



**Department of Botany**  
**Maharshi Dayanand University Rohtak**  
(NAAC Accredited 'A' Grade)

**Strategic Plan (2018-2023)**

## **About the Department**

Department of Botany was established in the year 2009 under the Faculty of Life Sciences. The Department is internationally known for its contribution in the field of Plant Biotechnology, Plant Biochemistry, Nanobiotechnology, Stress Physiology and Ethnobotany. The department runs M.Sc Botany program with an annual intake of 40 students and Ph.D. Programme in Botany. The Department has been financially strengthened by research projects from UGC, SERB-DST, Haryana State Council for Science and Technology (HSCST) and DST-FIST. There are six regular Teaching Faculty Members in the Department.

## **Vision**

Inspiring and motivating the students to utilize the knowledge of “Plant Sciences” to solve the future needs of “Food, Fuel, Energy and Environment” for the betterment of human life and society.

## **Mission**

The Department endeavour to make substantial contribution in the field of “Plant Sciences” by way of research and produce competent students who are not only well versed with the subject but are also better adjusted socially, emotionally and intellectually.

## **Strategic Goals**

- **To Improve Academic Quality**
- **To Improve Teaching and Learning Quality**
- **Plans to Improve Research Quality**
- **To improve Course Employability**
- **Plans to improve Inclusiveness and Social Impact**
- **Improvement in the Extension Activities**
- **Collaborations**

## **SWOC Analysis**

### **Strength**

- Qualified and competent faculty members.
- Diverse specialization of faculty members and their continuous efforts to update their subject knowledge and related skills
- Ability of the department to procure extra mural funds to strengthen research and teaching
- Publication of research articles in good international and national journal with impact factor
- Excellent infrastructure to support and complement the teaching and research activities

### **Weakness**

- None of the major paid journals/databases are available online in the University
- Attempts for scientific deliberations and interactions to foster collaborative research should be more focused.
- Post-doctoral research culture should be promoted.
- Central instrumentation facility of the Department needs to be enriched.

### **Opportunities**

- The department offers M.Sc. and Ph.D. courses in Botany, which are very popular and highly sought after.
- The Department may lead to the interdisciplinary Life Sciences research in collaboration with other departments.

### **Challenges**

- To maintain the popularity of the course in the wake of fewer job opportunities
- To motivate the students to go for post doctoral research in India and abroad given the socio-cultural environment of the region.

## **Action Plan**

### **2018-2019**

#### **1. To Improve the Academic, Teaching and Learning Quality**

- ✓ Maximum utilization of available resources, instruments, techniques and ICT material will be ensured
- ✓ Expert support services and counselling sessions to support learning, general well being including the mental health will be provided.

#### **2. To Improve Research and Extension Activities**

- ✓ Efforts will be made to fetch Research and Development grants from DST, DBT, UGC, HSCST and various other central/state government organizations
- ✓ Organization and participation in seminars, symposia, conferences, training programs, extension lectures will be more frequent.

#### **3. To improve Inclusiveness and Social Impact**

- ✓ Plants provide solution to three main challenges facing the society today: food, fuel and energy. Society will be sensitized about how plants can help achieve these goals and fulfil the demands of growing population via community based projects involving direct on site interaction with the stakeholders, field trips, plantation and environment awareness drives, lectures etc.

### **2019-2020**

#### **1. To Improve the Academic, Teaching and Learning Quality**

- ✓ Course updation in line with the UGC modal curriculum and NET examination will be done to make the teaching-learning more relevant.

- ✓ Regular academic audit and feedback from the students will be sought for improvement of the academic content and environment
  - ✓ Department will introduce new course or add contents on “Environment health and lab safety” in the existing courses in the Ph.D. course work.
  - ✓ ICT based teaching and learning will be encouraged.
- 2. To Improve Research and Extension Activities**
- ✓ Department will ensure installation of fire extinguishers in the department.
  - ✓ Measure for appropriate disposal of the hazardous waste in all the research labs will be discussed and implemented.
  - ✓ Efforts will be made to fetch Research and Development grants from DST, DBT, UGC, HSCST and various other central/state government organizations
  - ✓ Efforts will be made to organize at least one seminar/symposia/conference and at least four extension lectures in the academic year.
- 3. To improve Inclusiveness and Social Impact**
- ✓ Plants provide solution to three main challenges facing the society today: food, fuel and energy. Society will be sensitized about how plants can help achieve these goals and fulfil the demands of growing population via community based projects involving direct on site interaction with the stakeholders, field trips, plantation and environment awareness drives, lectures etc.

