Rayat Shikshan Sanstha's
Dahiwadi College Dahiwadi
Department of B.Voc in Agriculture
Campus Project Name : College Farm

About College Farm:

Dahiwadi college farm is of 8 acres which includes irrigated and dry land. Custard Apple, Aonla, Apple Ber, Pomegranate, Tamrind, Guava, Sapota and Drumstick farming and production are the recent advances in the field of agriculture where we are implanting all these methods of production of crops which provides immense knowledge to the students and it will turn useful for the farmers in using recent technologies from increasing production and productivity in Tahsil of Man.

Custard Apple:

Custard apple (Annona squamosa L.,) can be called as a delicacy of dry region due to its very sweet delicate flesh. It is a deciduous or semi deciduous tall woody shrub of about 5-6 meters.Being a hardy fruit tree, Custard apple thrives naturally in rocky terrain with shallow, gravelly, well drained soils. A cross-pollinated crop, it has wide variations in forms and size of fruit as well as the color of the pulp. The fact that it is called ***Sitaphal*** in all major Indian languages. Custard apple trees do not need much water or expensive fertilizers and pesticides. Maharashtra leads the country in Custard apple production, followed by Gujarat, Madhya Pradesh and Chhattisgarh.

In our college farm Custard apple varieties of NMK (Super golden) (No.300) planted by spacing with 12 X 8 fit, during 5th to 7th july, followed that installation of drip irrigation and lay out for intercropping of Drumstick varieties PKM- 1, From planting up to 1 year carry out operation likewise application of fertilizer, drenching, spraying, topping and other special horticulture practices likewise.

Aonla (Amla):

Aonla (Emblica officinalis) grafted varieties Banarsi (No.80) is planting during 7th to 9th august 2019 with a spacing of 12 X 10 fit in pits of 1mX 1m, after that irrigate the plants for establishment. No irrigation is required during rainy and winter season. Followed that installation of drip irrigation after planting up to 1 year carry out operation likewise application of fertilizer, drenching, spraying, topping and other special horticulture practices likewise.

Apple Ber:

Apple Ber (Ziziphus mauritiana) grafted varieties (No.40) planting during12 to 14th august 2019 with a spacing of 14 X 10 fit in pits of 1m X 1m, Followed that installation of drip irrigation after planting up to 1 year carry out operation likewise application of fertilizer, drenching, spraying, topping and other special horticulture practices likewise.

Pomegranate:

Pomegranate (Punica granatum) air layering varieties Super bhagava (No.25) planting during 12 to 14th august 2019 with a spacing of 12 X 9 fit in pits of 60cm X 60cm 60cm, Followed that installation of drip irrigation after planting up to 1 year carry out operation

likewise application of fertilizer, drenching, spraying, topping and other special horticulture practices likewise.

Tamarind:

Tamarind grafted varieties Pratishtan (No.150) planting during 5th to 7th July 2019 with a spacing of 12 fit in pits of 60cm X 60cm 60 cm, around the 400 mtrs. track. Followed that installation of drip irrigation after planting up to 1 year carry out operation likewise application of fertilizer, drenching, spraying, topping and other special horticulture practices likewise.

Farm Pond:

A farm pond is a dugout pond for water storage. It is used as an alternative to check dam where the topography does not permit the storage of water by construction of embankments. The water is obtained by pumping through a bore-well or by rain water harvesting. Total area of a land under the farm pond is about 6 R, which have 100 fit length, 60 fit width and 23 fit depth, having 30 lakh liters capacity which is supported to 8 acres land for irrigation.

Advantages of a College Farm Pond:

- Irrigation : Raising nursery or for protective irrigation of crops
- Creates water resource for the tough months of summer when shortage is acute.
- Ground water rejuvenation if there is no lining.
- Fodder and vegetables cultivation.

Plantation of Custard Apple

Plantation of Aonla (Amla)

Platation of Apple Ber

Plantation of Pomegranate

Farm Pond

Rayat Shikshan Sanstha's
Dahiwadi College Dahiwadi
Department of Botany

Botanical Garden Report

Importance of Botanical Garden:

Botanical garden is the institution that maintains the living plant collections of different varieties of plants, including the ornamental and cultivated wild medicinal, of economic importance, of various geographical regions and special interest etc.

Botanical garden of Dahiwadi College Dahiwadi is well-tended park displaying a wide range of plants labelled with their botanical names. They contain specialist plant collections such as cacti and succulent plants, herb gardens, plants from particular parts of the Western ghats of Maharashtra etc. There is polyhouse and shadenets with special collections.

Medicinal Plants in Garden:

The term "**medicinal plant**" includes various types of plants used in herbalism ("herbology" or "herbal medicine"). It is the use of plants for medicinal purposes and the study of such uses. Herb refers to any part of the plant like fruit, seed, stem, bark, flower, leaf, stigma or a root, as well as a non-woody plant.

These medicinal plants are also used as food, flavonoid, medicine or perfume and also in certain spiritual activities.

