

AG BIOTECK LABORATORIES (I) LTD



Tissue cultured Fig

(Ficus Carica)

Cv. AGBioGold

(Deanna)

**Production & Field
Plantation**

AG BIOTECK LABORATORIES (I) LTD



AG Bioteck Laboratories is the realization of the dream of techno entrepreneurs to build a biotechnology company by leveraging their scientific temper and environmental consciousness to deliver technologically proven and qualitatively superior products and services in the areas of Biotechnology, Tree Farming, Medicinal plants and Organic Farming, Products. **AGbioteck**

AG BIOTECK LABORATORIES (I) LTD

Infra: Inoculation & Incubation Facility



AG BIOTECK LABORATORIES (I) LTD

Tissue culture products

Fruit crops

Banana (all cultivars)
Citrus (Seedless Lime)
Fig (*Ficus carica*)
Dragon Fruit
Straw berry
Pine apple
Pomegranate
Guava (Seedless)

Forestry plants

Tectona grandis
Paulownia sps.
Gmelina arborea
Conocarpus sp
Bambusa vulgaris
Acacia mangium
Albizia odoratissima
Melia dubia

Flower plants

Anthurium
Chrysanthimum
Gerbera
Tropical orchids

Foliage plants

Spathyphyllum
Syngonium

Spices & Medicinal plants

Curcuma longa
Gingiber officinalis
Aloe barbadensis
Vanilla planifolia
Stevia rebaudiana
Costus sps
Sabah Snake grass

Medicinal Trees

Ekabilwa
Mahabilwa
Vitex Nirgundi
Sandalwood
Agarwood
Red sander

Oil yielding plants

Simarouba glauca
Azardiracta indica
Madhuca longifolia
Pongamia pinnata

AG BIOTECK LABORATORIES (I) LTD

about Plant: FIG (Anjeer)



- Fig Tree Known as 'The tree of life'' by the ancient Egyptians and much enjoyed by Cleopatra and Ulysses.
- *Ficus carica* (fig) is a crop of commercial significance in arid & semi arid regions of India, which is native to the Arid region of Asia
- The cultivated Fig, forms a shrub or low spreading deciduous tree belonging to the family Moraceae.
- Fig is consumed as fresh or dried & valued for its nutritional and medicinal properties. It contains proteins, calcium & Vitamin-A.
- Fig tolerates poorly drained soils and grow well in relatively infertile soils, temperature from 20 to 115 degrees of F and drought tolerant.

2018-4-6 13:46

AG BIOTECK LABORATORIES (I) LTD

about : Tissue culture Fig Plants



- **AG Bioteck Laboratories (I) Ltd, Hyd** is the only organization producing tissue culture Fig plants in India from selected elite Plus Trees (Mother Plants) with desirable characters.
- The varieties developed in the **AG Bioteck Laboratories (I) Ltd** are **Deanna (Yellow)** and **Brown Turkey (Reddish purple)** and selected **Thai Hybrids**

2018-4-6 13:46

AGbioteck

AG BIOTECK LABORATORIES (I) LTD

Tissue culture Fig Cv.Deanna (AGBioGold)



A large light fig of high quality suited to the fresh and dry fruit, green to golden skin with pink pulp, very popular in the worldwide. Deanna remains the largest and one of the most delicious honey type fig among many varieties



AGbioleck

AG BIOTECK LABORATORIES (I) LTD

Tissue culture Fig : Cv. Deanna (AGBioGold)

- This cultivar produces very large round to slightly flattened, green skinned figs turning slightly yellow to Gold when fully ripe.
- The skin is thin.
- The flesh is strawberry coloured and very sweet when fully ripe.
- The plants are very vigorous and fast growing. In fact it is the fastest growing variety off all that we have tested.
- It has crunchy seeds.
- It has good shelf life in cold storage
- It is a very productive, heavy bearer.
- Resistant against fig mosaic virus.



AG BIOTECK LABORATORIES (I) LTD

In vitro propagation/tissue culture of Fig

- Tissue culture is the modern Plant Biotechnology that is applied for mass production of superior planting material
- Tissue culture plants are developed from selected elite mother plants.
- Tissue cultured plants ensures uniform vigorous faster growth when compared with cutting plants
- Tissue cultured Plants starts yielding after one year of planting unlike the cutting plants.
- These are virus and disease free plants while supplying.
- Early maturity and high yields.
- Tissue culture plants produce fruits of uniform size.
- The economic life span of the plant is 20-25 years.



