

RESEARCH

On-going projects focus on agricultural price and forecasting, research priorities and policies for climate resilient agriculture, village household survey, water management, sustainable intensification of agriculture, farm mechanization, technology foresight in agriculture, Farmers FIRST Program, farmer producer organizations, value chains and exports, price volatility, outlook models for pulses and oilseeds, Direct Benefit Transfer (DBT), fertilizer price policies and crop insurance, Doubling Farmers' Income (DFI), export growth and policy reforms. Some new initiatives are:

- Agricultural Market Intelligence in India
- Ecosystem services and institutions
- Impact of Agricultural Technology
- Improving Groundwater Sustainability

Agricultural Sustainability Barometer in Haryana and Punjab

The index covers four broad dimensions viz. soil, water, ecological and economic encompassing 79 indicators. The composite index (0.52) showed a moderate level of agricultural sustainability in Haryana and Punjab. The sustainability indices for socio-economic and soil related indicators were comparatively better and environmental and water dimensions of the sustainability were the most eroded dimensions. The study recommends (i) an urgent need to adopt district-specific cropping pattern (ii) high investment in R&D, irrigation efficiency and drainage.

Doubling of Farmers' Income in India (DFI)

The real income growth has been estimated from 2015-16 to 2018-19. The estimates indicate a positive direction of change due to various initiatives by the Government. Diversification towards high-value crops is producing encouraging results. The terms of trade show a positive increase during 2015-16 to 2018-19. There is an increase in cropping intensity from 149 per cent in 2015-16 to 154 per cent in 2018-19. Livestock and fish production also have an important role in enhancing farmers' income.

Modelling Agro-ecosystem Diversity: Moving Beyond Taxonomic Diversity

Agro-ecosystem Diversity Index is formulated to assess the diversity of agro-ecosystems blending 20 indicators grouped under four major themes: landscape and ecosystem diversity, genetic and species diversity, agro-biodiversity threats, and societal response. The application of ADI in Trans-Gangetic Plains of India revealed that agro-ecosystem in the region has become highly specialized making agriculture more sensitive to numerous biotic and abiotic shocks. The methodology developed is helpful in computing index comparable to the agro-ecosystem diversity spatially and temporally.

Nutrition Status in India: Dynamics and Determinants

The study highlights Calorie intake trends over past four decades. Notable findings are: (i) Intake of protein remained consistent, while that of fat increased (urban > rural), (ii) Variation and inequality in nutrients intake showed a declining trend, (iii) Expenditure on food, household size and literacy influenced intake of nutrients, and (iv) Rural poverty acts as an impediment against nutrients consumption. It recommended spending on nutri-rich foods with increased consumption of cereals and pulses and strengthening of nutri-sensitive component at all stages of food value chain will enhance nutrient intake.

Factors Affecting Agricultural Mechanization in India

Increased flow of institutional credit to the agriculture sector, increase in agricultural GDP and increased real wage rate has driven farm mechanization in positive direction. Government scheme on farm mechanization has also helped in increasing credit flow to agriculture. Subsidy for the purchase of farm machinery under Sub-mission on agricultural mechanization is linked with institutional credit. Thus, influence of agricultural credit on farm mechanization may be concluded as the effect of the scheme on farm mechanization.

ICAR Outcome Review Report

The focus of ICAR is on crop improvement, particularly varieties for biotic and abiotic stresses, bio-fortification, reduction of water and soil losses, development of climate-resilient systems, conservation agriculture,

technologies for dryland horticulture, sustainability and diversification of farming systems, improving the production and reproductive capacity of animals, nutrition and health of livestock and fisheries, management of post-harvest losses, farm mechanization, etc. Other priorities include strengthening education programs in SAUs, manpower training in frontier areas, masters and doctoral programs of Deemed to be Universities (DUs), policy research for technology-led sustainable and inclusive development, bio-informatics, field demonstrations, commercialization and transfer of new technology, multiplication of planting material, and training of farmers, women and rural youth. ICAR-NIAP has brought out major policy publications and provided inputs to the policymakers and the Government. The major areas of policy publications included Doubling Farmers' Income (DFI), market intelligence, sustainability of agriculture, R&D policy, GST, research impact assessment, resource use planning and agricultural transformation.

PUBLICATIONS

Policy paper 35 on Impact of climate change

To bring robustness in climate change adaptation planning, there is a need to develop suitable location-need-context specific interventions and policy that builds resilience of agricultural system. Devising action plans with emphasis on awareness, preservation of natural resources, diversification, building physical infrastructure, strengthening of grass-root institutions and mainstreaming climate adaptation in the developmental policy is crucial for climate resilient pathways.

Policy paper 36 on Potential, adoption and impact of micro irrigation technology in Indian agriculture

The study indicated that micro-irrigation helps in inputs saving in terms of water (17-50%), energy (6-36%), fertilizer (25-40%) and cost of cultivation (11-36%). Micro-irrigation also improves the productivity (20-50%), income (30-65%) and improve the quality of produce.

Policy paper 37 on Trade policy for overseas acquisition of fertilizers and raw materials

The study looked into i) the overall fertilizer's availability scenario ii) import mechanism and international market scenario iii) comparable policies/policy framework of GOI and international practices, and iv) policy framework for encouraging international co-operation. The study recommended that Department of Fertilizer should play a facilitator role for both public and private entities (non-discriminatory) for exploring these approaches.

IMC Meeting

29th Institute Management Committee meeting of ICAR-NIAP was held on October 9, 2020.

