

Efficient Cultivation and Management of Bamboo plantations



*“ Bamboo plantations managed by
technology “*

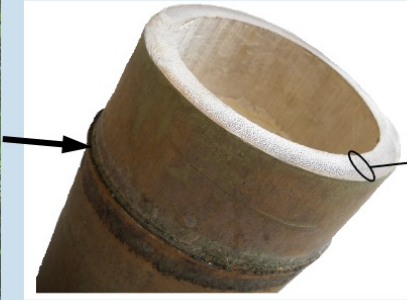
By Jan Oprins



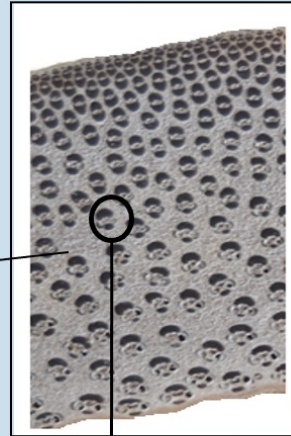
Bamboo fibers



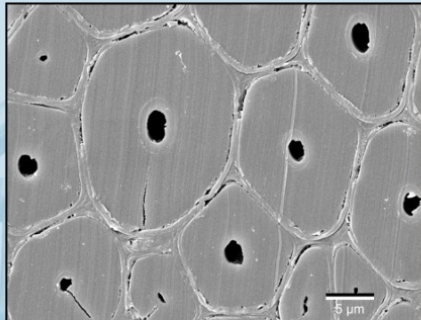
Bamboo culm



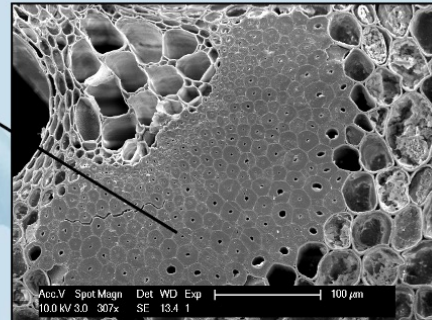
Cross section



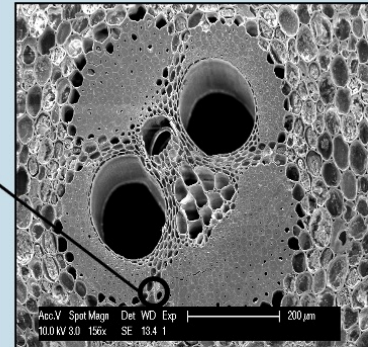
Fibres are distributed densely in the outer region of the wall and sparsely in the inner region



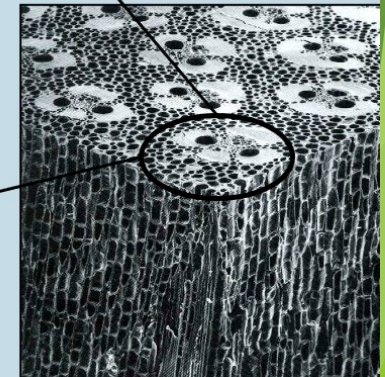
Elementary fibres



Technical Fibre.



