

Cross Cutting Issues & Knowledge Based Agriculture Policies

Gender WTO and Poverty Issues

- Impact of WTO on the structure and performance of agriculture production in Punjab in the short and long run.
- Research on how the WTO can improve comparative advantage to the farmers of the Punjab
- Impact of WTO on the income disparities and gender in agriculture 5AB.1.4. Development of agricultural poverty and productivity nexus

Development of New Research Approaches/Methodologies

- Research on Ergonomics
- Development/improvement of effective, long duration and multiple diseases vaccines of important diseases of animals and poultry
- Research on reproductive biotechnologies for in vitro fertilization, culture, embryo production and cloning to increase reproduction in animals
- Development of suitable hormonal protocols for estrus and ovulation synchronization especially in buffalo for increased reproduction
- Genetic characterization of local breeds of different animals for conservation and early identification of better traits
- Development of new extension methodologies and approaches 5AB.2.7. Use of machine vision and robotics in Agriculture
- Research on climate change/global warming especially its impact on production of different crops and livestock products in different areas in the short and long run
- Impact assessment methodologies of different projects

Maintenance/Service Research

- Monitoring of resistance to pesticide(s) in important pests of major crops 5A.3.2. Control of termites
- Develop appropriate management practices for vertebrate pests
- Studies on the housing and management systems of animals especially for small ruminants and poultry
- Diagnosis, epidemiology and control of emerging and re-emerging infections/ infestations of livestock and pests of crops
- Research on emerging sciences like biotechnology, nanotechnology etc for improving productivity in agriculture
- Research on control and factors affecting mycotoxin(s) production, especially aflatoxin in agricultural commodities, animal and poultry feed.
- DNA marker assisted selection for different traits of crops and animals
- Studies on the causes and narrowing gaps between the yields of the progressive farmers and the common farmers
- Impact analysis of cotton, sugarcane, rice, wheat, citrus, mango, and livestock research carried out at Universities and research institutions
- Studies on hygienic quality of food stuffs at vendor's level
- Development of low cost diagnostic kits for detection of important diseases of plants, poultry and animals
- Development/ improvement of assays/techniques for efficient diagnosis of crops, animal, poultry, and fish diseases