

Growing Goldenberries:

The New Superfruit

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What are they?

- *Physalis peruviana*
- *Solanaceous* crop from South America
- annual with marble sized fruit; tropical flavor
- eaten raw; jam / jelly; dried.
- fits standard vegetable crop rotations
- common names:
 - Cape gooseberry
 - Poha berry
 - Incaberry
 - Pichuberry



What crops are they related to?

- Closely related to:
 - tomatillo (*P. ixocarpa*)
 - ground cherries (*P. pruinosa*)



Goldenberry vs ground cherry



- extremely pubescent (hairy)
- husk has 10 ribs
- plants 5 or 6 feet tall
- not precocious



- glabrous (smooth)
- husk has 5 ribs
- ~ 3 feet tall
- extremely precocious

Steps to evaluate potential:

- Production guidelines for US are non-existent, thus:
 - **USDA-SARE Project LNE-18-362:**
'Goldenberries (Physalis peruviana): A New Fruit for CSA Farms and Farmers Markets'

USDA-SARE Project LNE-18-362

Goldenberries (*Physalis peruviana*):
A New Fruit for CSA Farms and Farmers Markets



**Goldenberries (*Physalis peruviana*):
A New Fruit for CSA Farms and Farmers Markets
SARE Project LNE-18-362**

Cooperators

Dr. Thomas Gianfagna

Dr. Thomas Molnar



Goldenberries (*Physalis peruviana*):

A New Fruit for CSA Farms and Farmers Markets

SARE Project LNE-18-362

- Evaluate:
 - Germplasm characteristics
 - Production practices
- Identify:
 - *Physalis peruviana* seed sources
 - Superior germplasm for production
 - Germplasm for use in cultivar development

Goldenberries (*Physalis peruviana*):

A New Fruit for CSA Farms and Farmers Markets

SARE Project LNE-18-362

- Encourage goldenberry evaluation by:
 - providing germplasm
 - producing a Sustainable Goldenberry Production Guide
 - provide updates via presentations at growers meetings.

Goldenberries (*Physalis peruviana*):

A New Fruit for CSA Farms and Farmers Markets

SARE Project LNE-18-362

- Is there a market?

Photographer: Lisa Wiltse/Bloomberg

Business

Move Over, Quinoa, Nestle Is Looking for the Next Superfood

By [Corinne Gretler](#)


September 4, 2018, 12:00 PM EDT

- ▶ Goldenberries are fruits from the Andes high in antioxidants
- ▶ Nestle may start using ingredient in baby food, chocolate

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Quinoa is so 2017. Nestle SA's new superfood candidate is the goldenberry.

The world's largest food company may add the Andean fruit, closely related to the tomato with a sweet and sour

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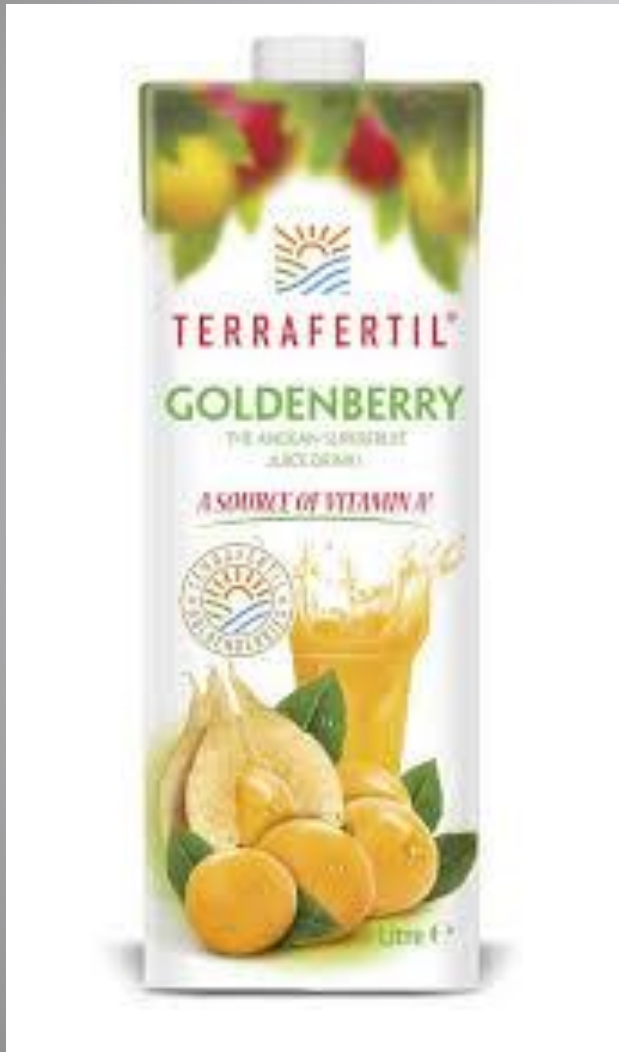
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About the product

- Youth skin by high vitamin P (Bioflavonoids)





Use to garnish desserts



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Goldenberries (*Physalis peruviana*):

- Nearly all goldenberries sold in US are imported from Colombia, Peru, Chile and Ecuador.

