Tur Dal Production & Tur Dal Research

CONSORTIUM OF INDIAN FARMERS ASSOCIATIONS
About CIFA

- CIFA - Consortium of Indian Farmers Associations.
- Specializes in policy advocacy on matters concerning agriculture.
- Has offices in Delhi and Hyderabad.
- Members from all agriculturally important states.
- Website: www.indianfarmers.com
About Tur Dal

- India is the world’s largest consumer of pulses.
- Tur dal, also known as Red gram or Pigeon pea (Cajanus cajan) is India’s second largest pulse crop.
- India, Myanmar, Kenya, Uganda, Malawi are major producers of Tur.
- World production of Tur dal is a little above 3 million tons.
- India consumes 90% of world’s production.
- Maharashtra, U.P, Karnataka, Gujarat, M.P, Rajasthan, A.P, Bihar are major producing states in India.
In any agriculturally progressive country, production increase must be driven by productivity (yield/acre) increase.

Primary purpose of agricultural research is to increase productivity.

Has our agrl. research helped increasing Tur productivity?
Ignored Warning!

"Crores of rupees are spent on pulses research without any major breakthrough to increase productivity and production of pulses in India"

- 13th Lokhsaba’s Standing Committee on Agriculture (1999-2000)

Unfortunately, the wasteful expenditure continues till date.
# Tur dal: Area, Production & Yield in India

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<tbody>
<tr>
<td>Area (mil. ha)</td>
<td>2.4</td>
<td>2.7</td>
<td>2.8</td>
<td>3.6</td>
<td>3.6</td>
<td>3.5</td>
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<tr>
<td>Production (mil.t)</td>
<td>2.1</td>
<td>1.9</td>
<td>2.0</td>
<td>2.4</td>
<td>2.2</td>
<td>2.3</td>
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<tr>
<td>Yield (Kgs/ha)</td>
<td>849</td>
<td>709</td>
<td>689</td>
<td>673</td>
<td>618</td>
<td>667</td>
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- Between 1960-2004, area increased by 1.1 million ha.
- But, yield/ha drastically decreased from **849 kgs** in 1960 to **667 kgs** in 2004.
- Production in 2004 was less than the production in 1990.

*Failure on agrl. research front is prime reason for poor yield.*
India vs Myanmar
Regress vs Progress

Myanmar (Burma), a small country has phenomenally increased Tur dal yield in the last 12 years

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<tr>
<td>India</td>
<td>662</td>
<td>618</td>
<td>670</td>
<td>667</td>
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<tr>
<td>Myanmar</td>
<td>636</td>
<td>895</td>
<td>925</td>
<td>1006</td>
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Yield: Kgs/ha  
Source: Directorate of Pulses development & FAO

When Myanmar can achieve significant yield increase, why can’t India?
India vs Myanmar
Regress vs Progress

- Myanmar's achievement in Tur dal is not an isolated one.
- Here is Myanmar's yield growth in Urad dal (Black gram)

**Urad (Black gram) Yield Growth**

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<tbody>
<tr>
<td>India</td>
<td>460</td>
<td>431</td>
<td>430</td>
<td>419</td>
</tr>
<tr>
<td>Myanmar</td>
<td>718</td>
<td>870</td>
<td>1011</td>
<td>1167</td>
</tr>
</tbody>
</table>

Yield: Kgs/ha  
Source: Directorate of Pulses Development & FAO

- Admittedly, Myanmar is ahead of us in agricultural technology.
- It achieves what we are unable to achieve.
Tur-Our Production vs Demand

- India's production is stagnant at 2.3 million tons.
- India's present annual demand is 2.6 million tons.
- India imports 3 lakh tons from Myanmar alone.
- Massive spend on agrl. research has not yielded results.
Plethora of Govt. Agencies!

- Indian Institute of Pulses Research (IIPR under ICAR)
- All India Coordinated Research Project (AICRP under ICAR)
- Directorate of Pulses Development (Estd in 1971)
- Technology Mission on Pulses
- National Pulses Development Project
- National Food Security Mission
- ICRISAT

What have they delivered?... We are now worse than in 1960.
IIPR- ICAR Under Lens-1

- Established in 1993 by ICAR. Has > 220 scientists and supporting staff.
- With 84 acres research farm and 61 projects for pulses.
- Supported by All India Coordinated Research Programme of ICAR.
- Claims to have developed **20 high yielding** varieties for Tur in 12 years.
- What is the performance of such varieties in farmers fields and extent of adoption/ popularity? Its website is silent on this.
- Not a single hybrid Tur developed so far.

