

The Syngenta logo is positioned on the right side of a horizontal bar. The bar consists of a thin light green top layer and a thicker dark green bottom layer. The logo itself is white, featuring the word "syngenta" in a lowercase, sans-serif font. A stylized leaf icon is integrated into the letter 'g'.

syngenta

Jatropha

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Jatropha: Experience of Agro-Forestry & Wasteland Development Foundation, Nashik, India

Contents

- Learnings from 17 years of jatropha cultivation
- Issues
- Next steps

Jatropha: Experience of Agro-Forestry & Wasteland Development Foundation, Nashik, India

- Started in 1986 by Vinayakrao Patil, a local farmer
- Commercial plantation for 17 years from 1986 to 2003
 - 1986: 8 acres
 - At its peak in 1995: >20,000 acres (>8,000 ha)
 - At the close in 2003: Nil as farmers ploughed down fields shifted to other crops
- Number of farmers > 2,500
- Visits by persons from:
 - World Bank Mission on Forestry, Hohenheim University, Swiss Development Corporation, Governments of India and Maharashtra (local state Govt.), several NGOs

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- Spacing of 3m X 3m is necessary for block plantation. Shorter spacing (2X2 or 3X2) is definitely unsuitable
- For single row, hedge plantation, 2mX2m is fine
- Fertilizer application is necessary:
“If there is no input, there will be no output” is universally true
- Pruning is necessary for optimum yield
- Sunlight is necessary for higher yield (the old rule)
- With irrigation, the vegetative growth is high but the yield increase is not proportionate
- The seed yield stabilizes from the 7th year onwards

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- 3mX3m spacing necessary



Seven year old, block plantation

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Pruning necessary



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- The average yield, even after seven years, was <1100 Lb / acre per year of dried seeds i.e. Less than 1.25 M.T. / ha per year
- After 17 years of efforts, it was concluded that jatropha plantation was not economically viable
- Consequently, it was decided to close down the project
- The experience of other old projects in India / world over is not different
- Therefore, it is time now for introspection ...

Jatropha: Issues

- Yield (uniformity)
 - Days to first flowering,
 - Number of flushes in a year
 - Female to male flower ratio
 - No of seeds per fruit
 - Seed weight
 - Branching habit

Jatropha: Issues

- Oil content in seed (%)
- Oil quality
- Toxicity
- Host to diseases (E.g. Cassava mosaic virus)
- Seed multiplication / propagation
 - Seed to plant
 - Vegetative propagation

Jatropha: Conclusion and next steps

Conclusion

- The current plantations are not sustainable

Next steps

- Moratorium on further plantation for now
- Five-ten year research programme necessary for success in jatropha
- Public-Private partnership may be considered in
 - Breeding
 - Marker development
 - Seeds production / Propagation

Jatropha: Conclusion and proposed actions

Thanks