14th – 20th):

Methi: Sprouts growing fastly, unfolding new leaves and reaching a few inches tall. True leaves with distinct serrated edges started forming.

Brahmi: plant grew taller and developed more leaves, but progress appeared slightly slower than Methi. Still, the small plants looked healthy and vibrant.

Week 3 (Jan 21st – 27th):

Methi: Plants continued their rapid growth, forming thicker stems and several sets of true leaves.

Brahmi: Leaves grew larger and broader, and overall plant size increased significantly. The initial slower growth seemed to even out.

Week 4 (Jan 28th – Feb 3rd):

Methi: Thinning done to allow space for individual plants to thrive. Plants responded well, growing bushier and reaching around 6-8 inches tall.

Brahmi: Continued steady growth, with leaves becoming thicker and more numerous.

Week 5 - 6 (Feb 4th – 14th):

Methi: Flower buds progressed, with some plants beginning to bloom. The characteristic fenugreek scent became noticeable in the garden.

Brahmi: Flowering continued, and seed pods matured, ready for collection. The plants maintained their vibrant green color and compact growth.

Observations:

***Methi** grew faster initially, requiring thinning to avoid overcrowding.*

***Brahmi** took a little longer to start, but its growth gradually evened out with Methi.*

Both plants responded well to regular watering and sunshine.

Methi developed a stronger scent compared to Brahmi.

Brahmi produced flowers and seeds before Methi.


Thank You...
Guided By : Nita Ma’am Neha Ma’am

ORGANIC FARMING

(Dravyaguna department)

- Students name :

  Nija adroja (roll no. 1)

  Ayushi chaudhari (roll no. 7)

- Alloted plot :

  Raw:9, column:12

- Selected plant :

  Chana (Cicer arietinum)

  Family : Fabaceae

- Starting date :

  13/01/2024

OBSERVATION

13/01/2024

• On 13th January We plough and planted chickpea.

13/01/2024

• And water in it.

16/01/2024

• After 3 days sprouts appeared on them.

23/01/2024

• After 10 days Small plants were visible.
• Small yellowish green leaves and toothed margin were present.
•Plant size :- 2-3cm

29/01/2024

•After 15 days many chickpea plants were appeared in plot . And all are grew up with increased height as well as branches.
•plant size : 5-6 cm

02/02/2024

• After few days plants were rapidly and very well grew.
• After 20days leaves turned into dark green and so many branches were seen and hight increased.
•plant size : 8-9cm

15/02/2024

19/02/2024

19/02/2024

- In 4th week height were increased and A bud was found.
- Plant size : 10-12cm

- In 5th week beautiful small pink Flowers bloomed on them and attractive to many butterflies.

24/02/2024

27/02/2024

29/02/2024

- In 6th week The fruits began to appear and will mature in a few days .
- Root of the plant (Tap root)


Organic Farming
Of Wheat

- Plot Location :

Row - 6
Column - 8

- Work Starting Date :

8 Dec 2023

We ploughed the soil to make it ready for sowing the seeds.

Then we sowed the wheat grains in the ploughed soil.

Then we supplied water to the soil.


5th Day
19th Day
6th Day
Initial
Growth
14th Day
8th Day
11th Day

Within 15 days
3 - 4 leaves
appeared.

Within a Month :

- 5 - 6 leaves appeared
- Plant attained a height of 8 - 9 cm.

Within 50 days
Spikelets appeared.
(Inflorescence of
wheat is of
spikelet type)

Within 2 months

Within 70 days

- Wheat grains started developing
- Crop height reached about 25 - 30 cm


Dravya Guna Department
SMIAS , Kolavada
Guided by :-
Dr. Nita ma'am
Dr. Neha ma'am
Plot holders :-
Ruchi
Satyaraj
Dilip

Organic farming

• Student Name:

Patel Charmy

Sangani Nikunj

Thummar Disha

• Alloted plot : 5/12

• Selected plant: Rajagaro

• Started Date: 08/12/2023

• *PLANTATION TECHNIQUE*

Soil was very hard and dry so we ploughed the land.