Vascular Bundles with fibre



Section of a bamboo culm



Bamboo plantation



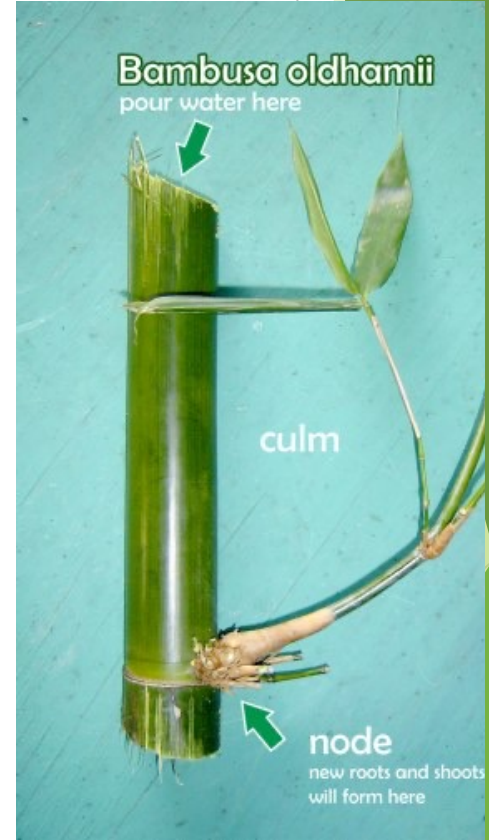


Ecological Balance

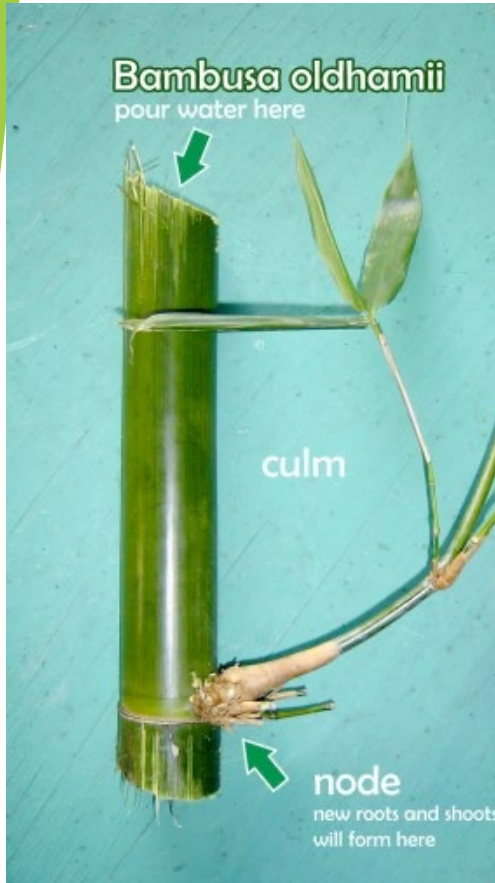
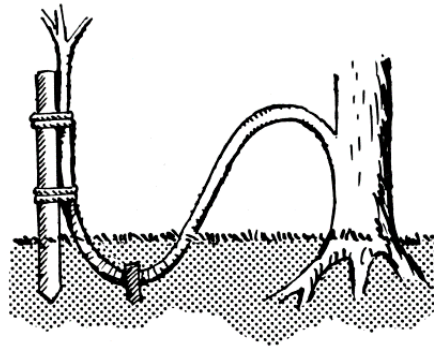
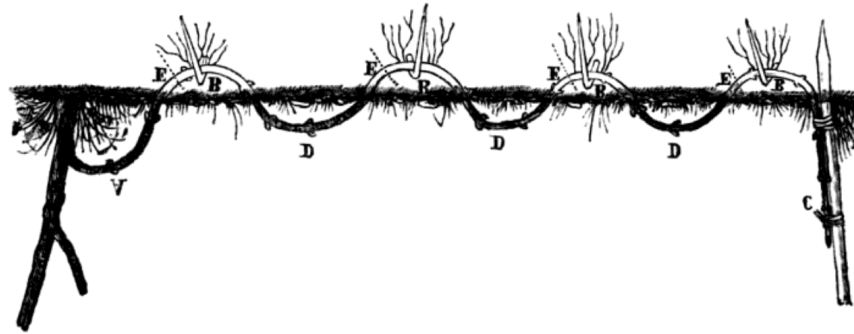
Plantlets for plantations



Bamboo Planting Ways



Multiplication of Bamboo



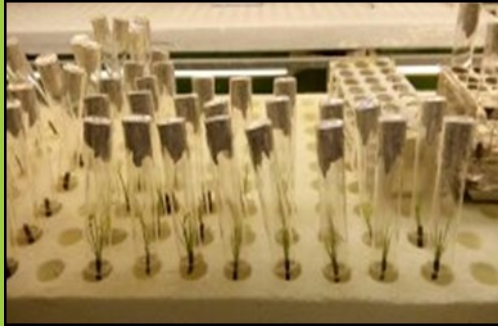
Why Bamboo propagation

- "Green Gold" – Bamboo: an alternative to wood products
- infrequent flowering (up to 100 years)
- labour-intensive