AG BIOTECK LABORATORIES (I) LTD

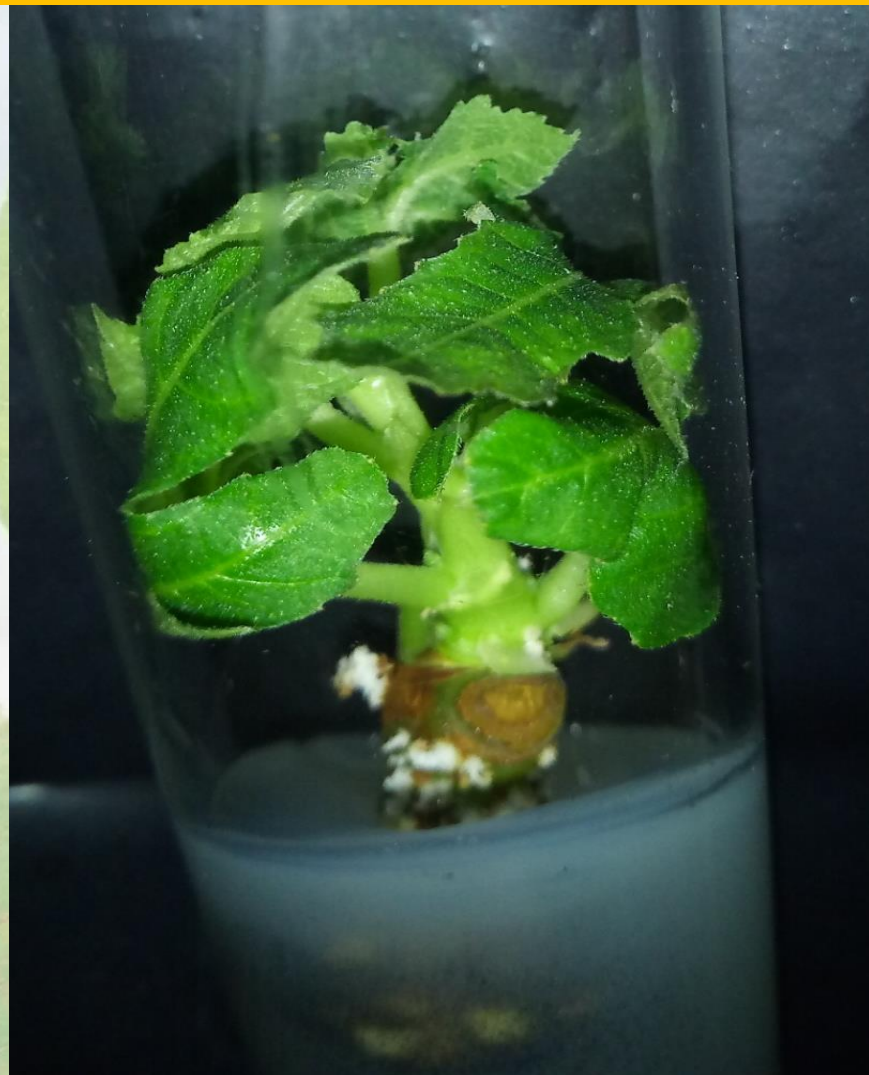
Fig Mother plant – Explants/tissues collection

AGBioteck is successful in identifying the Fig Trees with desirable characters in all major growing states and developed the tissue culture techniques for mass multiplication with clone marking



AG BIOTECK LABORATORIES (I) LTD

Fig Cv.AGBioGold : *In vitro* establishment of Tissue



AG BIOTECK LABORATORIES (I) LTD

Fig Cv.AGBioGold: *In vitro* Multiplication & Rooting



AG BIOTECK LABORATORIES (I) LTD

Fig Cv. AGBioGold : Tissue cultured plantlets in Primary Hardening (Jiffypots)



AG BIOTECK LABORATORIES (I) LTD

Fig Cv. AGBioGold : Tissue cultured plantlets in Secondary Hardening (Poly Bags)



AG BIOTECK LABORATORIES (I) LTD

Fig Cv. AGBioGold : Packing & Transport of Tissue cultured plants



AGbioteck

AG BIOTECK LABORATORIES (I) LTD

Suitable Soils

- Fig favor's deep, well drained, black and sandy loams.
- It can tolerate a faired high level of chloride salts but not sodium salts present in the soil.
- Red loams are highly suitable.
- Soil pH level should be 6.0 to 6.5



AG BIOTECK LABORATORIES (I) LTD

Climate

- Fig tree is a deciduous, and subtropical.
- Fig favours area having arid or semi arid environment, high summer temperature, plenty of sunshine and moderate winter.
- The plant has better threshold limit for high temperature than for the lower.
- Plants trees can withstand temperature up to 45°C, but young ones need protection.