Sr.No.	Name of the Medicinal Plants	Sr.No.	Name of the Medicinal Plants
1	*Rauwolfia serpentina*	8	*Vetiveria zinzanioides*
2	*Hemidesmus indica*	9	*Tinospora cordifolia*
3	*Datura media*	10	*Adhatoda vasica (zeylanica)*
4	*Spilanthus paniculata*	11	*Helictera isora*
5	*Gloriosa superba*	12	*Holarrhena antidysentrica*
6	*Asparagus racemosus*	13	*Bixa orientalis*
7	*Gmelina arborea*	14	*Curcuma aromatica*


Ornamental Plants in Garden:

Ornamental garden]plants are grown for the display of aesthetic features including: flowers, leaves, scent, overall foliage texture, fruit, stem and bark, and aesthetic form. In some cases, unusual features may be considered to be of interest, such as the prominent thorns of *Rosa sericea* and *cacti*. In all cases, their purpose is for the enjoyment of gardeners, visitors, and the public institution






Rayat Shikshan Sanstha's
Dahiwadi College, Dahiwadi
Department of Zoology
Apiculture Incubation Centre

Apiculture is the practice of culturing and the maintenance of honey bees and bee colonies for commercial production of mainly honey and beewax as well as other products.

Considering the present need of better livelihood, Department of Zoology, Dahiwadi College, Dahiwadi started the practice of Apiculture under Livelihood Business Incubation Center which is approved by MMSME, Govt. of India. The practice was initiated in 2014 with broad vision.

Main objectives of the project are as follows:

1. Provide modern knowledge of bee keeping to the students and farmers.
2. Motivate the farmers to setup the apiculture unit.
3. Undertake research, training and development activities.
4. Conservation of natural resources.

Dahiwadi area belongs to the drought prone region which holds very limited natural resources. Development of agro based industries can play important role in rural development. Apiculture is important low cost agro based project which raises the production of crop and adds the benefits of different products of apiculture. Hence it can be easily adopted by economically backward people.

Presently under this program, a number of students and farmers are benefitted by providing hands-on training program and they are practicing bee keeping as additional self employment.

Our Vision

To develop the advance Apiculture Research Centre for better understanding and management of honey bees and its products.

Dr. Tejas Patil
Co-ordinator


Latitude: 17.703245
Longitude: 74.539766
Elevation: 737.65m
Accuracy: 3.8m
Time: 30-09-2019 14:20
Note: image 1

SOIL & WATER TESTING LABORATORY

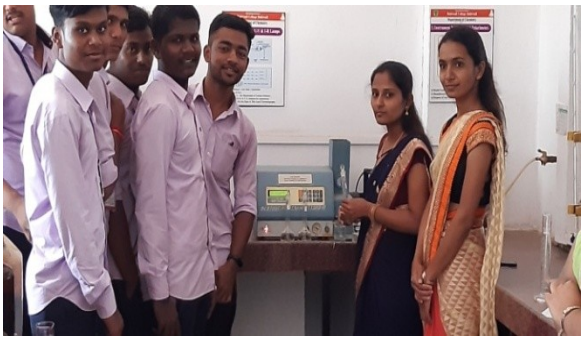
Rayat Shikshan Sanstha's, Dahiwadi College Dahiwadi runs Soil and Water analysis through Soil and Water Testing Laboratory. This Laboratory is recognized by Govt. of Maharashtra: JDAKOP/STR/STLR No. 03/2018 dated.25/5/2018. Large numbers of students of the college have a farmer background and they are dependent on the agricultural income. Keeping this view in mind, college has started this campus project. The aim of establishing of this laboratory is -

1. To create awareness regarding soil and water testing among the students through project.
2. To give farmers a service leading to better and more economic use of fertilizers and better soil management practices for increasing agricultural production.
3. To know the bad impact of excessive use of fertilizer and excess water to agriculture among the students and society..

In this laboratory following parameter of the soil is tested according to the norms of Maharashtra government

1.Nitrogen ,Phosphrous ,Potassium - (Macro-nutrients); 2- Sulpher (Secondary- nutrient); 3- Zinc, Iron, Copper, Manganese , boron (Micro - nutrients); and pH, Electrical Conductivity, Organic Carbon, Water Holding Capacity (Physical parameters).

AAS, Flame Photometer, Double beam Spectrophotometer, Kjeldhal's apparatus, Ph meter, Conductometer, Shaker, Double Distillation Unit etc instrumentation facilities are available for performing the soil and water testing .We provide this facility to all in affordable cost.



Rayat Shikshan Sanstha's
Dahiwadi College Dahiwadi
Department of B.Voc in Agriculture
Campus Project : Polyhouse

What is a polyhouse?

Polyhouse or a greenhouse is a house or a structure made of translucent material like glass or polyethylene where the plants grow and develop under controlled climatic condition.

Fig 1 Polyhouse

Crops grown in our college polyhouse:

During year December 2018 to April 2019 we had taking production of Cucumber, Fenugreek and Coriander on area of 2.5 R.

