

Life cycle of Tasar insect



Adult worm



Moulting

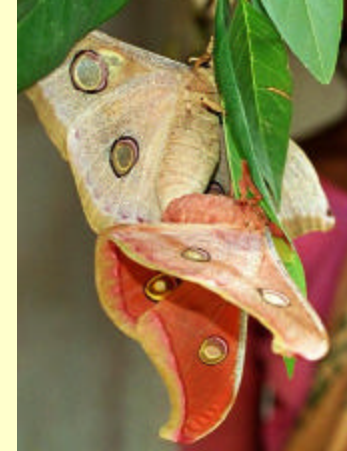
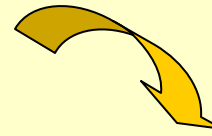


Cocoon Stage

- Duration of life cycle: 40-70 days.
- Host Plant: Terminalia spp.
- No. of Life cycles / year: 2-3.



Young worm



Moth coupling



Hatching of worms



BROAD SEGMENTS OF TASAR SUB-SECTOR

1. Pre-cocoon Segment:

- a) Laying (egg) preparation.
- b) Silkworm rearing on host plants.
- c) Marketing of cocoons.

2. Post-cocoon Segment:

- a) Yarn production.
- b) Weaving of Fabric.
- d) Marketing of Yarn and Fabric.