USDA United States Department of Agriculture
Animal and Plant Health Inspection Service

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Stakeholder Information / By Date / 2018 / April

Stakeholder Information
News
Federal Register Posts

APHIS Proposes to Allow the Importation of Fresh Cape Gooseberry Fruit from Ecuador

Last M

Protocol restrictions limit imports of goldenberries into the US

Goldenberries are currently seeing some limits on their supply into the U.S.

The berry, more commonly available in Europe, are shipped from Colombia and currently Andes Fruits Colombia is handling numerous restrictions involved in shipping fruit from Colombia to the U.S.



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USDA greenlights Ecuador cape gooseberries

Tom Karst
April 19, 2018 01:53 PM

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Goldenberries (*Physalis peruviana*):

A New Fruit for CSA Farms and Farmers Markets

SARE Project LNE-18-362

- We are trying to figure out:
 - Best genotype
 - *Look good*
 - *Taste good*
 - How to grow it here

Goldenberries (*Physalis peruviana*):

A New Fruit for CSA Farms and Farmers Markets

SARE Project LNE-18-362

- Grower evaluation of 2 genotypes
- Rutgers evaluation of 30 genotypes
- Rutgers evaluation of production practices
 - Mulch color
 - Pruning
 - Trellising



Results

A complete report can be found online at:

https://projects.sare.org/sare_project/lne18-362/



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Project Overview

Goldenberries (*Physalis peruviana*): A New Fruit for CSA Farms and Farmers Markets

[View the project report](#)

Information Products

[Goldenberry Fact Sheet](#) (Fact Sheet)

Commodities

- **Fruits:** berries (other)

LNE18-362

Project Type: Research and Education

Funds awarded in 2018: \$102,122.00

Projected End Date: 12/31/2020

Grant Recipient: Rutgers University

Region: Northeast

State: New Jersey

Project Leader:

Edward Durner



Pests

- Colorado Potato Beetle
(*Leptinotarsa decemlineata*)
- 3 lined potato beetles
(*Lema daturaphila*)
- Hornworms
- Armyworm



Photo courtesy of Andrew Ristvey, U of Md.



Lema daturaphila



(Leptinotarsa decemlineata)



- Tobacco hornworm (*Manduca sexta*)
 - black margins on white stripes
 - red horn



- Tomato hornworm (*Manduca quinquemaculata*)
 - green margins on white stripes
 - blue horn.





Photos courtesy of Andrew Ristvey, U of Md.

- Large, vigourous, healthy plants.
- Fruit were very slow to ripen (September).
- Low yield.
- Flavor got mixed reviews

Goldenberry seed is often mislabeled...

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HOURS

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MINUTES

49

SECONDS

NOT Goldenberry

- Cape Gooseberry
 - Chiltern Seeds
- Tomatillo Ground Cherry
 - Seed Needs
- Giant Poha Berry
 - Caribbean Garden Seed

- Variability among genotypes limited
- Two fruiting 'types' could be discerned:
 - Small
 - marble sized and shaped fruit (2 – 3 g each)
 - Large
 - irregularly shaped fruit (5 – 6 g each)
 - more tropical flavor than smaller fruit

Best genotypes so far:

- Small fruited
 - 'Cape Gooseberry'
TradeWinds Fruit Company
 - 'Ambrosia'
Fedco seeds
- Large fruited
 - 'Schoenbrunn Gold'
Turtle Tree Seed Company

Ambrosia Husk Cherry
Fedco
North America
2018



Schoenbrunn Gold
Turtle Tree Seeds
North America
2016 - OP2016



- Cape Gooseberry (Tradewinds Fruit)
- Ambrosia (Fedco)
- Schoenbrunn Gold (Turtle Tree Seed)

- Black plastic mulch on raised beds

- With trellising (simple two wire trellis using T-stakes and twine)

- With pruning to the first bifurcation of the main stem









18170











Summary

- We have identified several promising genotypes
- Two major plant characteristics need improvement:
 - earliness to harvest
 - yield
- The added expense of white mulch is not warranted.
- Trellising and pruning ease management / field access

- The average number of fruit per plant:
 - 240 to 742
 - smaller fruited genotypes produce more fruit per plant compared to larger fruited genotypes.
- Yield per plant:
 - 900 g per plant (~1.9 lb) to 2200 g per plant (4.9 lbs per plant).

Summary

- We recommend:
 - Black plastic mulch
 - Use a simple trellis
 - Prune plants to the first bifurcation of the main stem
 - For flavor & size: 'Schoenbrunn Gold'

2020

- A third year of evaluation will be conducted in 2020.
- Interested growers will again be provided seed of 'Schoenbrunn Gold'.
- We will be expanding our research evaluation to consider high tunnel production:
 - 5 50-ft Gothic style moveable high tunnels
 - at Cream Ridge
 - evaluate field vs high tunnel production of 'Schoenbrunn Gold' and 2 other genotypes.

