



PAWPAW PICKIN'S



State Chapter:
Ohio Pawpaw
Growers
Association

Spring 2014

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President's Patch

Spring will soon be upon us and will begin a new growing season with all of its ups and downs. The extended forecast suggests that this could be a record setting hot summer. Not much we can do about the weather but hope that it is not as severe as the weather man/woman is predicting.

I would like to hear from more of you about your North American pawpaw experiences—good or bad. Other individuals can certainly benefit from your past success stories and disappointments. I am sure that many individuals would rather hear from you than read my poor attempts at writing.

I have attached copies of the "Partnership Application" and the "Partnership Agreement" that we have been working on for several years. Many individuals have worked on this initiative for several years and I finally turned it over to Greg and Susan Hoertt to complete. They presented the results of their efforts at last year's Annual 2013 Meeting. Our funding resources and the availability of grafted pawpaws will determine how many of these "Partnerships" that we can support each year. Greg and Susan have agreed to receive and review the "Partnership applications."

We receive requests for information and questions about our activities. All of this information is just a few mouse clicks away on the NAPGA/OPGA website at

Ohiopawpaw.com

All of our past newsletters are archived at Ohio State University AG link on our website.

I already have a family with three young children who have agreed to grow and use their planting as an education tool near the Columbus area. They received grafted and seedling pawpaws from the OPGA.

The only stipulation is that the plants cannot be mailed, thus, the plants must be picked up in person somewhere in Ohio!

I hope that you keep us updated regarding any changes in your e-mail addresses so that you can continue to receive your NAPGA Newsletter and the NAPGA-E-zine electronic newsletter.

I mentioned in the NAPGA E-zine that if you desire any specific scion wood for this spring that you need to let me know. I will also bring several cultivars to the Annual Meeting in Wilmington to graft your pawpaw seedling.

- Ron

Mission Statement

NAPGA

is an organization of pawpaw enthusiasts, backyard and commercial pawpaw growers, small and large, dedicated to promoting the superior traits of the pawpaw plant and fruit, developing a pawpaw industry and marketing plan, preserving and studying the wild pawpaw genetics.

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Please check with Ron (Botrytis@fuse.net) regarding your membership status.

Partnership Application

The OPGA/NAPGA is a not-for-profit, tax exempt 501(c)5 organization of pawpaw enthusiasts and commercial pawpaw growers, large and small, dedicated to educating and promoting the superior traits of the pawpaw, developing a pawpaw industry, marketing plan, and preserving and studying the wild pawpaw genetics.

Objectives of the Partnership Program

- Introduce the planting of the North American pawpaws to individuals and groups throughout North America.
- Educate individuals and groups about the history, uses, growth, and nutritional advantages of the North American pawpaw.
- Increase plantings of select cultivars throughout North America.

Commitments of the Partnership

- Maintain active membership in OPGA/NAPGA
- Plant and maintain North American pawpaw trees according to best practices.
- Maintain records of tree growth, fruit production and growing conditions
- Share records with the OPGA/NAPGA
- Share fruit harvested from donated trees for educational purposes

Applicant: _____

Address: _____

Telephone Number: _____

Description/Name of Proposed Grower (e.g., individual, for profit entity, not-for-profit entity):

Reason for interest in this program: _____

Description of Proposed Growing Site [Please submit up to 4 photos of the proposed growing site]

Address of proposed growing site: _____

Applicant is (check all that apply) Occupant _____ Owner _____ Renter _____ Lessee _____

Approximate dimensions of growing area: _____

Soil type/conditions: _____ Drainage: _____

Hours of sunlight: _____

Description of other agriculture and/or landscaping grown at site: _____

Do you currently use herbicides, pesticides and/or fertilizers in your growing practices? Please describe:

Partnership Agreement

The duration of the partnership will provide useful data for a period of five (5) years unless the Partnership is terminated by agreement of both parties.