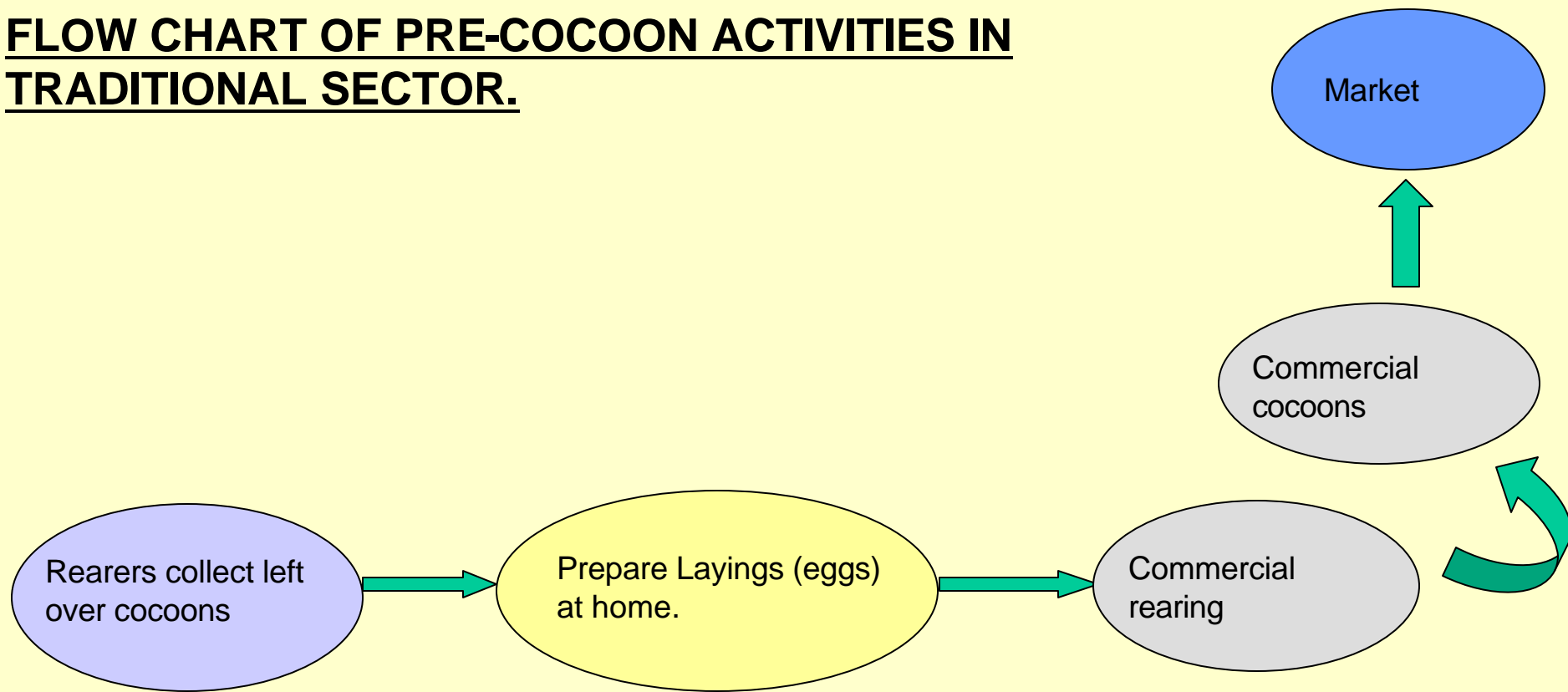
PROBLEMS IN PRE-COCOON SEGMENT OF TASAR

1. Acute shortage of high quality eggs for silkworm rearing.
2. Outdoor rearing renders the crop highly prone to risks.

Pre-Cocoon in Traditional Sector:

1. Use of home-made layings (eggs) without eliminating disease.
