

THEMATIC AREAS FOR SPGR

Priority Thematic Areas of Crop Sector for SPGR

1. Genetic Enhancement of major Crops

- a. Rice, wheat, mungbean, rapeseed, potato, etc.
- b. Variety development for unfavorable environments
 - i. Stress tolerance (drought, excess moisture, high temperature, salinity)
 - ii. Resistance breeding for biotic stresses
- c. Breeding for quality improvement

2. Genetic Resources and Biodiversity

- a. Introduction, collection, conservation, characterization and utilization of genetic Resources; characterization using conventional and molecular techniques
- b. Community gene bank

3. Farm Productivity Enhancement

- a. Management of natural resources for increasing yield and productivity
- b. Cost reduction and energy saving technology
- c. Physiology of yield improvement
- d. Unfavorable environments

4. Seed and Planting Materials

- a. Seed quality improvement including storage
- b. Seed physiology
- c. Seed health
- d. Propagation techniques

5. Plant Protection

- a. Insect ecology, pesticide residue, biological control; pest disease monitoring and surveillance

6. Climatic Change

- a. Crop vulnerability
- b. Impact assessment
- c. Crop adaptation to climate change

7. Soils and Water Management

- a. Soil organic matter (eg, SOM dynamics) and soil health
- b. Land degradation
- c. Fertilizer and water use efficiency
- d. Problem soils
- e. Soil and water quality
- f. Quality of agricultural inputs
- g. Carbon sequestration in soil

8. Small-scale Farm Machinery

- a. Design and development low-cost farm machineries

9. Unfavourable ecosystems

- a. Hill farming
- b. Coastal Agriculture
- c. Drought management
- d. Salinity
- e. Flood prone agriculture
- f. Coastal afforestation

10. Coastal Agriculture

- a. Ecosystem analysis, crop adaptation

11. High Value Agriculture

- a. Crops, livestock, and fishery, and products
- b. Socio-economics
- c. Markets
- d. Policy

12. Post-harvest Technology

13. ICT in Agriculture

- a. Agricultural Databases and Knowledge Banks
- b. Use of Geographic Information System and Remote Sensing

Priority Research Areas of Livestock Sector for SPGR

1. Epidemiology/ Surveillance of Diseases

- a. Epidemiology and surveillance on newly emerged diseases

2. Health Management and Clinical Research

- a. Clinical & Surgical Research

3. Diagnosis & Diagnostics

- a. Development of Diagnosis Systems & Diagnostics
- b. Development of ELISA, CFT & Other tests

4. Therapy and Therapeutics

- a. Development of New Treatment System
- b. Development of Herbal Treatment
- c. Development of Drugs and other therapeutics

5. Vaccines & Biologics

- a. Development of Vaccines & biologics

6. Disease Prevention & Control

- a. Development of Prevention, Control & Eradication Measures for different Livestock Diseases

7. Veterinary Public Health

- a. Zoonotic Diseases and their Control

8. Feeds & Fodder

- a. Fodder Germplasm Conservation and Improvement
- b. Nutrition and Productivity Improvement
- c. Feed Additives
- d. Unconventional Feeds

9. Genetic Improvement & Innovative Breeding

- a. Breed Development and testing
- b. Seed Stock Production
- c. Genetic Evaluation
- d. Indigenous Stock Improvement

10. Livestock Marketing

11. Livestock Products & Byproducts

- a. Development of Alternate Dairy Products

12. Quality Improvement and Control

- a. Livestock Products and Byproducts
- b. Feeds, fodder and forages
- c. Vaccines, Biologics and Diagnostics

13. Livestock Waste Management

- a. Development of Appropriate Environment Friendly Livestock Waste Management System

14. Livestock Biodiversity & Conservation

- a. Characterization of Indigenous Species
- b. Conservation of Endangered Species
- c. Zoo-Animals

Priority Research Areas of Fisheries Sector for SPGR

1) Production Diversification

- a. Fish/shrimp culture through crop rotation
- b. Integrated farming

2) Enhancement of Productivity

- a. Aquaculture of improved fish/shrimp/others germplasm
- b. Intensification of fish culture & management technologies
- c. Quality fish feed development for aquaculture

3) Food Security

- a. Floodplain fish stock replenishment

4) Conservation of Resources

- a. Fish habitat restoration and conservation
- b. Conservation of fish biodiversity in ex-situ and in-situ conditions

5) Fisheries Biology

- a. Biology of indigenous and exotic fish/shrimp species
- b. Development of innovative breeding techniques of commercial and threatened aquatic species
- c. Fish/shrimp health management
- d. Fish genetic resource identification

Priority Research Areas of Socio-Economics, Marketing, and Supply and Value Chain for SPGR

Socio-Economics/Productivity and Profitability

1. Economics of irrigation and water management