## **2020-2021**

- 1. To Improve the Academic, Teaching and Learning Quality**
- ✓ Department will introduce new discipline specific elective in the M.Sc. Botany scheme of examination. Few proposed courses are on Plant, Soil and Environment, Nan biotechnology and horticulture.
  - ✓ Learning goals and outcomes will be revised before each semester.
  - ✓ Pedagogy for direct teaching-learning will be reviewed and improved thereafter.
- 2. To Improve Research and Extension Activities**
- ✓ Department will ensure that each research lab in the department has fume hoods/exhaust
  - ✓ Efforts will be made to fetch Research and Development grants from DST, DBT, UGC, HSCST and various other central/state government organizations
  - ✓ Department may also apply for FIST level 2 grant.
  - ✓ Efforts will be made to organize at least one seminar/symposia/conference and at least four extension lectures in the academic year.
- 3. To improve Inclusiveness and Social Impact**
- ✓ Social participation for better environment and sustainability will be ensured through community based programs
- 4. To improve Employability**
- ✓ Short term training programs on landscape designing may be conducted.

## 2021-2022

### 1. To Improve the Academic, Teaching and Learning Quality

- ✓ The courses will be made academically more challenging by incorporation of newest developments in the respective field and analyzing the learning objectives and outcomes.

### 2. To Improve Research and Extension Activities

- ✓ Efforts will be made to fetch Research and Development grants from DST, DBT, UGC, HSCST and various other central/state government organizations
- ✓ Opportunities for collaborative research with renowned institutes such as JNU New Delhi; GJU Hisar; NIPGR New Delhi; ICGEB New Delhi; IARI; CSIR laboratories, ICAR, Amity University Noida, University of Massachusetts, USA; Texas A&M Agrilife Research USA etc will be identified and developed further.
- ✓ Efforts will be made to organize at least one seminar/symposia/conference and at least four extension lectures in the academic year.

### 3. To improve Inclusiveness and Social Impact

- ✓ Public sensitization program on the importance ecosystem sustainability will be organized
- ✓ Field trip/excursion tour for the students of the dept. will be organized.

### 4. To improve Employability

- ✓ Short term training programs on mushroom cultivation may be conducted.

## 2022-2023

### 1. To Improve the Academic, Teaching and Learning Quality

- ✓ Course curriculum for M.Sc and Ph.D programs will be reviewed and revised and assessed on the basis of learning outcomes in each semester.

### 2. To Improve Research and Extension Activities

- ✓ Efforts will be made to fetch Research and Development grants from DST, DBT, UGC, HSCST and various other central/state government organizations
- ✓ Efforts will be made to organize at least one seminar/symposia/conference and at least four extension lectures in the academic year.
- ✓ Students will be taken for visit to Science laboratories of eminence/CSIR labs/Central Universities etc.

### 3. To improve Inclusiveness and Social Impact

- ✓ Fostering socially desirable values in the students
- ✓ Sensitizing the society about the dire need of sustaining the plants, soil and environment by organizing various in house, extension and field activities
- ✓ Interaction of students with the local farming community to identify their key problem areas and thereafter designing a research remediation plan to enhance the practical applicability of research

### 4. To improve Employability

- ✓ Short term training programs on horticulture/bionanotechnology may be conducted.

## **Activity Calendar (2018-19)**

- Celebration of World Habitat Day (October 03), World Forest Day (March 21) and National Science Day (February 28) by organizing various co-curricular activities such as poster making, declamation contest, slogan writing, model designing, essay writing competitions.
- Organization of two weeks refresher course in October, 2018.
- Efforts will be made to organize inter and intra departments matches for cricket, badminton and chess.
- Organization of at least 4 extension lectures (two in each semester)
- Organization of one day seminar/conference once in each semester
- One field trip/educational tour for the students of the department will be organized during the current session