PHOENIX EBRA

The Rebirth of Seeds · Clean plants for Florida growers

Phoenix Ebra Inc.
Lake City, Florida

Nursery & Grower Fact Sheet

Naturally pathogen-free plants, multiplied from one clean start.

Phoenix Ebra is a Florida plant tissue-culture company. We take proven plant varieties, clean out the viruses, bacteria and fungi they have picked up over generations, test them, and multiply them into healthy, identical plants for nurseries, garden centers and growers.

NON GMO ALWAYS

We do not change a plant's genes. We clean it.

Every plant we ship is a true-to-type copy of the variety you already know: the same Hamlin, the same Valencia, the same strawberry. Tissue culture is a natural propagation method, like taking a cutting, done in a clean lab.

× **No genetic engineering** × **No gene editing** × **No foreign DNA** × **No GMO techniques, ever**

What is GZ? GZ means Generation Zero: a plant reborn from one clean start, as clean as the very first plant of its variety. Every GZ plant is third party verified and certified as pathogen free, and it's a true-to-type copy of the variety you already know.

The orange seed example: from one seed to 10,000 plantlets

1 seed
Sprout
Take one orange seed that is just beginning to sprout. There is a tiny green tip at the top.

1/10–1/30 mm
The meristem
That tip is the meristem. It grows so fast that pathogens picked up over past generations can't keep up.

1 clean tip
Isolate
Under a high-powered microscope, our PhDs slice off the meristem. This is meristem isolation.

1,000
Tissue cultures
From that single clean meristem, our PhDs cut 1,000 pieces, called tissue cultures.

×10 each
Multiply
Each goes in a dish of nutrients that signals it to divide. Each one produces 10 plantlets.

10,000
Plantlets
Separated into our custom soil mix and grown into plants in our propagation chambers.

No gene editing, no trickery, no foul play.
Just 100% Generation Zero plants, like the very first plant ever placed on this earth.

Quick facts: what a clean start is worth

VIGOR AND GROWTH

Up to 30%
Severe strains of strawberry mottle virus can cut plant vigor and yield by up to 30%.[1]

Up to 75%
Strawberry necrotic shock virus can cut runner production by up to 75% and yield by up to 15%. For a nursery, runners are the product.[1]

No symptoms
Most single virus infections show no symptoms, so researchers call visual inspection "very inefficient in nurseries." Only testing tells you a plant is clean.[1]

More flowers
In a field study, tissue-culture strawberry plants produced more flowers than plants grown from runners.[2]

A century of proven science

1902
Gottlieb Haberlandt first conceives of plant tissue culture.

1922
Tissue culture is first demonstrated using isolated root tips.

1952
Georges Morel and Claude Martin show meristem tip isolation yields virus-free plants, with no genetic modification.

1960s
Morel adapts it for rapid clonal multiplication. Agriculture and horticulture adopt it widely.

Today
Phoenix Ebra brings it to Florida, with in-house pathogen testing and automation.

YIELDS AND RETURNS

Up to 62%

Raspberry bushy dwarf virus cut raspberry yields by up to 62% in a 2025 study of three red raspberry varieties.[3]

"Virtually no fruit"

Some blueberry viruses leave infected bushes with "virtually no fruit at harvest." Growers are advised to plant only virus-tested, certified stock.[4]

Phoenix Ebra's stock is third party verified and certified as pathogen free.

WHY A CLEAN START MATTERS NOW

$220 billion

What plant diseases cost the world economy every year.[5]

−32%

Florida's orange crop fell 32% in one season, to 12.2 million boxes in 2024–25.[6]

Since 2007

Florida has required citrus nursery trees to be grown in insect-proof screened structures.[7]

Orange Facts

- **Scarcer fruit, better prices.** Florida oranges averaged 73 boxes an acre in 2024–25, down from 367 in 2007–08, while the price growers get per box doubled, from $6.61 to $13.30.[8]
- **Clean trees kept clean pay off.** In a University of Florida trial with young Valencia trees, covered trees dropped none of their fruit, and the fruit was much sweeter (10.9 vs. 7.5 Brix). Uncovered trees lost 60% of their crop to fruit drop, and 80% caught greening within six months.[9]

Phoenix Ebra Facts

- **Years sooner than seed.** Orange trees grown from seed take 6 to 15 years to bear fruit; grafted trees start in 3 to 4. Phoenix Ebra's GZ citrus keeps its parent tree's mature fruiting age, so you skip the seedling wait and start clean.
- **Higher yields per acre.** Four-year-old high-density Valencia blocks (495 trees an acre) produced more than 300 boxes an acre, about double Florida's average at the time.[10] Dense plantings take many clean trees, and we multiply 10,000 from one clean tip.
- **Most fruit in the least space.** Under University of Florida protective screens, clean citrus trees (grapefruit) reached 855 boxes an acre by year 7½, more than 11 times Florida's 2024–25 orange average.[11] Screen houses start with clean trees.

Crops we are bringing to Florida

Hamlin oranges · Valencia oranges · Tomatoes · Strawberries · Blueberries · Raspberries · Blackberries

Citrus: Phoenix Ebra will be registered with the FDACS Division of Plant Industry to sell finished citrus trees, liners, plantlets and rootstock.

What this means for you

Nurseries and garden centers

- Clean, uniform stock your customers can trust
- True-to-type, familiar varieties
- Grown right here in North Florida

Growers and partners

- Clean mother stock for replanting
- Clean-up and multiplication of your own lines
- Pilot plantings and research trials

Ready to order?

Reserve transplants — PhoenixEbra.com/shop →

Bulk orders, 100+ per variety — Bulk order form →

Citrus, berries or custom multiplication? Call, text or email Adam.

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2. Karhu, *Acta Horticulturae* 560, 2001.
3. Riaba & Udovychenko, *Agrobiodiversity for Improving Nutrition, Health and Life Quality*, 2025.
4. Pacific Northwest Plant Disease Management Handbook, Blueberry viruses.
5. UN Food and Agriculture Organization (IPPC review), 2021.
6. USDA NASS, Florida Citrus Summary, Aug. 2025.
7. Florida citrus nursery rule (F.A.C. 5B-62), effective Jan. 1, 2007.
8. USDA NASS & FDACS, Florida Citrus Statistics 2024–25.
9. UF/IFAS (Alferez et al.), *Citrus Industry*, Mar. 2022.
10. *Citrus Industry*, July 2017 (Peace River Packing Co.).
11. UF/IFAS EDIS HS1304, Citrus under Protective Screen (CUPS).