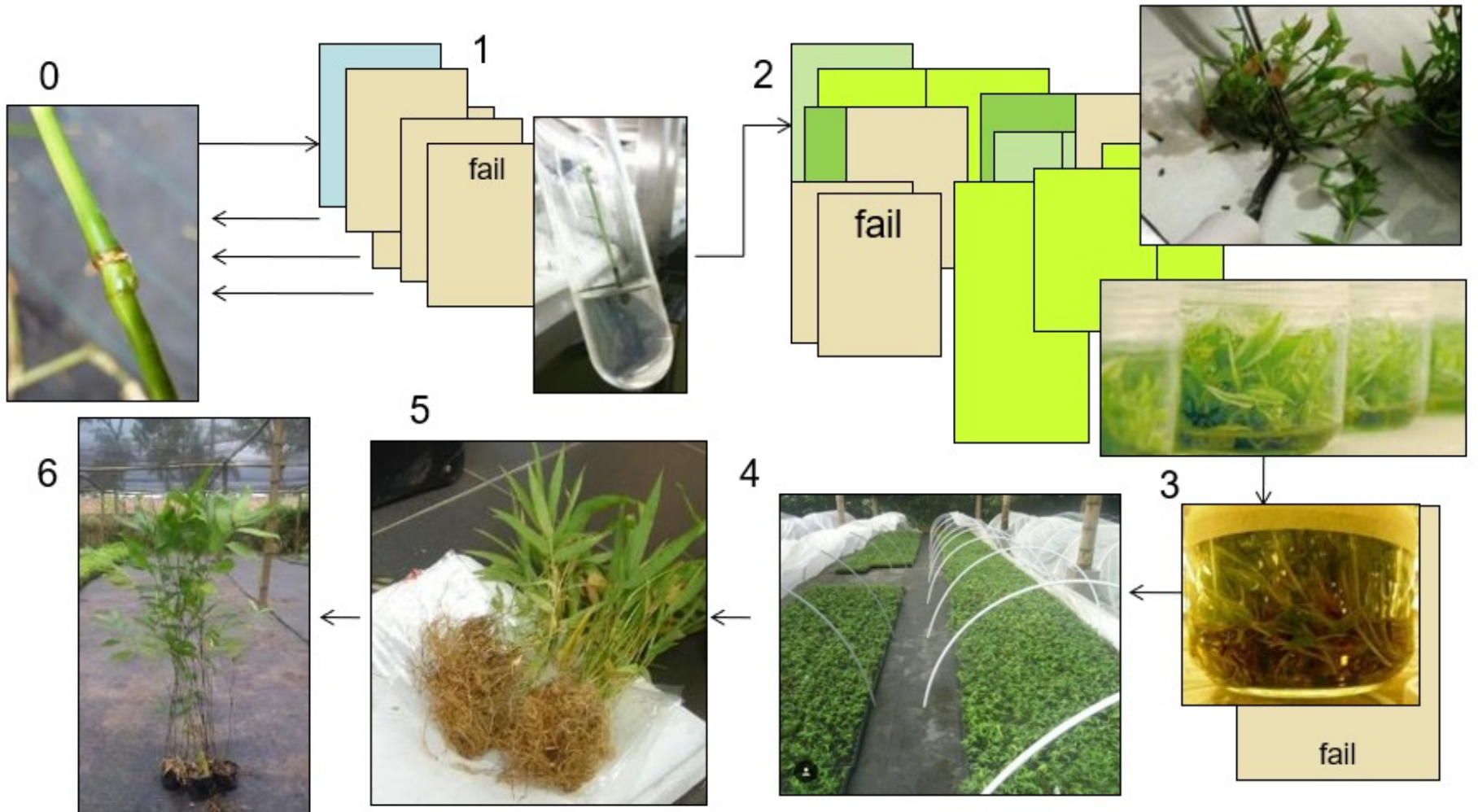
⇒ **Tissue Culture technology**

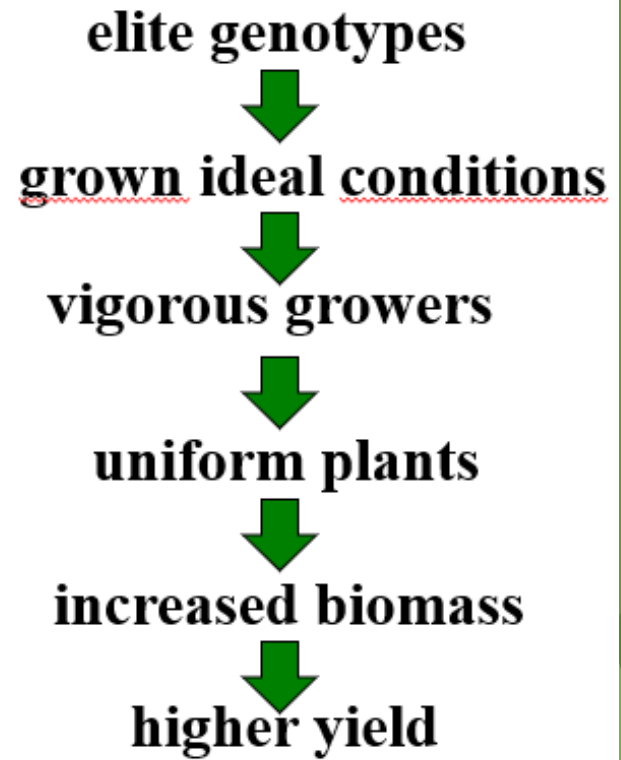