2. Silkworm prone to damage by heavy rains.
3. Predators: bugs, lizards etc. inflict damage.
4. Poor sanitation : high disease incidence.
5. Cocoons sold to petty traders: poor price realization.
6. Average income Rs.2000 in 90 days.

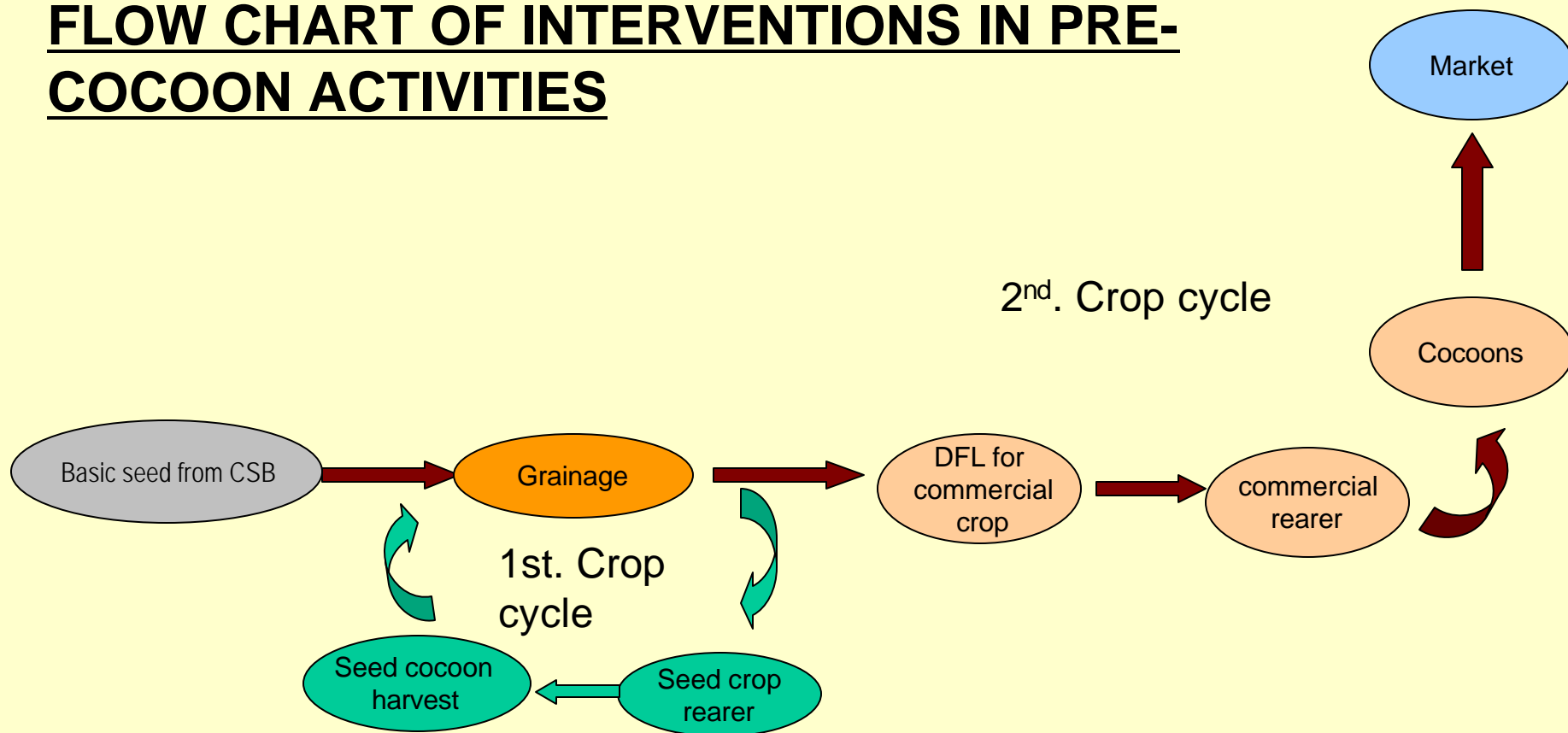
FLOW CHART OF PRE-COCOON ACTIVITIES IN TRADITIONAL SECTOR.