Then we sprinkled the seeds of rajagira.

We turned the soil upside down so the seeds gets properly covered by the soil.

Then we irrigated the land properly

• *OBSERVATION*

1st week -

Saplings were 2-3 cms

seeds started germinating and white reddish colour sprouts were visible

soon small leaves were seen

2nd and 3rd week -

By this week plant started to grow in length but was badly covered by weeds... we can not plough weeds as rajagaro sampling were very small.

4th week

Rajagaro continued to grow in length and plot looked so mesmerizing because of it's reddish dark green colour leaves

5th and 6th week.

During this period fertilizer was sprinkled

It was cherry on cake when flowering started. Though the height of plant was not sufficient but beautiful red coloured inflorescence started to appear flowers were seen only on 3-4 plants.

7th and 8th week

At the end of January majority of plant had their flowering phase

Recent

Guided by

Neeta ma'am

Neha ma'am


SEED BANK

Guided by

Department of Dravyaguna, SMIAS

Vd. Nita Rawal

Vd. Neha Parmar

Work done by us :-

- The seeds were already collected by gardener of Bhavprakash Herbal Garden. We identified the collected seeds, classified them according to families and we documented them in a scientific way along with vernacular name.

Some glimpses of our work

Some glimpses of our work

Some glimpses of our work

Storage

List of plants

A	B	C	D	E	F
Sr. No.	Drug Name	Latin Name	English Name	Hindi Name	Gujarati Name
1	बाकुची	*Psoralea corylifolia*	Psoralea seed	Bavachi	Bakuchi
2	बिभीतकी	*Terminalia bellerica*	Belleric myrobalan	Baheda	Baheda
3	गुञ्जा	*Abrus precatorius*	Rosary pea	Gunja	Chadothi
4	एरण्ड	*Ricinus communis*	Castor	Eranda	Divel
5	रक्त चन्दन	*Pterocarpus santalinus*	Red sandalwood	Rakta Chandana	Sukkhada (lal)
6	भिण्डिका	*Abelmoschus esculentus*	Lady finger	Bhindi	Bhinda
7	पृश्निपर्णी	*Uria picta*	Uria Picta	Prushniparni	Prushnaparni
8	कुष्माण्डक	*Cucurbita pepo*	Pumpkin	Kaddu	Kodu
9	बरबरीक	*Ocimum basalicum*	Basil	Takmariya	Takamariya
10	असेरीयो	*Lapidium sativum*	Garden cress	Aseriyo	Asaariyo
11	सूर्यावर्त	*Helianthus annus*	Sunflower	Surajmukhi	Suryamukhi
12	कासमर्द	*Cassia occidentalis*	The negro coffee / Coffee seeds	Kasaundi	Kasundra
13	राजगीरी	*Amaranthus cruentus*	Amaranth	Rajgira	Rajgaro
14	विकृतम्	*Manikara zapota*	Chickoo	Chikoo	Chikudi
15	अजमोदा	*Apium graveolens*	Carom seeds	Ajwain	Ajmo
16	दमनक	*Ocimum basalicum*	Sweet Basil	Damnaka	Damro
17	मार्कण्डिका	*Senna auriculata*	Avaram Senna	Sona mukhi	Mindhi Aavad
18	अरिष्टक	*Sapindus laurifolius*	Soap nut	Aritha	Aritha
19	अश्वगन्धा	*Withania somnifera*	Winter cherry	Asgandha	Ghodahad

Labelling


SEED BANK
NAME OF DRUG :- Ashvgandha
BOTANICAL NAME :- Withania somnifera
GUJARATI NAME :- Ghodahad
DATE OF COLLECTION :- Oct, 2023


SEED BANK
NAME OF DRUG :- Bibhitaki
BOTANICAL NAME :- Terminalia bellirica
GUJARATI NAME :- Baheda
DATE OF COLLECTION :- Oct, 2023


SEED BANK
NAME OF DRUG :- Gunja
BOTANICAL NAME :- Abrus precatorius
GUJARATI NAME :- Chanothi
DATE OF COLLECTION :- Oct, 2023


