NAVSARI AGRICULTURAL UNIVERSITY

DEPARTMENT OF FRUIT SCIENCE

ACHF NAU
Let's Bloom Human Fruition

FUTURE PLANS

VISION

Augmenting the share of horticulture sector in GDP of the state through research and education.

MISSION

Generation of human resources through quality learning and development of cost-effective and viable technologies.

MANDATE

Teaching:

- UG & PG level as well as Guiding up to PG level.
- Coaching classes for SRF/JRF/NET Exam.
- Motivation of students for different projects.

Research:

- Collection, evaluation and maintenance of germplasm of important fruit crops *viz.*, mango, sapota, banana, papaya and coconut.
- Developing high yielding, disease and insect-pest tolerance varieties / hybrids of fruit crops with better quality.
- Production of grafts / planting materials of various fruit crops.
- Developing improved production technology in various fruit crops.
- Rejuvenation of old mango and sapota orchards.
- Ultra high density and canopy management in fruit crops.

Extension:

- Participation in *Krishi Mahotsava*- a flagship programme of GoG.
- Organizing fruit exhibition-cum-competition, Farmers' training, *shibir* etc.
- To disseminate ToT through publications.

- TV telecast and radio talks on various aspects of fruit crops.
- "*Mera Gaon Mera Gaurav*" and Farmers FIRST programme related activities.
- Diagnostic visit to farmers' field.

SWOT Analysis

STRENGTH

1) At present, Government Organizations, State Agricultural Universities and Non-Government Organizations are involved in increasing acreage and production of major tropical and sub-tropical horticultural crops.
2) Area under horticultural crops is increasing year by year.
3) Climate of Western India is highly suitable for various types of fruit, vegetable and flower crops especially tropical, subtropical and arid.
4) Western India is rich in plant biodiversity that could be utilized for developing promising cultivars of desirable traits, especially underutilized fruits tamarind, jackfruit, jamun, lasoda, custard apple etc.
5) Technologies have been developed for rejuvenation of old and senile orchards to increase productivity.
6) Gujarat has a long sea coast which is highly suitable for coconut and palms.
7) An increase in area under horticultural crops as a result of assured irrigation facility being provided by Government.
8) Government policies are supportive for horticultural development and other required infrastructure.
9) Technologies have been established for by-product utilization of mango, banana etc.
10) Technologies developed for off season and early sowing which provide better remuneration in strawberry.
11) Vansada and surrounding area has emerged out as nursery hub of the state because of favourable agro-climatic conditions for plant multiplication.

12) Horticultural processing industry is the emerging sector for food processing and value addition.
13) Highly qualified faculty members and well-equipped laboratories are available to develop new innovative technologies.
14) Availability of facilities to initiate new horticulture college at Paria.

WEAKNESS

1) Unawareness of farmers in respect to cultivation practices and export.
2) Maximum area under fruits crops (sapota, mango, cashew, coconut) is covered by single variety.
3) Unavailability of quality planting material in fruits like cashew, papaya and underutilized fruits.
4) Less knowledge about value addition and waste utilization of major fruits crops.
5) Volatile markets and market intelligence.
6) Lack of standard grafting techniques for cashew and unutilized fruit crops.
7) Shortage of trained human resources in horticulture.
8) Lack of improved production technology for problematic soils / coastal regions.
9) Lack of standard package of practices for underutilized fruit.
10) Unavailability of off-season, regular bearing extended fruiting duration cultivars with longer shelf life in horticultural crops.
11) Lack of complete protocol for post harvest management and processing of most of fruits.
12) Lack of trained supporting manpower for processing and value addition
13) High capital investment required for setting up of the processing units.
14) Lack of processing technologies for underutilized fruits.

OPPORTUNITIES

1) Lots of barren/ fallow land and hilly tribal belt of Western India.
2) Long coastal tract of Gujarat and problematic areas.
3) Introduction of newly released varieties/ hybrids in horticultural crops.

4) Higher domestic and international demand due to rich source of anti-oxidants, nutrients and medicinal values of horticultural crops.
5) More adoption of precision farming technologies namely fertigation, high density plantation, protected cultivation for fruit crops, organic farming and rejuvenation of senile orchards
6) Fruit crops based cropping systems *viz*., intercropping, mixed cropping, multistory cropping
7) The central government has declared several Agri-Export Zones (AEZ) in Western India for different fruit crops.
8) Huge production of fruits in the south Gujarat.
9) Linear increment in demand for value added products.
10) Value addition and their by-product utilization is the emerging field to augment the income of the farmers.
11) Agility and empowerment of young research team in Post Harvest Management.
12) Higher demand for nutraceutical and functional foods due to increased health concern.
13) Subsidies are being provided by Government for setting up of protected structures and processing Units.
14) Export of processed horticultural commodities.
15) Increasing intake of students for generation of human resources in field of horticulture.

THREATS

1) Highly perishable in nature.
2) Static productivity due to injudicious use of fertilizers, old orchards, pest/ disease problems and lack of knowledge.
3) Erratic and irregular rainfall.
4) Effect on flowering and fruiting due to climate change.
5) Unstable market assurance and gluts.
6) Lack of export policy.

7) Heavy monetary loss due to high post harvest losses.
8) High dose of preservatives in the processed products which are hazardous for human health.
9) Unavailability of skilled trained manpower for maintenance of processing plants.

FUTURE PLAN

1. Production of graduates and postgraduates in the field of Fruit Science.
2. To speed- up the activities of research in the area of Fruit Science.
3. Introduction to evaluation of new fruit crops.
4. To prepare planning for different types of extension activities and training programs.
5. Provide quality planting material of fruit and vegetable crops to farmers.
6. Development of pruning techniques in high density planting of mango.
7. Development of rejuvenation techniques for old and overcrowded mango and sapota.
8. Feasibility of organic farming in mango and sapota.
9. Requirement of heat units for fruit maturity of mango varieties.
10. Requirement of micronutrients in papaya.
11. Study on effect of graded doses of paclobutrazol on mango cv. Alphonso.
12. To develop post harvest technology for different fruit crops.
13. Breeding programmes on commercially important fruit crops of this area.
14. Survey and collection of germplasm for different fruit crops.
15. Publication of extension literatures.