

Extension and Market Intelligence

Value Chain Analysis

- The share of chilli in spice and agricultural exports has increased from 6% and 0.7% in 1960-61 to 9% and 3% in 2023-24, respectively, reflecting growing international demand. Trade potential analysis indicates significant untapped markets in China, USA, Thailand, Bangladesh, Malaysia, Indonesia and Sri Lanka, collectively representing approximately \$847 million USD in export revenue. This translates to an additional foreign exchange inflow of about Rs. 7,150 crore.

ICT models

- A price forecasting model was developed in Prophet using training data and validated with 'Max price' as testing data for chilli price forecasting.
- The Online Soil Fertilizer Recommendation Software was operationalized by integrating soil test-based crop response models with fertilizer response equations tailored for FCV tobacco in KLS, SLS and SBS zones, facilitating site-specific nutrient management.
- The Tobacco Seed Portal was redesigned and upgraded by the institute, enabling rapid seed distribution of all tobacco types across regions, thereby improving supply chain efficiency.
- An Android application, "CROP SURAKSHA", was developed using Xamarin (.NET) and Android Studio, providing comprehensive Integrated Pest Management (IPM) information for cereals, pulses, oilseeds and commercial crops.

Frontline extension

- Critical determinants for tobacco export promotion and demand-driven value addition in turmeric and chilli crops were identified, guiding strategic interventions.
- To enhance the value chain of turmeric-based Farmer Producer Organizations (FPOs), key expectations of FPOs include access to credit, market intelligence, certification, and export facilitation. ICAR-CTRI intervention is required to introduce high-yielding, high-curcumin varieties, mechanization in processing, and strengthening market linkages are prioritized.

Technology outreach activities

A total of 12 OFTs and FLDs and 21 capacity building programmes were conducted for the farmers and line departments on scientific tobacco and other commercial crops management practices.

Capacity building programmes

Scientists and staff members have undergone training at different institutes during 2024 to nurture their professional skills.