SEED BANK
NAME OF DRUG :- Bakuchi
BOTANICAL NAME :- Psoralea corylifolia
GUJARATI NAME :- Bakuchi
DATE OF COLLECTION :- Oct, 2023

Method of seed preservation :-

* Preserving seeds at the college level involves several steps to ensure their viability for future use:

1. Selection of Seeds: Choose seeds from healthy, mature plants of desired varieties for preservation.

2. Cleaning and Drying: Remove any debris or pulp from the seeds and air-dry them thoroughly to prevent mold formation.


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3. Labeling: Clearly label each seed packet with essential information such as plant species, variety, date of collection, and any other relevant details.

4. Storage Containers: Use airtight containers such as glass jars or plastic bags to store the seeds. Make sure the containers are clean and dry before adding seeds.

5. Desiccants: Include desiccants like silica gel packets to absorb any moisture inside the storage containers, helping to prevent seed deterioration.

6. Cool, Dry Storage: Store the seeds in a cool, dry place away from direct sunlight to maintain their viability. A temperature range of 32-41°F (0-5°C) is ideal for most seeds.

7. Regular Monitoring: Periodically check the stored seeds for signs of mold, pests, or moisture. Replace desiccants if they become saturated.

8. Seed Viability Testing: Conduct germination tests on a sample of seeds at regular intervals to assess their viability. Replace any seeds showing low viability.

9. Documentation: Maintain records of seed preservation activities, including seed sources, storage conditions, viability tests, and any other relevant data.

10. Sharing and Exchange: Consider sharing preserved seeds with other educational institutions or participating in seed exchange programs to diversify seed collections and promote conservation efforts.

By following these steps, college-level seed preservation efforts can contribute to biodiversity conservation and support research and educational activities in agriculture and related fields

Importance of seed collection :-

Seed collection is important for several reasons:

1. Biodiversity Conservation: Seed collection helps preserve genetic diversity within plant species. By collecting seeds from various populations, we can conserve unique traits that may be important for future breeding programs or for adapting to changing environmental conditions.

You can describe the topic of the section here

You can describe the topic of the section here

2. Crop Improvement: Seed collection provides a vital resource for plant breeding and genetic improvement programs. By selecting seeds from plants with desirable traits such as disease resistance, high yield, or drought tolerance, breeders can develop new crop varieties better suited to specific growing conditions or agricultural needs.

3. Food Security: Preserving a diverse range of seeds ensures resilience in food production systems. If a particular crop variety becomes susceptible to pests, diseases, or environmental stresses, alternative varieties with different genetic backgrounds can help maintain food production and security.

Importance of seed

4. Medicinal and Nutritional Resources: Many plant species contain compounds with medicinal or nutritional value. Seed collection preserves the potential for discovering and utilizing these valuable resources for pharmaceuticals, nutraceuticals, and functional foods.

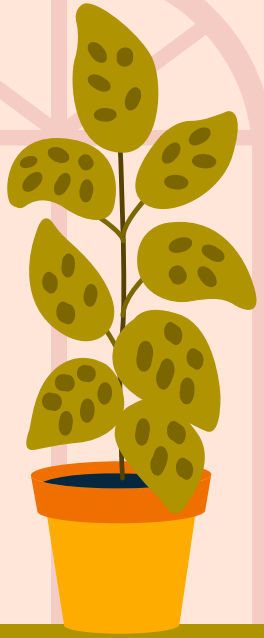
5. Ecological Restoration: Seed collection plays a crucial role in ecological restoration projects by providing plant material for reestablishing native vegetation in degraded habitats, such as wetlands, forests, and grasslands. Collecting seeds from local plant populations helps maintain the genetic integrity of restored ecosystems.

6. Research and Education: Seeds collected from diverse plant species serve as valuable resources for scientific research, education, and conservation efforts. They enable studies on plant genetics, physiology, ecology, and evolution, fostering a deeper understanding of plant biology and ecosystem dynamics.