KEY FEATURES OF INTERVENTIONS UNDER UNDP

1. Promoted the concept of production of Disease Free Layings (DFLs) of Tasar at the village level.
2. Promoted improved Silkworm rearing practices.

FLOW CHART OF INTERVENTIONS IN PRE-COCOON ACTIVITIES



Salient features of village level grainage:

- Owned and managed by individual entrepreneur.
- Established in rearing villages.
- Number of cycle per year : 1
- Expected production of DFLs : 4500
- Number of rearers to be catered: 12 – 18

Advantages of Village Level Private Grainages :

- Ensure timely supply of DFLs to the rearers.
- Reduce risk of crop failure.
- Cut cost of production of DFLs.
- Offer DFLs at affordable price to the rearers.
- Grainage owner organizes seed rearing.
- Rearers exert control over grainage owner to get good DFLs.
- Grainages promote concept of better services and quality.

Process of DFL production in grainage



- Cocoons are dried briefly under sun
- Samples of the lot tested for disease
- Seed cocoons are sorted based on built



- Sorted seed cocoons are tied to threads
- Bunches of cocoons hung in grainage
- Ambiance facilitates moth emergence
- Male and female moths couple





- Moths are manually decoupled
- Inseminated moths kept in egg laying boxes
- Moths lay eggs for 72 hours

- Grainage room thoroughly cleaned
- Walls and floors sprayed with Formalin
- Room allowed to dry up





- Female moths are checked for disease
- Graineur performs examination independently
- Eggs of healthy moths are retained



- Eggs are washed in soaps
- Soaked in Formalin
- Washed vigorously in flowing water
- Dried under shade





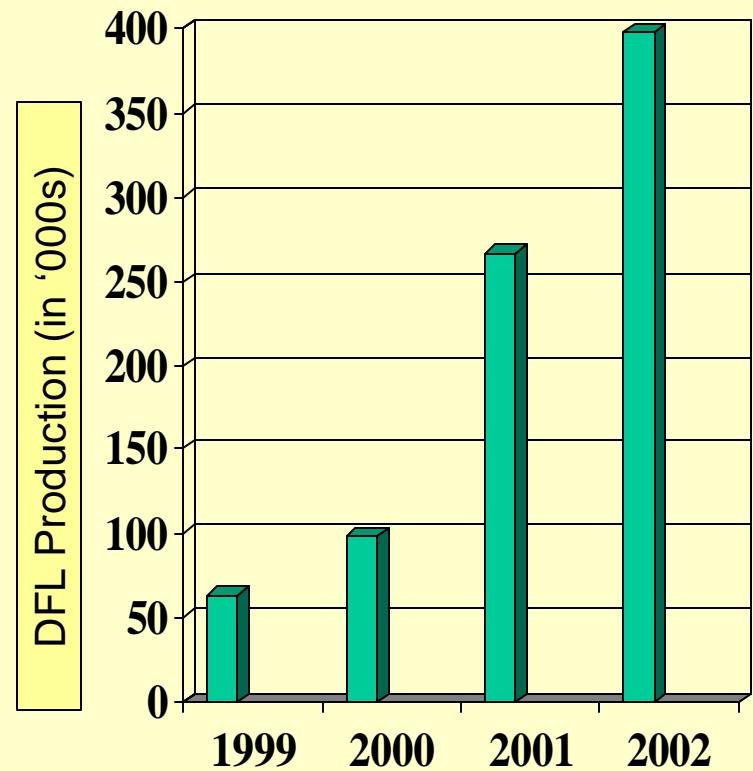
- Dried eggs are measured
- Packaged in small cotton bags
- Sold as Disease Free layings