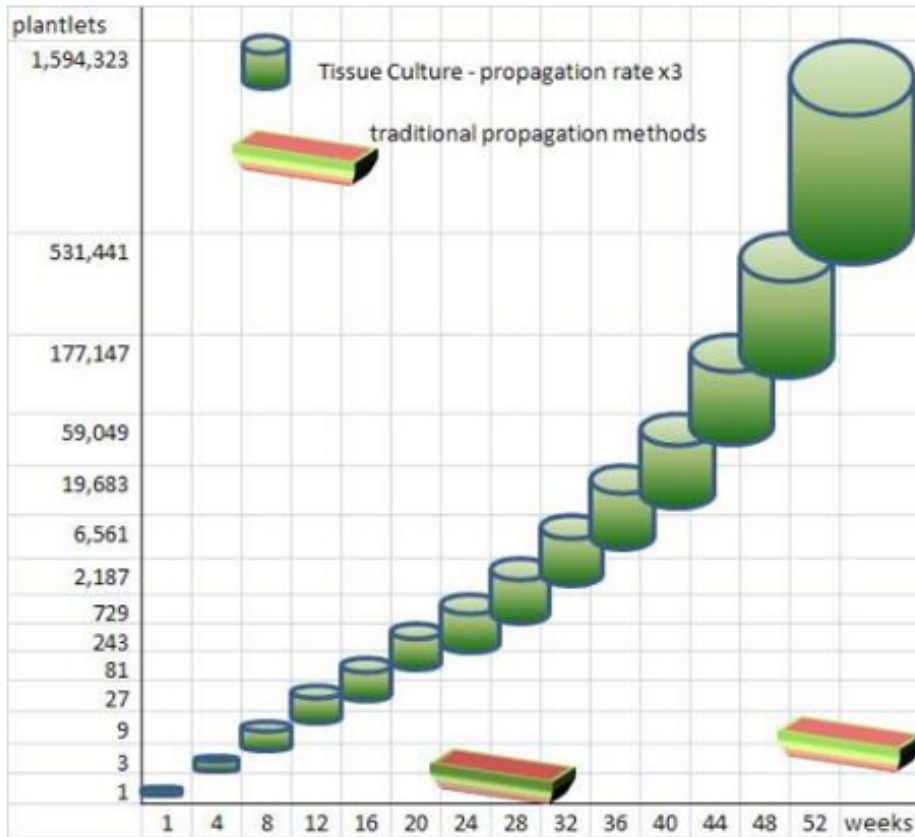
- **Possible large quantities for plantations**
- **Short time period**

