

Session 2 - Indian Cotton 2021 and Beyond - How to Increase Cotton Productivity / Yield in India

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I compliment centurion CAI and CAI President Shri. Atulbhai Ganatra and CAI Board for selecting the theme Indian Cotton 2021 & Beyond, with focused emphasis on increasing cotton productivity.

Deliberating on how to increase the productivity.

Friends let us painfully accept that India suffers chronically from severe stagnation in cotton yields. Also, that cotton production in our country is paradoxical. Though globally we are the biggest producer of cotton, we rank lowest in productivity.

Retrospectively, there have been good benefits of introduction of BT and Hybrids because our yields were abysmally low.

However, the revealing point is after 2003 our production increased by increasing deployment of acreage to cotton production by 50%. And today our acreage deployment is 36% of the world acreage.

Just juxtapose our stagnated yield of 500kg against the average yield of 1500kg/hectare achieved by advanced yield countries such as Australia, Brazil, China, Israel, Mexico, and Turkey for our productivity road map.

It portends that we need to change our thinking through introspecting and revising our production concepts, systems, methods and management. And deeply study and adopt best methods and practices followed by higher achievers.

Appreciatively, eminent Indian scientists are now alert and making efforts to bring in lot of changes - tailor making our production systems - to achieve better productivity. ICAR scientists have worked out 21 short duration BT hybrid variety cotton crop.

Revealing Introspections

The most revealing introspection done by our scientists is that Indian cotton remains thirsty and hungry during the flowering and fruiting period i.e. when cotton needs water and nutrients, our production and agronomic systems does not provide it. Our long duration hybrid takes up total 160 days, rendering very late flowering and fruiting.

Further, our present hybrids are of low harvest index and bush type converting the growth into vegetative one and not into reproductive one. We must redirect the growth to reproductive one.

Action / Thoughts on increasing the productivity of Indian cotton

Two suggested areas of improvement are - First is technological and another is operational cum managerial.

Technological - Adopt, adapt and tailor make from latest technology in cotton production system from various countries. For e.g. China, Australia and Brazil have some novel production systems. Turkey has very helpful production system for organic cotton. Evolve our own technological need by having short duration, better sympodial architecture, early maturing with synchronous flowering and fruiting, high harvest index with least unproductive branches and leaves, resistant to sucking insects, bacterial blight, leaf curl virus and other diseases.

Operational cum Plant Managerial Practices--Various countries have different adoptable good practices and we must cull out the appropriate methodology for ourselves. Illustratively, the integrated crop management practices in Israel with a special emphasis on drip irrigation with fertilizers which is known as Fertigation, can benefit us because we have 60% of our area under the rain fed conditions. Emulate the high density production of management and plant geometry from Brazil. The research outfit of Australia directs farmers with renewal of BMP i.e. Best Management Practices every year. In essence, what is needed is high density planting, short duration BT varieties, conservation tillage, mulching, canopy management, orientation of rows for light interception, higher plant population, inter cropping, etc. Also discipline and study timely crop termination with convergence of IPM (Integrated Pest Management), IWM (Integrated Water Management), INM (Integrated Nutrient Management) should work in consonance for harmonised crop health management.

Conclusion

To achieve the above, introduce a unified body namely a Cotton Board, for which model can be drawn from National Cotton Development Council of USA. The proposition for which CAI has advocated earlier. This has to converge the interest of the entire stake holder like farmers, consumers, cotton distributors, state and central government agriculture department.

Our present government is proactive and CAI should take a lead to form such an all representative independent body.

Highly potential cotton economics can lead our nation to great prosperity. One additional bale of cotton produce can generate 5 jobs. Today's action is destiny of tomorrow. Let's act gather-together.

Jai Hind.