- DFLs sold to the rearers from Grainage
- DFLs are sold through upfront payment



Grainage Performance

- No.of Grainages : 132
- Germination % age : 84%
- Fecundity : 216
- Sale price/DFL (Rs.): 4.00
- Subsidy on DFL : Nil
- No. of Rearers to get DFLs: 1330



Silkworm Rearing: Strategies and Approaches

- Improvement of Host flora
- Adoption of Scientific practices
- Emphasis on capacity building
- Focus on enhancement of Productivity

Tasar Silkworm Rearing



- Separate set plants for Young worms
- Applying of higher dose of manures
- Regular pruning to maintain height.



Use of DFLs



Rearing of young silk worm
Protected condition

- Right way of feeding
 - Watch and ward against predators
- Regular shift of worms to fresh plants
- Women play crucial role

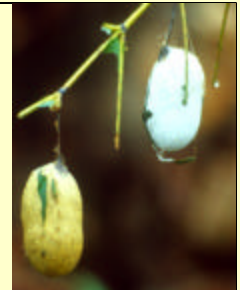




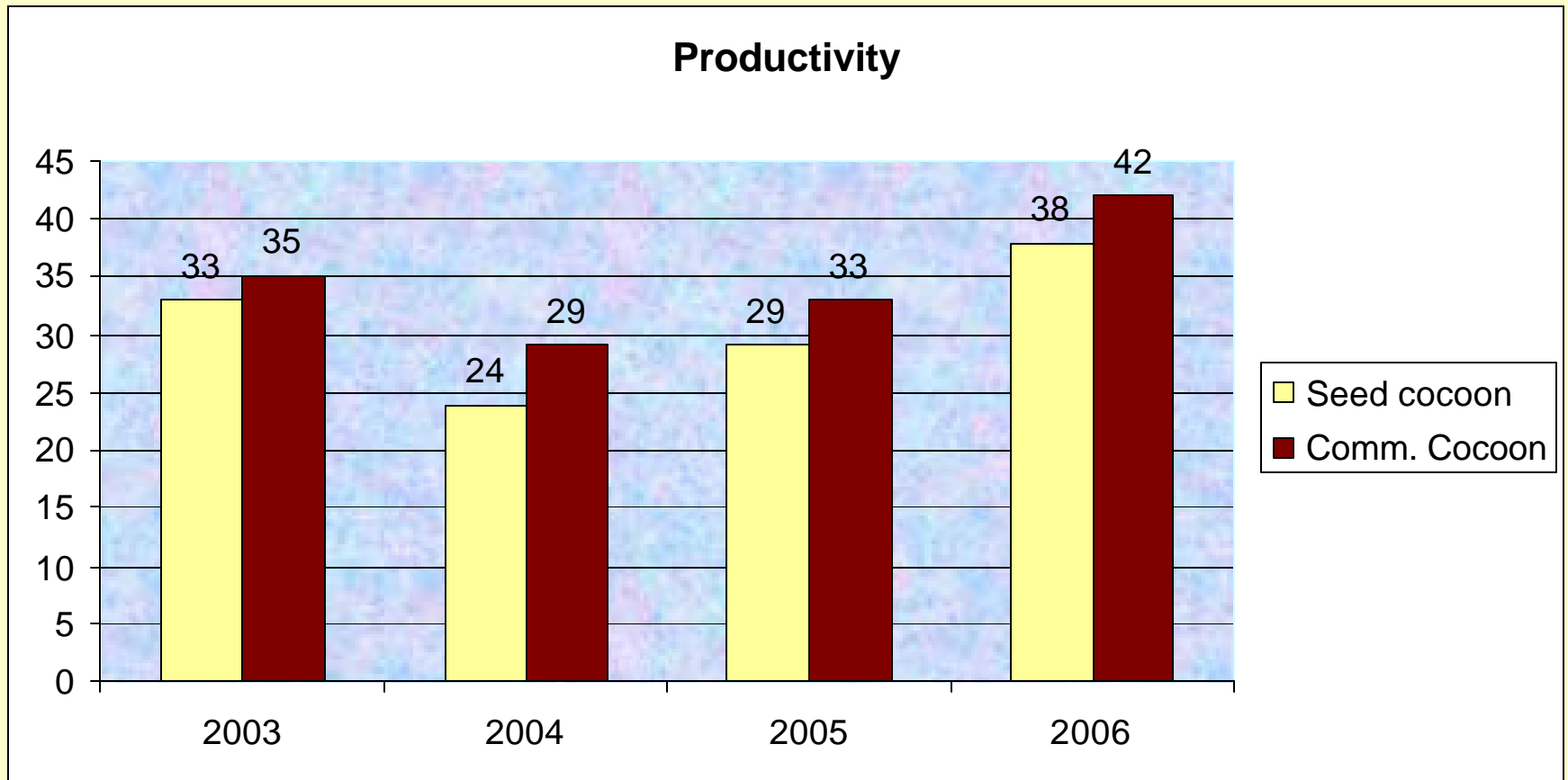
- Nutritious leaves
- Vigourous growth of worms
- Prophylactic spraying
- Absence of disease