CAPACITY BUILDING

Training on Agricultural Policy Research

One-week virtual training program under SCSP on "Agricultural Policy Research" from 3-9 December 2020 had participation of 60 social science researchers. The program was inaugurated by Dr P K Joshi, Former Director, IFPRI, South Asia.

Annual Day 2020

ICAR-NIAP celebrated its 29th Annual Day on 29 October 2020. NIAP also presented foundation day award to Dr. Shalander Kumar, ICRISAT for his



outstanding contribution in the field of agricultural policy research. 13th Prof Dayanatha Jha Memorial Lecture was held on 29 October 2020. Dr. Uma Lele, President Elect, International Association of Agricultural Economists (IAAE) delivered a lecture on "Smallholder agriculture, productivity growth and sustainable healthy food consumption".

Brainstorming Session on Agriculture and Food Policy

NAAS and NIAP jointly organized a Brainstorming Session on "Agriculture and Food Policy for Five Trillion Dollar Economy" on October 14, 2020. The session was chaired by Dr. Ramesh Chand, Member, NITI Ayog and co-chaired by Dr Trilochan Mohapatra, Secy., DARE and DG, ICAR. Very eminent panellists from India and abroad participated and expressed their views.



AWARDS & RECOGNITIONS

Dr. Suresh Pal, Rafi Ahmed Kidwai Award (2019)
Dr Shivendra K Srivastava, NAAS Young scientist award (2020)
Dr. Naveen P Singh, NAAS fellow (2021)

EVENTS

Hindi Pakhwara

For the implementation and extensive use of Rajbhasha (Hindi) among the staff, the official committee of ICAR-NIAP organised series of events to celebrate "Hindi Pakhwara" during 14-30 September, 2020. The activities during the "Hindi Pakhwara" included debate, essay writing and poem recitation competitions. Shri Anil Joshi, Vice President, Indian Hindi Institute expressed his views on promotion of Hindi during valedictory program.

150th Birthday Ceremony of Mahatma Gandhi Ji

A week long program was organised to celebrate 150th Birth Anniversary of Mahatma Gandhi Ji. An online poster competition on Gandhiji and Swachhta was organised for the children of NIAP staff on 28 September 2020. On September 29, 2020 Swachhta Abhiyan, sanitization and cleanliness drive was conducted following the guidelines on Covid-19. Shri Anil Joshi, Vice President, Indian Hindi Institute also expressed his views on the philosophy of Gandhi Ji and Swachhta Abhiyan.

Webinar on Mahatma Gandhi Vision of Village and Agro-Industries

Prof. Vasant Gandhi delivered a lecture on "Gandhi vision for agriculture and agro-industries in development" on 150th Birth anniversary on October 2, 2020. The webinar was live through zoom and facebook.

Vigilance Awareness Week

Vigilance Awareness Week was celebrated from October 27. On the first



day i.e. October 27, 2020, Integrity Pledge Administering ceremony was observed. Poster competition and essay writing competitions were also organized to spread awareness about the efforts for fighting against corruption.

Ekta Pledge

To promote harmony among staff, Ekta pledge was taken by institute staff on October 31, 2020.

Constitution Day

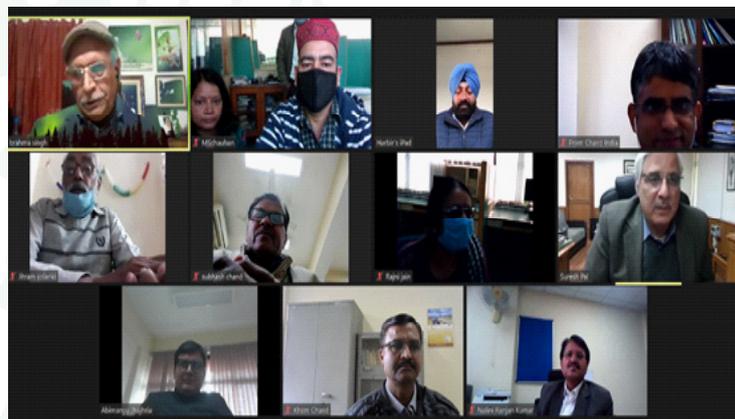
ICAR-NIAP celebrated 26th November as Constitution Day to commemorate the adoption of the Constitution of India. All staff participated in reading the Preamble with Hon'ble Prime Minister.

Swachhta Pakhwara

ICAR-NIAP celebrated Swachhta Pakhwada Abhiyan from December 16 to 31, 2020 in which all staff members participated. During the Abhiyan, various activities were organized. Cleanliness drive with awareness about pandemic Covid-19 was also hosted.

Kisan Divas

ICAR-NIAP celebrated Kisan Divas on 23 December 2020. Dr. Brahma Singh, NAAS Fellow delivered a lecture on Hi-Tech Horticulture. The lecture was well received and followed by lively discussion with farmers.



राजभाषा कार्यशाला

नियाप परिसर में "भारत में डिजिटलीकरण से कृषि क्षेत्र की सेवाओं में सुधार से आर्थिक विकास के सुनहरे अवसर" पर 18 दिसम्बर 2020 को राजभाषा कार्यशाला का आयोजन किया गया। जिसमें नियाप स्टाफ ने भाग लिया।

Prime Minister Address

ICAR-NIAP staff attended Web-telecast of Hon'ble Prime Minister Address to the farmers on December 25, 2020. (<https://pmevents.ncog.gov.in>)

Scientific strength: Scientific strength reached 27.

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