AG BIOTECK LABORATORIES (I) LTD

Planting procedures

- The best time for planting is the onset of the rainy season.
- The layout for planting can be either square or hexagonal system. The square system is more common and desirable.
- Spacing depends on soil type and recommended spacing for Deanna is 9 feet x 12 feet
- Pits of 45 cm x 45 cm x 60 cm depth size are dug and exposed to sun for about 15 days, and then filled with a mixture of Vermicompost and top soil(1:1) with 500 gms of SSP and 1 kg of neem/pit along with Trichoderma viridi, Metarizum.
- Once the plant is planted, the soil around the plant should be tamped firmly.



AG BIOTECK LABORATORIES (I) LTD

Tissue culture Fig Cv.AGBiogold in the Farmer's Field



1 Month old plant



3 Months old plant



5 Months old plant

AG BIOTECK LABORATORIES (I) LTD

Irrigation



- Fig plants can sustain heat and drought.
- Commercial fig production is possible if plants are timely irrigated.
- Loose and sandy soils require larger quantities of water than heavy soil.
- Either drip or flood irrigation can be practiced.
- The drip irrigation minimizes water requirement and allows fertilizer application through irrigation water.
- In the absence of adequate and regular irrigation the fruit development is affected, resulting in small and hard fruits.
- In drip irrigation, 15-20 liters of water/day plant may be supplied. The thumb rule is to replenish 50% of pan evaporation losses.

AG BIOTECK LABORATORIES (I) LTD

Training

- Fig trees are trained initially to single stem to encourage a wide, symmetrical crown with a mechanically strong framework having evenly distributed laterals.
- The tree is allowed to grow for about a meter and then it is topped, which induces side branches all round the main stem.
- The Plants should be free of suckers, dry and sick branches.
- The interior of the bush should be maintained



AG BIOTECK LABORATORIES (I) LTD

Pruning

- Pruning in fig is practiced annually to stimulate production of new growth, and bearing fruits.
- The best time to secure a mature crop is hot, dry summer. Therefore, pruning may be done 4-5 months in advance.
- Generally, a single marketable crop is harvested yearly in our country.
- When heavy pruning is practiced, trees are headed back severely every year, leaving about 2 buds on each one year old shoot.
- If light pruning is adopted, shoots which have yielded fruits are lightly headed back after harvesting.



AG BIOTECK LABORATORIES (I) LTD

Manuring And Fertigation

- Nutrient requirements vary according to the variety and soil type.
- For young plants fertilizers can be applied with the onset of monsoon and, just after pruning for those which have commenced yielding.
- The annual requirement can be best divided into 2 applications, half after pruning and remaining 2 months later when the syconia are developing.
- Nitrogen is essential for rapid growth of foliage and development of syconia, fruit color and maturation
- Potassium for yield and quality.



AG BIOTECK LABORATORIES (I) LTD

After Care

- After the plants are set in the field, regular watering is essential until they are well established.
- A basin of 60 cm diameter should be prepared around the plant and is widened as the canopy size increases.
- Basin cleaning is taken up regularly to keep it weed free.
- The side shoots and suckers should be removed as and when they emerge.
- Maintenance of orchard is very important to keep weed free



AG BIOTECK LABORATORIES (I) LTD

Fruits given to 1 year old plant in the Farmer's Field



Deanna produces large, very attractive and sweet green figs that ripen to yellow or greenish yellow. The strawberry to amber flesh is considered to be of very good quality. These fruits are resistant to splitting. The small eye helps to minimize spoiling. It also has good cold hardiness.



AG BIOTECK LABORATORIES (I) LTD

Harvesting And Post Harvest Management

- Harvesting of figs depends on their use.
- About 90% of the figs produced in the world are dried.
- Fresh figs should be harvested when they are soft and slightly wilted at the neck and little or no milky latex flow at the cut end of the stalk
- Figs are grown for drying, they are allowed to ripen and to dry partially



AG BIOTECK LABORATORIES (I) LTD

Deanna Fig (AGBioGold) Fresh And Ripen Fruits



AGbioteck

AG BIOTECK LABORATORIES (I) LTD

Fig : Cv. Deanna (AGBioGold) drying process





THANK YOU