Partner Grower: _____

Description/Name of Proposed Grower (e.g., individual, for-profit business/organization, not-for-profit entity): _____

The above Partner Grower agrees to:

- Plant and label the North American pawpaw trees.
- Maintain the North American pawpaw trees according to “best” practices.
- Collect and maintain data and photo records for 5 years:
 - ♣ Flowering dates
 - ♣ Harvest data
 - ♣ Date of first fruit drop
 - ♣ Date of last fruit drop
 - ♣ Number of fruit
 - ♣ Weight and dimensions of fruit or the largest fruit
 - ♣ Annual measurement of tree trunk diameter and height
 - ♣ Description of fruit quality
 - ♣ Description of significant damage due to pests, animals, weather, or other conditions
- Share twice annually your plant records and pictures with the OPGA/NAPGA.
- Remain in good standing by maintaining an active membership in the OPGA/ NAPGA during the duration of the partnership.
- Endeavor to make their planting open to the community.
- Use some of the pawpaw fruit harvested for educational purposes.

OPGA/NAPGA agrees to:

- Donate 6 – 8 North American pawpaw trees and tree labels to the above listed grower.
- Assist in the planting and placement of the North American pawpaw trees.
- Provide information on the maintenance and cultural practices of the North American pawpaw trees.
- Provide information on harvesting and marketing of the North American pawpaw.
- Provide record keeping logbook.
- Publish the data and pictures collected from the Partner Grower in the OPGA/NAPGA in newsletters and/or other communications.
- The OPGA/NAPGA will assist the Partner Grower with the development of their educational program.
- The OPGA/NAPGA will provide an opportunity at the OPGA/NAPGA annual meeting and/or other events for the Partner Grower to present the progress of their North American pawpaw planting.

Partner Grower signature: _____

NAPGA/OPGA representative: _____ **Date of Agreement:** _____

How to Grow North American Pawpaws From Seed

by Dr. Ron Powell

North American pawpaw seeds must be collected from soft, mature fruit. Remove all the pulp including the pulp sac from the seeds. Refer to OPGA Educational Publication, "How to Handle N. A. Pawpaw Seeds," for additional information. Do not allow the seeds to dry out or freeze.

After the seeds have been properly stratified for 80 – 120 days at 5° C / 41° F, the seeds are ready to plant. Remember that germination may be slow and irregular because the seeds have dormant embryos and the seed coats are slowly permeable. I do not scarify my seeds but some individuals do scarify the seeds by making a small "nick" in the seed coat with a small file. Propagation by seed and all seedlings, regardless of the parent tree will express variability as to fruit size, color, taste, etc. Starting plants from seed is the slowest method to obtain a fruiting N. A. pawpaw tree.

There are several ways that N. A. pawpaw seeds can be planted. The following are just several ways that individuals plant their N. A. pawpaw seeds:

1) Cliff England (NAPGA member) transplants his N. A. pawpaw seedlings in pots, called tree bands. Any other deep containers will also work. The tree bands are tall, narrow containers that have a "band" (+) across the bottom instead of holes. The pots are to be set on hardware cloth off the ground. The pur-



pose of this is to allow the roots to be "air-pruned." As the roots grow through the bottom on the pot, they are killed by the air. Seeds can be planted directly in a soilless mix $\frac{3}{4}$ to 1½ inches deep. Keep the soil moist but not wet until after the seed has

germinated. The seeds should germinate in 2 – 3 weeks. The seeds will form a taproot and send up an above ground shoot in about 1 to 2 months. The



seedlings can be protected from direct sun for at least the first year. This picture is from Renalto Aunino in Brazil., state of Santa Catarina. He plants his N. A. pawpaw seeds directly in pots with a mix of worm humus and

coconut dust. He had 100 percent germination—all 7 seeds.

Research conducted at KSU shows that growth of containerized pawpaw seedlings was positively influenced by low to moderate shading (28% or 51%).

2) The N. A. pawpaw seeds can be planted directly where you want them to become established. The seeds need to be planted about $\frac{3}{4}$ to 1½ inches deep in loose soil. The seeds should be planted with the pointed end facing up since the root radicle emerges from the broad, flat end of the seed. Mulch the planted seeds with several inches of mulch. Keep the seeds moist but not wet. In using this method, be sure to plant more seeds than needed and after germination, thin the weakest seedlings to your desired number of seedlings. The seedlings need to be protected from direct sun for at least the first year.



3) Dr. Ron Powell (NAPGA member) plants his N. A. pawpaws in a bed about 15 inches deep filled with a soilless mix. The bottom is covered with a rubber roofing material. A trench is dug 1½ inches deep and seeds laid side by side in the trench. He makes his rows 3 to 4 inches apart. The seedlings can then be transplanted a year or more later into deep containers. The young seedlings are kept under 55% shade. Keep moist but not wet and they should be shaded for at least the first year.

Ron has a few problems with squirrels insisting that walnuts be planted with the pawpaw seedlings, thus,



he covers the emerging seedlings with a hardware cloth. Occasionally he has problems with zebra caterpillars eating the small, tender leaves, leaving just sticks. The leafless

sticks never die but they are stunted for a while until they leaf out again.

4) Mr. Woody Walker starts his N. A. pawpaw seedlings in an above the ground planting box in full sun. The soil is peat moss, perlite, vermiculite and humus-soil with a generous addition of hydrogel water-absorbing pellets and some diatomaceous earth to kill off harmful organisms in the soil. He does not shade his seedlings. Seedlings in the larger box are in their second year.

He said a local nurseryman told him the roots need a lot of air for healthy development in his experience. He used geotextile fabric over screen mesh and a rock bed. He covered the bottom with about 1 inch of cedar chips before he added soil mix, hoping to prevent insects.

Woody says that he is pretty impressed with the results so far. "Slugs and snails are a nuisance in my greenhouse but I see little damage in the planter box. It rarely needs any watering (we've had a rainy summer, 2013). Water and fertilizer are evenly distributed. Pawpaws grown in full sun may require more frequent watering than if they were shaded. The inferior seedlings can be winnowed out pretty



easily, and I'll graft in place. When it's time to plant the grafted trees I'll drop a side on the planter box, let the soil fall away, coat the roots in hydrogel liquid and bundle them without any soil for shipment — no container needed."

5) Many individuals will pre germinate their N. A. pawpaw seed. This can be accomplished by filling a deep tray. 3-4 inches deep, half full of a commercial soilless mix and laying a couple of layers of cheese cloth on top of the soilless mix. Place the N. A. pawpaw seed on the cheese cloth. Then place another double layer of cheese cloth on top of the seed and finish filling the tray with the soilless mix. Water and keep moist. The seed can then be checked for germination by lifting the top cheese cloth with the soilless mix intact and the germinated seed can be removed and planted in a deep container.

6) Mr. Joe Grant (NAPGA member), plants his germinated N. A. pawpaw seedlings into milk cartons that he has saved to plant his seedlings in. He just jabs holes in the bottoms. Roots make it thru bottom, and the carton rots after placed in the ground. And he can fit 9 seedlings into a milk crate. He says that this "works well."



7) Another way or two is to take 4 inch PVC pipe about 15 inches long and cut it in half length wise and then tape it back together before filling with a soilless mix. A bottom can be made by taping it shut with Duct tape. Seeds can be planted directly into the "pot." A variation of this is to take a piece of roofing felt (36 inches wide) and cut it in half, making a piece 18 inches wide. Cut this into about 15 to 16 inches long and then make it into a cylinder about 4 inches in diameter. Tape with Duct tape. Fold the roofing felt to make a bottom and tape. The advantage of these types of "pots" is that they fit into a post hole. The roofing felt can be cut off or sliced and left in the hole to rot. The roots can easily penetrate the roofing felt.

In summary, there is no one best way to grow pawpaw seeds. I am sure that you can come up with other ways of starting your seed. Please let us know if you have a variation or a different method of starting your seed. Just remember to keep the seeds moist but not wet and whether you shade them or not, it is up to you.

Pawpaw Garden Coleslaw

by Terry Powell

(Modified from *Recipes Menus Prayers for Family Gatherings*
by Carolyn Anderson)

This Asian influenced slaw is naturally light and sweet. To vary, try adding slivered almonds.

Ingredients

4 cups green cabbage (about 1/2 cabbage), finely chopped
1/2 cup scallions (green part) chopped
2 cups carrots grated
1/4 cup parsley

Ingredients for the Dressing

1/3 cup rice wine vinegar
1 TB canola oil
1 tsp salt
3/4 cup pawpaw pulp

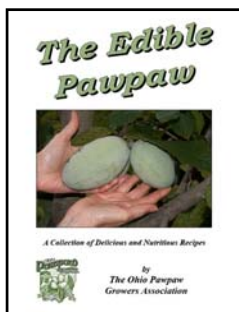


Directions:

Mix cabbage, carrots together. Set aside.
Put all the dressing ingredients, along with the scallions and parsley, in food processor and process until scallions and parsley are chopped fine.
Mix well into the cabbage and carrots.
Refrigerate 1 hr. before serving.

Request for Pawpaw Recipes

"The Edible Pawpaw" recipe book **sold out** but we have reprinted 100 copies.



It's time to begin work on a second North American Pawpaw cookbook! Please send your pawpaw recipes and suggestions to

Ron Powell
6549 Amelia Dr.
Cincinnati, OH 45241

or

Email: Botrytis@fuse.net

Don't let your NAPGA/OPGA membership lapse. Call Ron or send him an email. Don't miss any important benefits of NAPGA/OPGA membership.

Rappahannock

N. A. Pawpaw

by Derek Morris, Winston-Salem, NC

This past year (2013) was the second year my 'Rappahannock' pawpaw produced fruit and while it only had 3 small to medium sized fruit in 2012, 2013 was very fruitful. My tree was loaded with fruit in random sizes, most being medium in size but there were some quite large fruits on this tree as well. And they were all delicious! While this variety is reported by some to produce small fruit this was simply not the case with my tree last year. This variety has rounded fruits and comparatively few seed as promoted. The medium firm flesh is very tasty in my opinion and I would describe the flavor as quite sweet and mild with some exotic lingering aftertaste—maybe a little cherimoya? It is hard for me to say with certainty but slightly different than most others.

While the fruits of 'Rappahannock' display a slightly different flavor profile than most other varieties, the tree itself is very distinct from all others I have seen. For one, the tree's branches seem to be more horizontal as well as the leaves. While pawpaw generally have leaves that hang downward at varying degrees, this variety has leaves that droop very little giving the tree a most un-pawpaw-like appearance. I find the tree quite ornamental and have also noted this variety to be vigorous. In other words 'Rappahannock' wants to grow, and generally much faster than other varieties.

I have read that this variety has larger blooms than others but I have not noted this, though maybe the blossoms do open a little wider than others. I will pay closer attention this year. 'Rappahannock' has quickly become one of my favorite varieties and one I would not want to be without. In talking with a few other growers of this variety it may be that this variety is better suited to the southeast or mid Atlantic region and in places nearer the coast. I guess only time will tell if this is really true.

While I have heard of limb breakage being a problem with this variety so far I have not had any issues with my tree. This variety needs to be tested more in different areas of the country.

The delicious fruit is firm enough that it is a fairly good keeper and will maintain quality for longer periods of time than many other varieties. Based on my personal, albeit short experience with his variety I believe it would make a great commercial variety at least in the southeast and mid Atlantic.

Rappahannock is a Neal Peterson selection that was released by him in the early 2000's. It is a variety along with 5 others that was selected from among 1500 accessions.

Hand Pollination of the North American Pawpaw

Mr. Neal Peterson has granted permission to use the text of this article and the pictures are by Dr. Ron Powell to illustrate the text. This article by Mr. Peterson originally appeared in The California Rare Fruit Growers publication, "The Fruit Gardener," September/October 1997, pp 10 & 11.

Some people find that North American pawpaw trees just don't produce fruit. "Why?" they ask. The answer usually is, "They need a pollinator." Sometimes this means they need a helping hand in their pollination. The question then becomes, "How do you do it if you've never done it? When is the pollen ripe? When is a flower in the female state and most receptive? How do you do the act itself—transfer the pollen to its appointed spot?"



Female receptive stage Eight glistening stigmas

Here are some simple pointers to guide you if you aspire to pollinate North American pawpaws by hand. N. A. pawpaw blossoms begin life as females and later become males.

They are designed this way to discourage self-pollination. In the female stage the petals are held rather tightly together, forcing the small flies and beetles that visit the flowers searching for nectar to brush past the stigmas when the pollen they carry on their backs can be deposited. In this stage, the petals will have turned color, from green to maroon (although some green may still show) but the anthers will be tightly pressed together as a solid green ball, and the stigmas will appear green and shiny.

In the later male stage, the petals darken more, the fetid flower odor intensifies, the ball of anthers loosens (no longer solid) and the



Male stage—time to collect pollen

anthers turn from green to brown, shedding the yellow dust-like pollen. In this stage, the petals flare back, allowing the visiting insects to brush easily past the anthers, thereby collecting pollen on their backs.

The first trick for the hand pollinator is collecting the pollen. There are many ways to do this, but Neal's own preference is to use large gelatin capsules (size XXX) that you can buy at health food stores. Open the capsule and use one end as a cup to scrape the ripe-anthers with-pollen,



Applying pollen with a fine brush

causing them to fall into the capsule. Then close the capsule and label the contents

with an indelible pen. These capsules being made from gelatin, absorb moisture, promote the anthers to release their pollen, which then adheres to the sides of the capsule. Then use a **very small, soft, and flexible** camel's hair brush to collect the pollen from the sides of the capsule, and apply the pollen to the stigmas of the female flower. For the sake of thoroughness, and to learn the results of your efforts, tag the pollinated flowers.

The final pointer has to do with picking the right time of day and the right type of day for pollinating. Neal finds that he gets the best results on a perfect spring day, when the sun is bright, the air is warm, the breezes gentle or none at all. Cool temperatures, windy and cloudy days are bad. Neal pollinates in late morning to late afternoon. When in doubt about how to do it, think like a flower, think like a beetle.



New fruit cluster

2014 OPGA Annual Meeting Registration Form

The 2014 Annual Meeting will be held at Wilmington College on May 17th
but the exact location on campus has not yet been determined.

By Mail: Complete the information section below and return with the registration fee to:
NAPGA / OPGA, % Ron Powell, 6549 Amelia Dr., Cincinnati, OH 45241

\$12 — each for NAPGA / OPGA members in good standing
\$15 — each for non members

Or by Phone: Ron Powell @ 513-777-8367
or E-mail: Botrytis@fuse.net

Completed registrations by May 9th are appreciated.
Please make checks payable to: OPGA

NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

PHONE: _____ **E-MAIL:** _____



NAPGA/OPGA Dues

Please check with Ron (Botrytis@fuse.net) regarding your dues status or be sure to read the reminder in your email correspondence. Your membership dues are now collected on your anniversary date.

Please renew your membership in NAPGA/OPGA to show your support. Your continued support is needed to further the education and the promotion of North American pawpaws.

Go to www.Ohiopawpaw.com, for a membership form.

Membership dues are: **\$20.00 — family membership**
\$ 5.00 — student membership

Send dues to: **NAPGA / OPGA, % Dr. Ron Powell**
6549 Amelia Dr., Cincinnati, OH 45241

NAPGA/OPGA Editor

visit us at our web sites:

www.NAPGA.com

www.Ohiopawpaw.com

Pawpaw Pickin's is published bi-annually by the NAPGA/OPGA, organizations dedicated to advancing the education and knowledge of North American pawpaw culture, encouraging the planting of pawpaws, the management of native pawpaws, and perpetuating the utilization of all N. A. pawpaw products.

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