- Harvesting bountiful
- High grade of cocoons

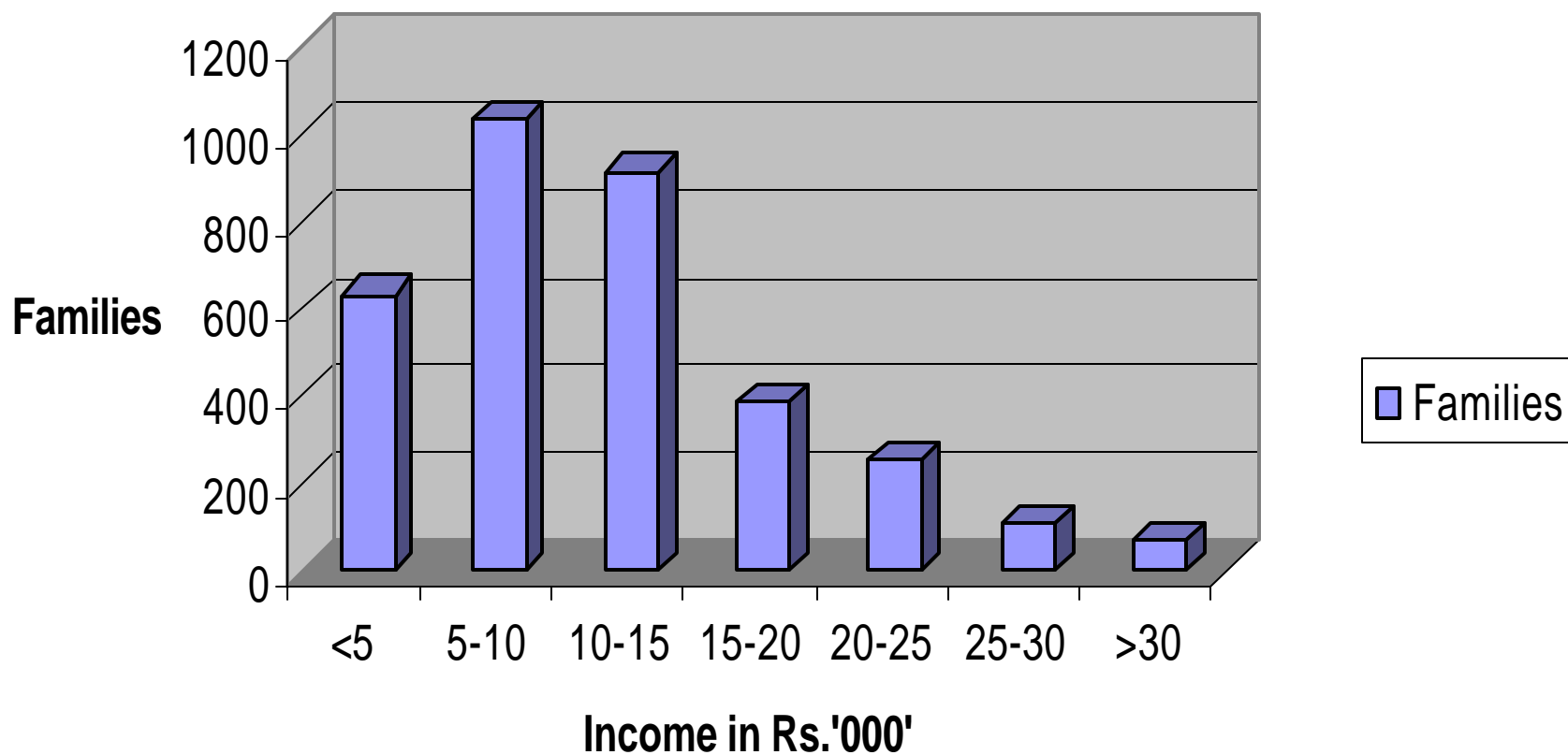


Increase in Productivity in Tasar Rearing



Income from Tasar Rearing

Income distribution



Post-Cocoon Activities: Reeling, Spinning, Weaving

Major Strategies:

- Capacity building.
- Extending improved technology.
- Eliminating primitive practices.
- Organizing Forward and Backward linkages.
- Separating production risk from enterprise risk.