Benefits of Polyhouse:

Polyhouse is very beneficial for the farmers specially those who prefer organic farming.

- Your plants are grown under controlled temperature thus there is less chances of crop loss or damage.
- You can grow crops throughout the year and will not have to wait for any particular season.
- There is less pest and diseases infestation in polyhouse.
- External climate will not have any impact of the growth of crops.
- Quality of produce is obviously higher in polyhouse.
- Good drainage and aeration.
- Polyhouse gives the right environmental facilities to your plants in any season.
- It also increases yield for about 5 to 10 times.

- Less cropping period.
- Fertilizer application take easily.

Introduction of poly house cucumber production:

Cucumber is the one of the widely grown plant in the gourd family for its dark green vegetable. It is a creeping vine that roots in the ground and grows up trellises or other supporting frames, structures, spiraling tendrils. The cucumber plant may also root in a soil less medium such as hydroponic system. The cucumber vine has large leaves with a form of canopy over the fruits. However cucumber can be as large as 60 centimeters long and 10 centimeters in diameter.

Sci. Name: *Cucumis sativus*

Family: Cucurbitaceae

Verities taken in polyhouse:

Namdhari seed 46 (NS 46) self pollinated

Growing condition for polyhouse cucumber production:

- Select a polythene polyhouse with abundant light and ventilation.
- For better plant growth, the optimal humidity in the polyhouse should be maintained.
- As high humidity result in powdery mildew disease, ventilation can be adjusted to maintain optimum temperature and humidity.

Propagation of cucumber in polyhouse:

Cucumbers were propagated by seeds.

Irrigation/ nutrient supply in polyhouse cucumber production:

- In cucumber, we must use organic fertilizer, micro-nutrients and plant growth regulators for nutrients supply through irrigation.
- Application of required potassium and phosphorus and little amount of nitrogen before planting.

Flowering in polyhouse cucumber production:

Cucumber under polyhouse conditions produces fruits without pollination.

Fig. 2 Flowering of polyhouse cucumber

Harvesting of poyhouse cucumber:

Harvesting time can be 4 to 6 weeks after sowing/ seedling. With help of sharp knife or a sickle, cut the cucumbers by leaving 1 to 2 cm of stalk at the end of the fruit.

Fig 3 & 4 Harvesting of cucumber

Yield and marketing of polyhouse cucumber:

Yield of cucumber depends mostly on verities, nutrient supply, irrigation management and climatic condition of a polyhouse. In a polyhouse obtain a there about 50 to 70 tones cucumbers /ha.

Marketing of Cucumber:

Freshly harvested cucumbers it may be transported to local market like eg,. Dahiwadi, Vaduj, College Staff and gondavale.

Fig. 5 Marketing stall

RET Plants in Garden

The Mountains of the Western Ghats are the second most important shelter in the world for threatened species. The current need is conservation assessment of rare, endangered and threatened species (RET) of the southern Western Ghats. A species is endangered when it is threatened with extinction. Since time began, countless species have gone extinct from natural processes.

List of RET Plants Conserved in Garden:

Sr.No.	Name of the RET Plants	Sr.No.	Name of the RET Plants
1	*Ferea indica*	10	*Ceropegia noorjahani*
2	*Rauwolfia serpentina*	11	*Ceropegia bulbosa*
3	*Aponogeton satariensis*	12	*Ceropegia jainii*
4	*Delphinium malbaricum*	13	*Barleria prionitis*
5	*Ceropegia media*	14	*Barleria cristata*
6	*Ceropegia vincaefolia*	15	*Barleria lupulina*
7	*Barleria crenatus*	16	*Abitulton ranadei*
8	*Zamia species*	17	*Garcinia indica*
9	*Mappia foetida*	18	*Anthocephalus kadamba*

Rayat Shikshan Sanstha's

Dahiwadi College Dahiwadi

Department of Botany

Conservation of local seed varieties

The short term course entitled **Conservation of local seed varieties** is conducted by Department of Botany, Dahiwadi College Dahiwadi. Conservation of local seed varieties is the main objective of the course is conservation and multiplication of local seed varieties.

This course started for the T.Y.B.Sc. students for their basic knowledge. Conservation of the local seed varieties and to improve importance of local seed varieties.

Conservation of seed is important as most of the indigenous seeds. They are likely to be extinct due to exploitation of hybrid and high yielding varieties by large seed production companies. They can not be saved season to season and have applied patents on these products .

Conservation of local seeds means conservation of wild quality of seeds . This course is helpful for the students for development of local varieties .

No. of benifiatiary- 9 students for this academic year . Duration of this course is three months. We teach the students for general collection, conservation, multiplication , Disease diagnosis and their control measures of local seed varieties .The Examination conducted in the Month December to February. Course runs under able guidance of Principal Dr. B. T. Jadhav .

Coordinator
(Prof. V.V. Kamble)

Head
Department of Botany