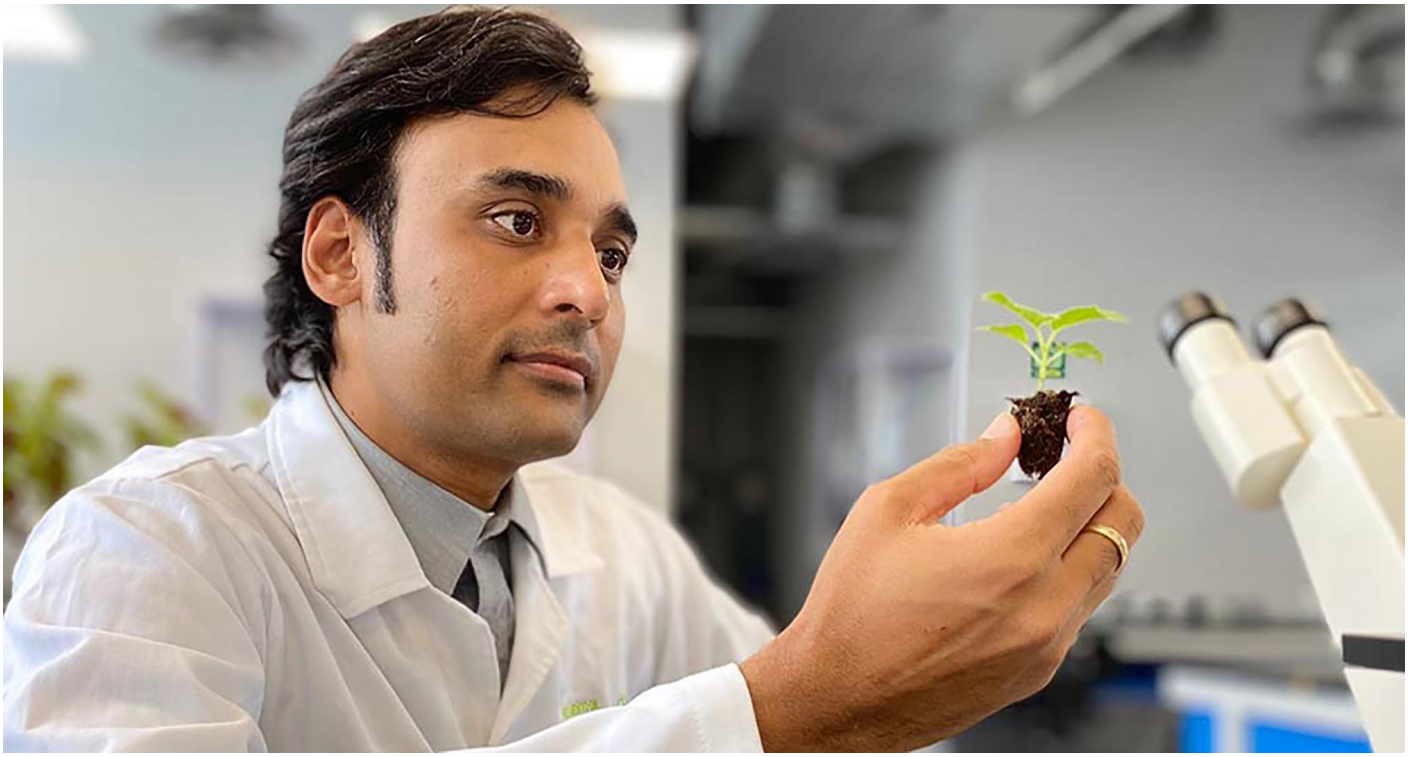
Tec leads timber tree laboratory project in Querétaro



After having successfully cloned the Kiri tree, research professor Dr. Ashutosh Sharma from the Department of Bioengineering at **Tec de Monterrey's Querétaro campus** is now leading the construction of **the first laboratory for micropropagation of timber trees in Mexico.**

The project is progressing under **Dr. Sharma's supervision of design and development** in collaboration with the Materra Forestal company from Querétaro.

"A country can't develop without science and technology, and this project is a clear example of how a scientific project can generate new businesses and jobs and strengthen the economy," said the researcher.

The new laboratory will have approximately 500 m2 of laboratories, greenhouses, and acclimatization areas.

"The wood from the Kiri tree is one of the most expensive in the world. Each tree can be sold for between 2,000 and 3,000 dollars."

width="900" loading="lazy"> **A unique laboratory in Mexico**

Dr. Sharma emphasizes that it'll be a **unique space for the Kiri tree:**

"We're the second-largest laboratory in the world after Germany*. The Kiri plant that we're developing is for timber and we want to promote new business opportunities,"* he said.