*Carries no tangible & accountable targets.*
IIPR- ICAR Under Lens-II

- It's primary duty is to develop elite germplasm and release high yielding varieties regularly.
- IIPR of ICAR has failed miserably in this.
- Tur farmers are still using seeds that their great grandfathers had used!
New Variety Selection.....ICAR Style!

"29 promising pigeon pea [Tur] lines with a 5% yield advantage have been identified"

- ICAR’s Annual Report(2003-04)

Hello, can we ask commonsensical questions?

§ Why only 5% yield advantage? Adequate?

§ Is it (5%) over present yield level or 1960 level?

ICAR’s subsequent annual reports do not talk about fate of these so called promising lines. Surprising!
Truth About Seeds Release by ICAR

❖ When ICAR claims it "released" new seeds, it only means "notification".
❖ Section 5 of Seeds Act 1966 mandates such "gazette notification".
❖ A vast majority of seeds developed do not live beyond "notification".
❖ ICAR had "notified" 19 Tur varieties between 1997-2005. They are hardly seen in farmers' fields!

ICAR's seeds release ends and remains in "gazette notification".

Who benefits from such "gazette notifications"?

Not farmers! It only benefits bureaucratic research!

Can India afford such bureaucratic research?
Technology Mission on Pulses

- Lives on empty promises.
- Promised **self sufficiency** in pulses by 2007.....but, India’s import doubled from **0.79 mil.** tons in 1991 to **1.3 mil.** tons in 2005.
- Promised to take **Tur yield** to **897 kgs/ha** by 2007.... but it remains at **< 700 kgs/ha** which is less than 1960 yield level.
- Spent more than **Rs 780 crores** in the last **4 years** alone.
**Technology Mission on Pulses Under Lens**

Promises plenty....... delivers peanuts

X\textsuperscript{th} Five Year Plan Tur Production Targets vs Actuals

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<tr>
<td>Target</td>
<td>23.9</td>
<td>26.10</td>
<td>28.30</td>
<td>30.60</td>
<td>32.31</td>
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<tr>
<td>Actual</td>
<td>21.8</td>
<td>23.5</td>
<td>23.4</td>
<td>26.0</td>
<td>NA</td>
</tr>
<tr>
<td>Shortfall</td>
<td>2.1</td>
<td>2.6</td>
<td>4.7</td>
<td>4.6</td>
<td>NA</td>
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Source: Directorate of Pulses Development Economic Survey 2006-07

- The shortfall increases every year.
- India imports Tur dal to meet domestic requirement.
- Remember, our 2002 production was same as 1961 production!
Comments from PAC

“ICAR technologies [are] not reaching farmers”
- Parliamentary Public Accounts Committee (PAC) in The Hindu 12th March 07

Correct!...Two reasons.

- ICAR is not accountable for extending its technologies to farmers.
- ICAR’s technologies & research - including new seeds - lack inherent strength to self propel their spread & popularity.
Tur, a major food crop, has never been managed well in India. Much hyped “Green Revolution” has never benefited the farmers. About Rs 5000 crores have been spent populating the research. But, no positive results, except higher yields at the farm and field levels.

Though having more resources, India’s agricultural scientists lag behind Myanmar’s scientific achievements.

We question cricketers who do not play well. Do we question our agrl. scientists when crops fail to strengthen India’s global competitiveness in agriculture?

It’s time to have strong interventions.
Plain Speaking About Agrl. Research

- All public funded agrl. research must have strong field focus.
- Primary purpose of agrl. R&D is to practically contribute to agricultural growth and development.
- The purpose cannot be to merely publish research papers!
- ICAR scientists must be assessed based on reach & adoption of their research by farmers at large (as in China).

ICAR scientists must agree to abide by these principles.
CIFA’s Recommendations

- All unproductive research centers & projects of ICAR must be closed.
- ICAR’s research on Tur & Pulses must be subjected to open audit for its practical & field utility value by empowered farmers.
- Research by private bodies must be encouraged in areas where ICAR has failed.
- Unproductive expenses of ICAR must be questioned and curbed.
Remember......

- Average annual income of a Tur farmer is less than Rs 8000.
- We have nearly 3 million Tur farmers.
- Every research project conceived for improving Tur cultivation must truly benefit Tur farmers.
- These must be in the conscious and subconscious minds of all scientists and policy makers.... Always!
Summary

This presentation reveals India's failure in agril. research.

Root cause of India's agrarian crisis lies in our unproductive agricultural research. Tur dal is a classic example.

Solution to our food insecurity lies in our ability to address chronic inefficiency in our public funded agricultural research.
Needed

- A strong action from Government to make ICAR relevant & useful to Tur farming in India

Will our Government act?
Let us work together. You can reach us on: