



New York Nut Growers Association

English Walnut Project

New York Chapter of NNGA - English Walnut Improvement Project Update

By: Jeff Zarnowski

Updated slides from Carl Albers-leading the way.

**Summer Meeting NY Nut Growers Association
August 12th 2023
Acra, NY**

Why Plant Nut Trees

- They grow here and we have plenty of water and low cost land compared to many regions.
- One study people who eat three servings a week reduced death by 20% from all causes.
- Perennial, no annual tillage necessary rebuilding soil structure and increase soil organic matter
- Each 1% increase in soil organic matter increases water storage by roughly 20,000 gallons per acre!
- Trees enhance the hydrologic cycle which is 95 percent responsible for cooling the planet according to Walter Jehne, Australian climate scientist and soil microbiologist.

Mainly from Carl Albers NYNGA October 2022

Walnut Health Benefits

Source: “Walnuts 101: Nutrition Facts and Health Benefits” by Atli Arnarson, Healthline

- Walnuts are made up of 65% fat and about 15% of protein.
- Walnuts are richer than most other nuts in polyunsaturated fats.
- Contain a relatively high percentage of the healthy omega-3 fat alpha-linolenic acid (ALA). The only significant source amongst nut crops.
- Walnuts are an excellent source copper, folic acid, phosphorus, vitamin B6, manganese, and vitamin E.
- Walnuts are one of the richest dietary sources of antioxidants. Walnuts ranked second in a study investigating the antioxidant content of 1,113 commonly eaten foods.



English walnuts fall free from the husk and you just pick them up!

More EW Project Information

www.nynga.org



Moberg Tree - Penn Yan NY

Desired Characteristics

a.k.a. What makes a good walnut tree?

- Hardy to USDA zone 5 - to fit with our growing zones for NY.
- Nut falls free from the husk most years – easy to harvest
- Large, thin shelled nuts with high percentage of nutmeat, so we grow nut meat not shells and husks.
- Crack out easily – so we get whole and half nuts to eat.
- Mild, nutty flavor, sweetness a plus – no bitter aftertaste
- Late flowering/late leafing to escape late spring frosts
- Early maturity; retains leaves after nuts drop
- Annually productive/lateral bearing?
- Adequate insect and disease resistance, especially to walnut blight
- Dwarf size? More trees per acre, like apples and hazelnuts

Again, Thank you Carl A.

NYNGA English Walnut Project

We Need Your Help!

Search for adapted, regular bearers of easy cracking nuts with good flavor – no excessive bitter aftertaste

Trial known cultivars throughout NYS (Ames, Bauer, Broadview, Combe, North Platte and Young's B1 – source Grimo Nut Nursery.) Complete sets were planted at 9 sites across NYS in 2020. Monitor adaptation and use as benchmarks

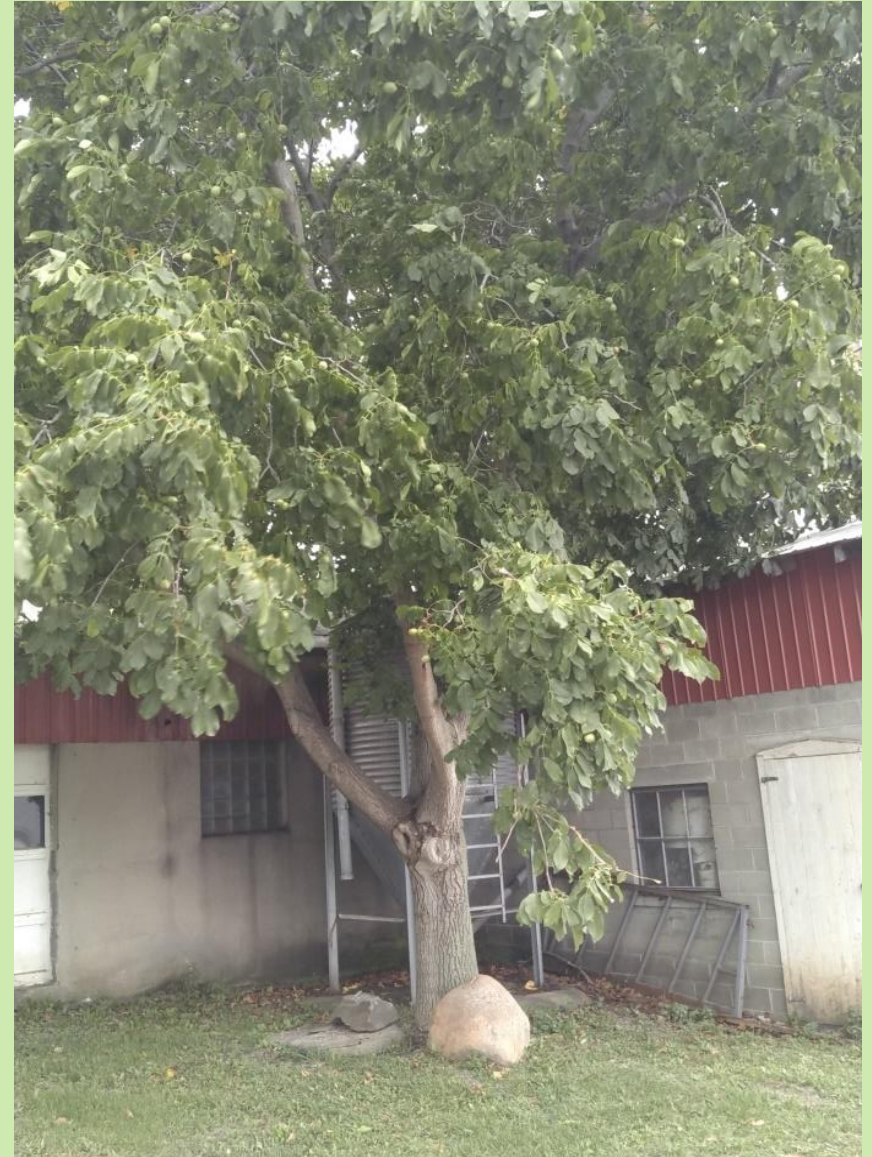
Select for the best genetics thru statewide trials of these and other clones, plus seedlings from superior parent trees

Cull inferior trees, replace with better selections

Thank you Carl A.

Clones In The Pipeline

- Grafted Spring 2021
- Charles Greiner, Stanley, I.E. Mitte, Marty and Julian from zone 5a in Quebec – Grimo Nut Nursery
- Grafted Spring 2022
- Hansen, Liddington Late Leafing Carpathian, McKinster Carpathian, Spurgeon, Russian #3 – Source: Burnt Ridge Nursery
- Several clones from England's Orchard and Nursery
- Also Marty, I.E. Mitte, Winnie, A.Nolt Chicken Barn, B. Shirk South Turkey, and D. Eberly House
- Plus seedlings from parents of interest, though none are perfect
- Thank you to our Master Grafters Cindy DeFelice and Jeff Zarnowski. We need more people grafting using hot pipe callous systems, callous boxes, or in temperature controlled greenhouses as walnuts require 80 F to callous



We need more eyes to find and people to plant out trees!
Please, this is a worthy effort for all of us.

Grafting Named Selections



After three years of Hot Pipe Callus (HPC) we finally have learned moisture is paramount to grafting success!

- Keep cold soil moist
- Dormant scion wood moist!
- Keep heated graft moist!
- It will determine if graft success is near zero or 90+ %.

You too can graft walnut trees with Hot Callus Pipe (HPC) grafting! Takes about \$80 plus some scrap material you have or can get from friends. Please See Fall 2022, NY NGA presentation by Cindy DeFelice, “Hot Pipe Callusing for Grafts”.

Grafting Rootstock Selection

- Rootstock for grafts have large effects on the resulting tree that include:
 - Hardiness
 - Bud timing
 - Disease resistance
 - Size
 - Productivity
 - Resilience.

One Year old Black walnut on left and heartnut on right





How Many Nuts Does Can An English Walnut Tree Produce?

Approximately 16 Five Gallon Buckets

From 1 tree!

2021 Moberg Tree Production

You Can Get Started With English Walnuts Today!



Carl Albers has gathered nuts from promising selection of regional trees he thought were good trees.

Z's Nutty Ridge LLC grew them for you to learn, assist and be proactive members for a new nut crop for the region!

With a suggested donation of just 5\$ - Please give what you can.

Donations will allow continued efforts

No Plant Is Perfect - J. Regia Drawbacks

- Walnut blight
- Anthracnose
- Winter injury
- Susceptibility to late spring frosts
- Husk fly maggot
- Butternut curculio



Photo Credit: dailydemocrat.com

Why haven't we seen more English walnuts?

Regionally the previous lack of concerted improvement efforts. Now led by Carl A. and NY NNGA Chapter!

Thank you Carl Albers for leading the charge!

Productive, Yet Neglected Tree

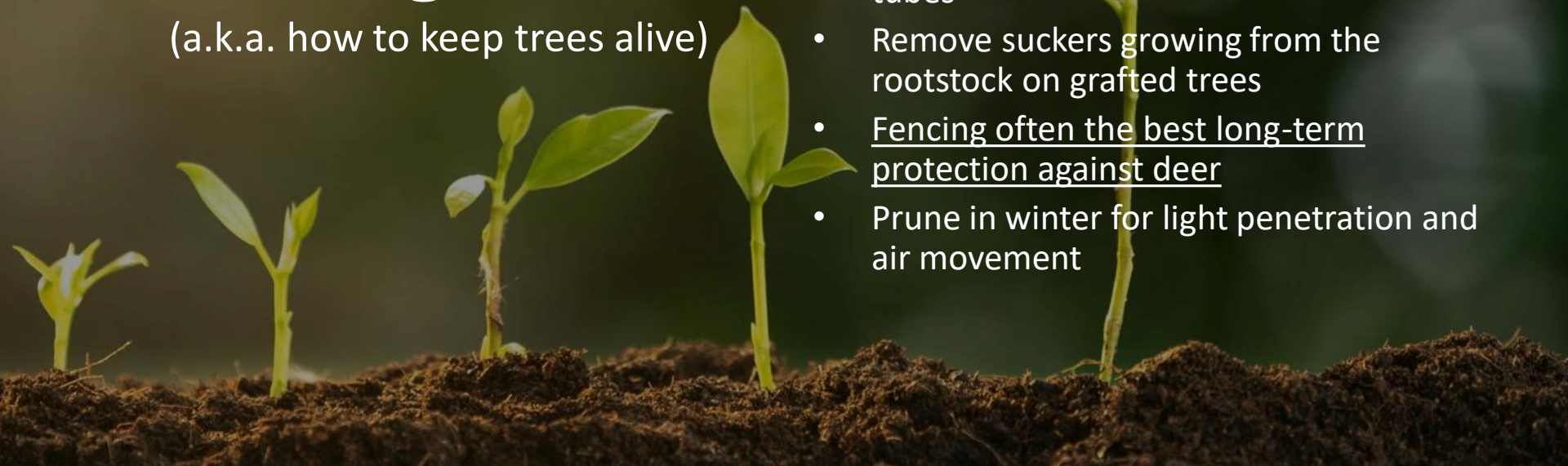
- Roots in the road ditch – poor site selection
- Never pruned
- No soil or tissue tests to determine nutritional needs
- We can do better!



Fall and Winter Graft Management

(a.k.a. how to keep trees alive)

- Soil test and apply any needed limestone
- pH goal is 6.5 to 7.0
- Mow close once understory goes dormant to reduce vole habitat
- Physical barriers to protect against deer and voles
- Tree tubes help protect young grafts from wind/weather extremes
- After graft has been protected for several years and trees have become wind firm replace tree tubes with ½-inch hardware cloth
- Remove weed growth from inside tree tubes
- Remove suckers growing from the rootstock on grafted trees
- Fencing often the best long-term protection against deer
- Prune in winter for light penetration and air movement



John Gordon Demonstration Planting

Pictures to prove English walnut grow locally!

Zone 5b/6a

15-foot x 15-foot spacing



The above grove is done with the generosity of John Wertis leaving a legacy for all of us to learn and grow from.

Thank you, John Wertis!

How You Can Help!

1. Track down healthy trees near you (best if nuts fall free from the husk)
 2. Collect nuts to evaluate for ease of cracking and taste; best to evaluate given tree for several years
 3. Collect scion wood from superior trees in December for HPC
 4. We need more people grafting using hot pipe callous systems, callous boxes, or in greenhouses where the temperature can be regulated to 80 F
 5. Need more planting sites to evaluate clones and seedlings in a wide variety of micro-climates across NYS (eastern NA)
- Carl Albers, cwalbers@yahoo.com,
Phone:607-346-5226





The one and the
same John Wertis
mentioned earlier!

Stanley Tree

Productive
Good tasting, easy cracking nuts
Found in Zone 6a

More EW Project Information

www.nynga.org

- History and Overview
- Join Our Search for Superior Individuals
- Help Us Trial and Evaluate the Best Trees
- Support Our Work – It costs about \$50 to clone and distribute each tree
- Section on ‘Growing English Walnuts’
- You can help either through financial support or by action!
- Email tree information to : cwalbers@yahoo.com



New York Nut Growers
Association
English Walnut Project
Thank You To All of Our
Supporters

- In the not-too-distant future silvopasture based walnut orchards here regionally!
- Meaning not a monoculture planting but under and inter-plantings too!