Traditional Tasar Reeling

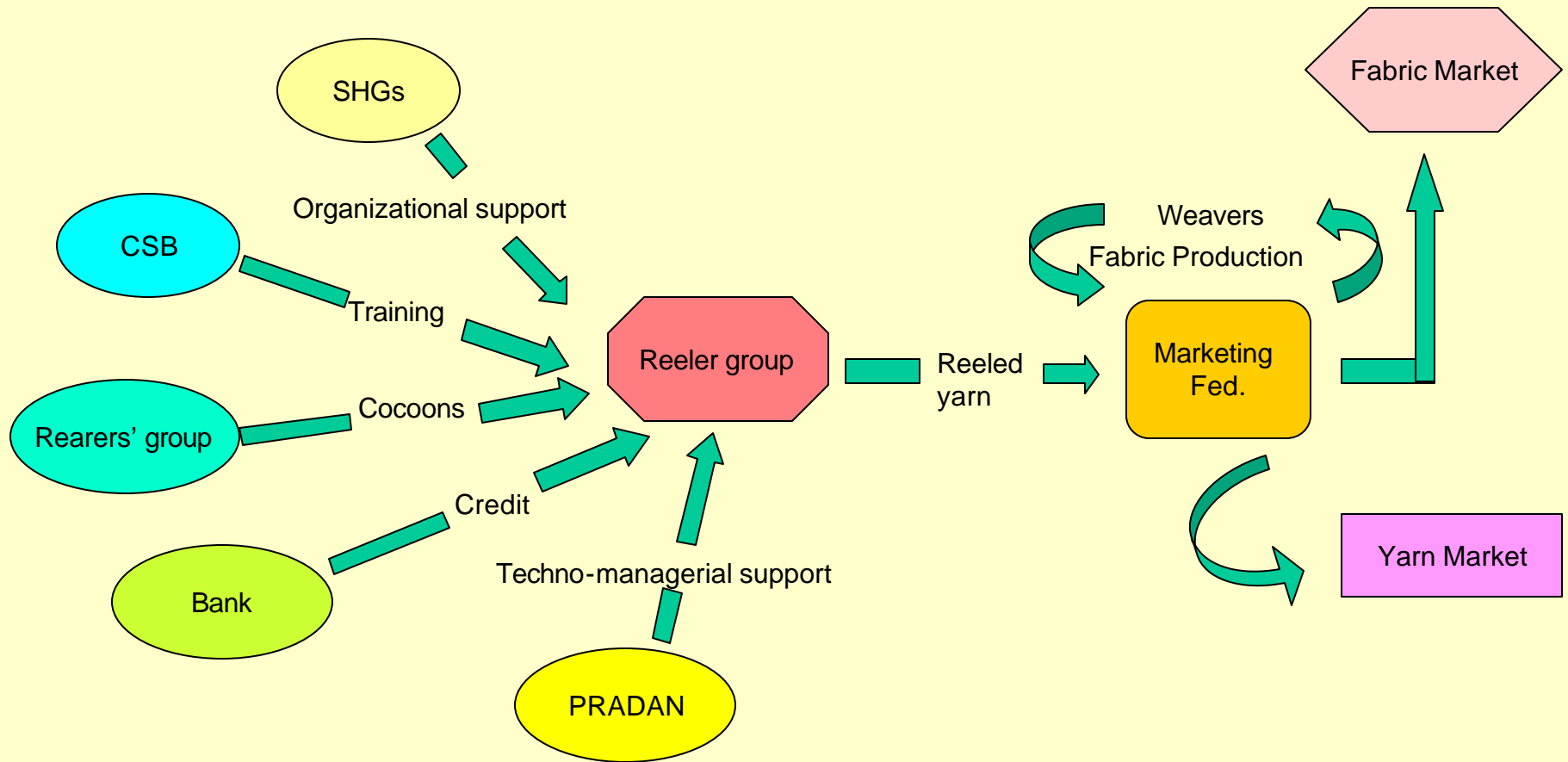


- Odd Looking
- Oppressive to women
- Involves children
- Controlled by money lenders

- Painful process
- Unhygienic practice
- Abysmally low production
- Low productivity makes it unviable



Post-Cocoon Activity: Scheme



Promotion of Self-Help-Groups of Women



No. of SHGs Promoted: 750

Total Family coverage :10350

Total Savings(in Lakhs):168 la.

Total Credit disbursed : 412 la.

Tasar Reeling Activity



- Promoted to create income for women
- Technology: CSTRI Reeling Machine
- Women spend 6-8 hours a day
- Average daily net income: Rs.40-60.
- Number of women involved: 95
- Yarn prodn. during Project Period: 2360 Kg.

- Re-reeling ensures high quality
- 760 Kg. of yarn sold to market
- Buyers : major export houses
- 1600 Kg. of yarn woven by us



Weaving activity



- Provided 120 new handlooms
- Trained weavers to use improved reeled yarn
- Offered design development support
- Offered regular marketing support

- Introduced strict quality control systems
- Created show room at N.Delhi
- Established ongoing contact with market



Design Development and Marketing



- Developed 167 unique designs in Tasar
- Created 67 designs of sarees and made-ups
- Specialized in wide range of colours in Tasar

- Participated in domestic and international fairs.
- Current year production of Fabric: 25,000 mts.
- Sales turnover (in lakhs) : Rs. 118 la.
- Sales: 65% domestic and 35% export.



OUT COME OF THE PROJECT

- Replicable model prototypes
- Well established linkages
- Large pool of village based resource persons.
- A strong team of professionals to work for Tasar
- Creation of a vision

VISION

- Creating 15,000 livelihoods in Tasar.
- Livelihood Standards:
Each family should earn at Least
Rs.12,000 annually.
- Environmental Sustainability.
- Expanding Market:
From Present Rs.145 Crore to Rs.
200 Crore.

SCOPE OF EXPANSION OF TASAR SERICULTURE IN JHARKHAND:

- Total Forest Area

: 2.3 Million Hec

- No. of Active rearers

: 40,000

- Requirement of DFLs

: 100 lakh units.



Strategies

Strengthening Collaboration

Creating Multiple Stakeholders

-Agency, Government, People, Banks, Research Institutions

Promoting Entrepreneurship based model

- People's initiative
- Cost-Effectiveness
- Commercial Viability
- Market Demand Driven