Crop Science: Most Important Topic for 2021 Competitive Exams

- The Division has 13 national institutes including one deemed-to-be-university, 3 bureaus, 9 project directorates, 2 national research centres, 27 all-India coordinated research projects, & 5 all-India network projects. Besides, it administers a large number of revolving fund schemes & national research networks, & facilitates the technical clearance of externally funded projects.
- Located at the ICAR Headquarters, the Division has 6 commodity/subject-specific technical sections, namely, (i) Food & Fodder Crops, (ii) Oilseeds & Pulses, (iii) Commercial Crops, (iv) Seeds, (v) Plant Protection, & (vi) Intellectual Property Rights. Each section is headed by an Assistant Director General (ADG) . Three Principal Scientists assist the middle level management & technical backstopping of various scientific/technical matters whereas Deputy Secretary (Crop Sciences) is responsible for internal administrative matters in the Division.
- Citizen's/Client's Charter for Crop Science Division (2014 - 2015)
- Results-Framework Document for Crop Science Division (2014 - 15)
- Results-Framework Document for Crop Science Division (1st April, 2013 - 31st March, 2014)
- Annual Performance Evaluation Report of RC (April 1,2013 to March 31,2014)
- Results-Framework Document for Crop Science Division (1st April, 2011 - 31st March, 2012)
- Annual Performance Evaluation Report of RC (April 1,2011 to March 31,2012)

Achievements

- Developed & released nearly 3,300 high-yielding varieties/hybrids of field crops for different agro-ecologies; facilitated verification & identification of technologies under the country-wide, synergistic network of All India Coordinated Projects; these outputs ushered in the eras of green & yellow revolutions in mid1960s and mid-1990s, respectively; national average productivity raised by 2 - 4 folds in food grains, rapeseed-mustard & cotton since 1950 - 51

- First in the world to develop hybrids in grain pearl millet & cotton in the 1970s; also developed hybrids in other crops, including non-conventional crops, such as castor, safflower, rice, pigeon pea & rapeseed-mustard; developed single cross hybrids in quality protein maize (QPM) & baby corn for high nutritional value in addition to high yield
- Employed genes for stress resistance & quality in several crops from their wild relatives; developed early and suitable plant types for new niche areas & cropping systems in pulses & other crops; evolved effective male sterility systems for hybrid development in many crops

Thrust Areas

- Harnessing conventional & modern scientific knowledge, tools, & cutting-edge of science for development of improved crop varieties/hybrids suited to diverse agro-ecologies & situations, & efficient, economic, eco-friendly & sustainable crop production & protection technologies; promoting excellence in basic, strategic & anticipatory crop science research
- Refinement of seed-production technologies & production of breeder seed with added emphasis on hybrid cultivars
- Conservation & sustainable use of genetic resources of plants, insects & other invertebrates, & agriculturally important microorganisms
- Providing knowledge-intensive advisory & consultancy in crop-science
- The aim is to be able to produce enough food, feed, fiber & renewable raw materials for a growing world population on the limited land available. This is one goal of the Crop Science Division, which has businesses in crop protection, seeds & nonagricultural applications.
- Crop protection products should act selectively in the smallest possible amounts & then quickly decompose into neutral substances. Modern insecticides control insect pests while sparing pollinators & other beneficial insects. Herbicides selectively suppress weeds without harming the crop.
- And many fungicides serve to make plants more resistant to microscopic pathogens. In their search for new active ingredients, our researchers are increasingly guided by nature’s strategies. Bayer is adding a growing number of biological crop protection products to its extensive range alongside sophisticated chemicals.