Solution: Tissue Culture Biotechnology



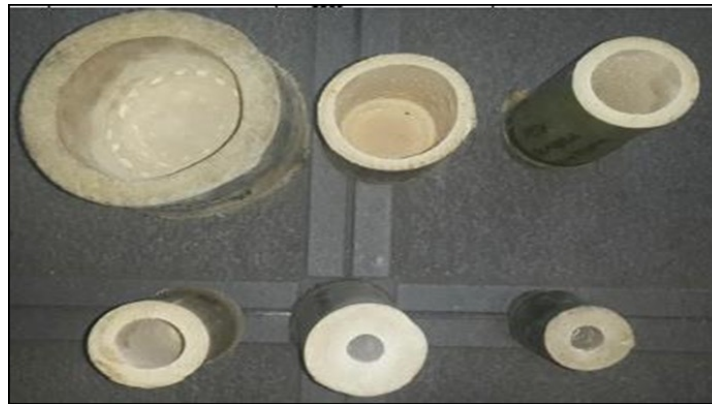
Tissue Culture Process





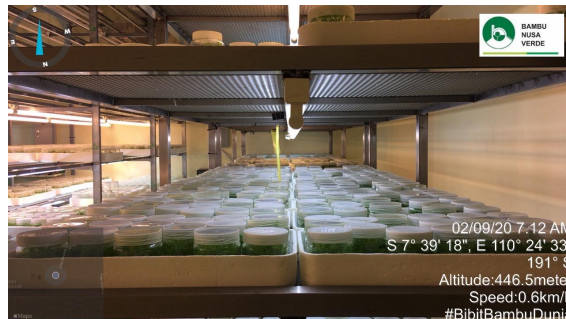
Use of selected mother plants / elite clones

Ongoing initiation trials
each month



OVERVIEW	Plants	Ornamental / . Sourcing	Plant Species		Species in Production – 2016	
Ornamental bamboo	64	36%	33	46%	14	54%
Source OPRINS	26	15%	16	22%	7	27%
Source EBF - Bali	21	12%	10	14%	6	23%
Source nursery & private	108	60%	35	49%	12	46%
Source China, India, ...	20	11%	10	14%	1	4%
Source Forest	4	2%	1	1%	0	0%
Total source	179	100%	72	100%	26	100%

The Laboratory



- Media preparation and sterilization room
- Culture room
- Incubation room
- Jar storage room
- Washing room

- Sterile infrastructure
- Growth room: temperature, humidity, light controlled
- Medium sterilization and manufacturing equipment
- Highest purity water filtration system

Nursery : Greenhouses



Nursery Galicia



Hightech Greenhouses

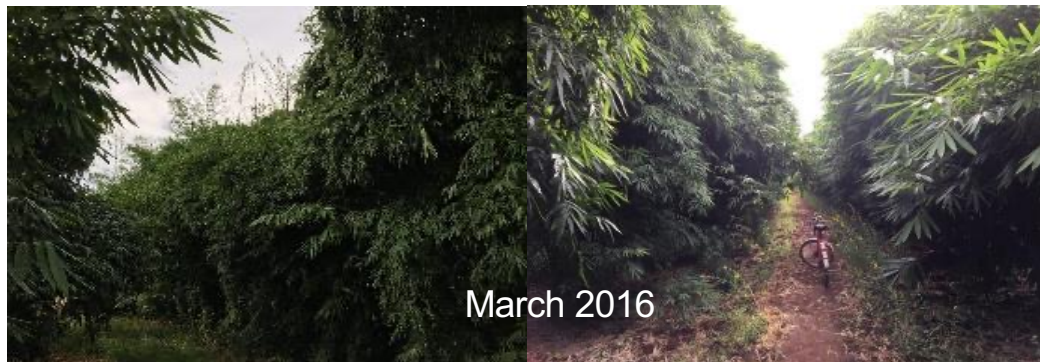


Bamboo Plantations

- Lay-out
- erosion
- logistics



Trial planting, Lisoka estate, Malawi



Sustainable Plantations



Bamboo for Africa



Harvesting techniques : clear cut or selected harvesting



Technology to control growth, fertilizer needs,..



Bamboo for Africa



Thank you!