Micropropagation consists of taking small sections of tissue from a plant or entire structures to grow them under artificial conditions and thus regrow entire plants.

In other words, **it's possible to produce thousands of plants from a small plant via this process, without the need for seeds or cuttings.**

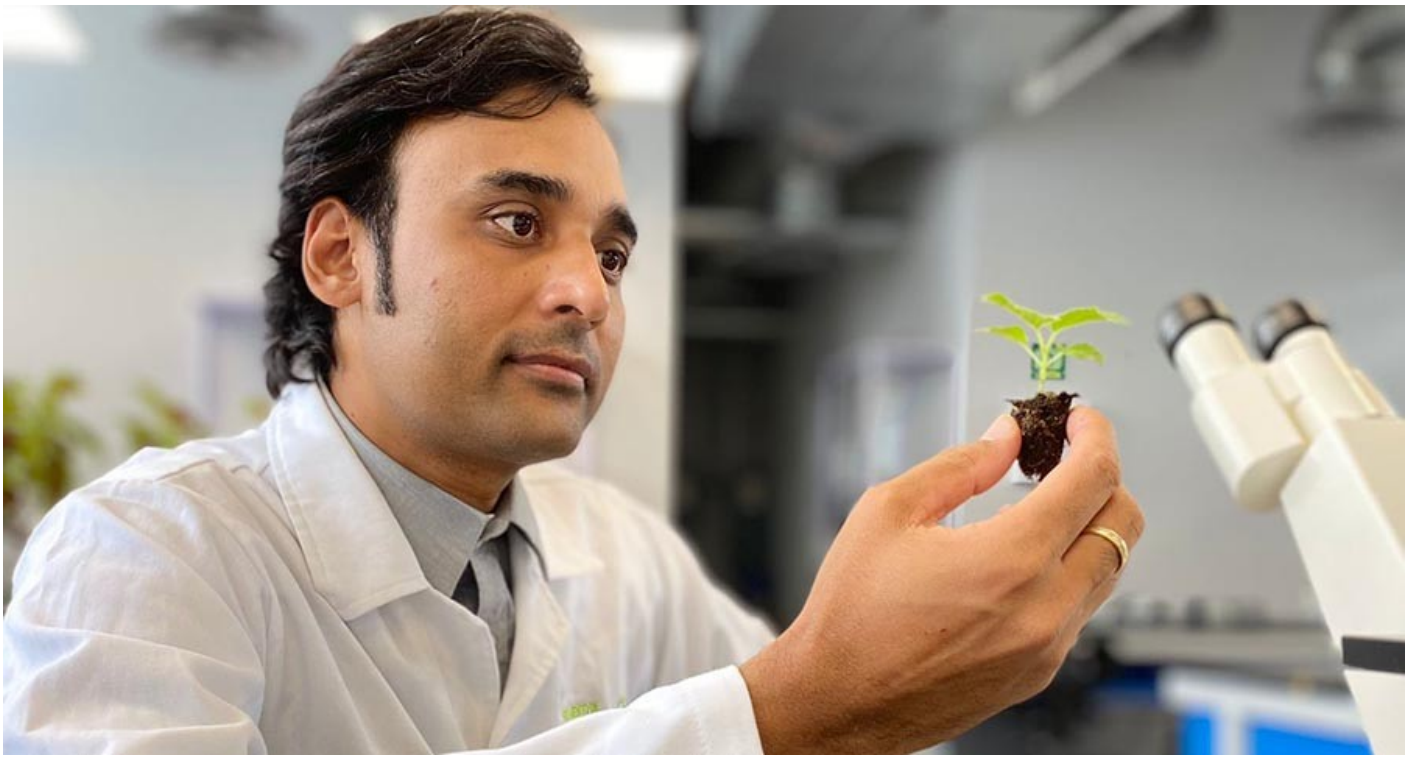
The micropropagation technique **consists of 4 stages:**

- *Differentiation*
- *Proliferation*
- *Rooting*
- *Acclimatization*

"The whole process is carried out in laboratories with specialized equipment and the acclimatization part is carried out in controlled growth chambers and greenhouses," says Dr. Sharma.

"The wood from the Kiri tree is one of the most expensive in the world. ***Each tree can be sold for between 2,000 and 3,000 dollars,"*** he added.

"A country can't develop without science and technology, and this project is a clear example of how a scientific project can generate new businesses and jobs and strengthen the economy."


width="900" loading="lazy">

Current status of the research

The pilot stage has already been successful, with the cloning of two thousand trees, so the next step will now be to reach **50,000 plants in the next six months.**

“One of the objectives was to achieve 100% adaptation of the plant within an 8-hectare area in Amealco, with permission from SEMARNAT,” said Dr. Sharma.