7. Cultural Heritage Preservation: Seed collection also contributes to the preservation of cultural heritage by safeguarding traditional crop varieties and heirloom plants that hold cultural significance for indigenous communities and agricultural traditions.

Overall, seed collection is essential for maintaining biodiversity, improving agricultural productivity and sustainability, enhancing food security, supporting ecosystem restoration, advancing scientific knowledge, and preserving cultural heritage.

Future plans :-



- The collected seeds can be used for research purposes.
- The collected seeds of a plant can be used to cultivate that particular plant.
- The seed bank will continuously grow and in future, our juniors will carry on this project.


!!Thank you!!

◆ Oraganic farming Report

◆ Dravyguna department

Guided By:

Vd.nita mam

Vd.neha mam

Plant name:

Shatavari(asparagus racemosus)

Students name:

Kavita prajapat
Khushi Dama
Arti Mahla
(2nd year2021-22)

Plot no:11/8

Date:8/12/2023

Creeper plant

Procedure:-

First we clean our plot area.

Then take 5 shatavari plant from our garden.

These 5 plants planting in our area.

Observation:

- We planting Shatavari on 12/12/23.
- After 2 week shatavari plants were grow gradually.
- green stem seen in shatavari plants.
- 3 plants in growing in stage.

- In third-fourth week thron were seen in shatavari plants.
- Size of plant increase, leaves also seen
- We irrigation in plants every 10 days.
- In 5-6 th week increase the size and needle leaves are clear seen

- In8-9 week shatavari plants are good growing.
- Shatavari leaves are increase.
- Plant size increase.
- We don’t use any pesticides.

Uses

- As a rasyana.
- Vayasthapan
- In stanyakshaya

Thank you

Organic farming

- **Name :-**

  Yash Gohil (Roll no. 17)

  Abhishek Gondaliya (Roll no.18)

- **Allotted plot:-**

  raw : 4 , column: 12

- **Selected plant:-**

  Sunflower (Helianthus annuus)

  Asteraceae family

- **Starting date :-**

  8/12/2023

- **Observation :-**

- O**n 8th December** We farmed and planted sunflower .

- **After two Weeks** Small plants were appeared with 2 big leaves and 2 smaller .

(21st December 2023)

- **After four weeks** Plants were grew up having 4 or more leaves.
Plant size :- 3 – 4 cm
(7th January 2024)

- **After six weeks** Plants grew very well but numbers of weeds grew up.
Plant height:- 10-15 cm
(29th January 2024)

- **After seventh week** Height of the plant increased and We took out the weeds .
Plant height:- 15-20m
(3rd February 2024)

- **After 8th week** numbers of the leaves increased and small bud was started to appeared.
Plant height :- 25cm
(10 February)

- **After 10th week** Plant grew very well and buds were also appeared in almost all the plans.

Plant height:- 30 -35 cm

(20th February 2024)

- **After 11th week** very fabulous yellow colored Flowers bloomed and Many flowers are still blooming . (26th February 2024)

Plant height:- 45-50 cm

Organic Farming

Guided by:-Department of Dravya

Guna 1)Nita Ma'am,

2)Neha ma'am

Plot No :-2/7

Student Name:1)Arvind ,2)Mayur

Sanskrit Name:Vasa

Latin Name:Adhathoda Vasica

Starting Date:8/12/2023

Observation

8/12/2023

- Started Plantation

15/12/2023

- New Leaf buds Observed

25/12/2023

- Branches started becoming Brown from Green

05/01/2024

- Some leaves started becoming yellow

20/01/2024

- Removed Unwanted weeds from tha field

29/01/2024

- Plant Has Grown in Size

10/02/2024

- We Have Again Removed Unwanted weeds

25/02/2024

- Leaves Which had started becoming Yellow Had Fully Become Yellow

28/02/2024

- Favourable Season For Vasa is Monsoon so No Remarkable Changes Observed.

- **We Have given Water to the plant at a Interval of 2 week**
- **We Have Not Used Any Fertilizer**
- **No Flowering or Fruiting observed**
- **No Insect Found on plant**

Plantation Technique

- Plantation Done by Cutting Method


Thank you