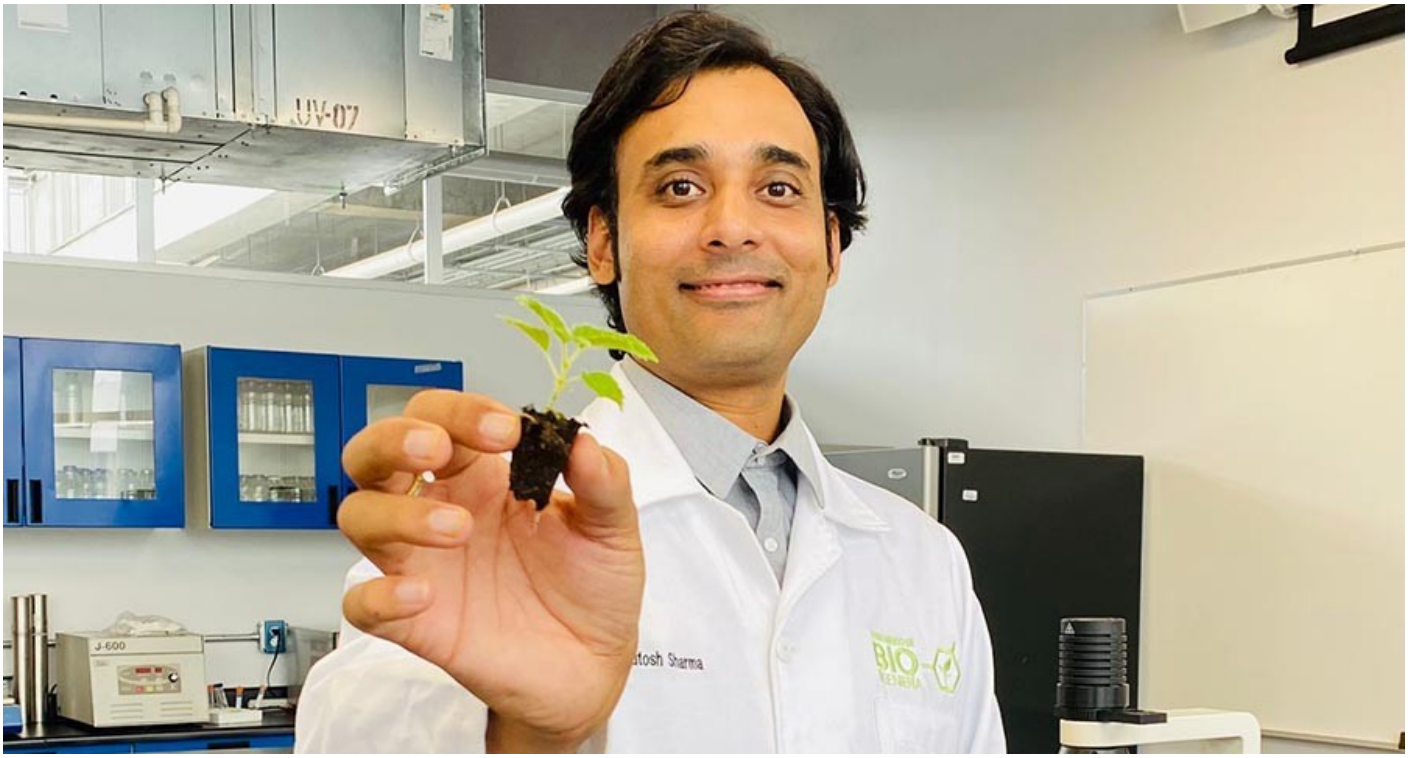
Due to its strict sanitary measures and processes, the Materra Forestal company **has received its first notification for a commercial plantation of timber trees.**

“One of our goals is to be the number one Kiri tree exporter worldwide,” adds Dr. Sharma.

Kiri: the tree with “superpowers”

The so-called tree of the future has unique characteristics:

- *It’s the fastest growing tree in the world (it grows up to 6 cm per day).*
- *Extremely light wood (1/3 the weight of pine wood).*
- *Its wood is considered to be semi-precious on the global market.*
- *The tree with the highest CO2 absorption in the world (up to 10 times more than any other tree).*
- *It’s used for the recovery of eroded and contaminated soils.*
- *The giant leaves of the Paulownia species are excellent fodder for livestock (similar to alfalfa).*
- *An agroforestry system can be developed through associated crops, providing food and wood.*



width="900" loading="lazy">

For Dr. Sharma, working with **Materra Forestal has been such a positive experience that he’s already thinking of inviting them to be a training partner company.**

“We want students to see the best new trends in agribusiness, and how biotechnology is transforming the field,” he concluded.

KEEP READING

https://tec.mx/en/news/guadalajara/research/patent-created-tec-professors-design-ophthalmic-device