AMERICAN PAULOWNIA ASSOCIATION

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Mr. Bob Davis on The American Paulownia Association

Charter Member and former President of the American Paulownia Association is asked some general questions about his years of involvement in the association.

Why did you become involved in the APA?

I became interested in Paulownia when this plant with huge leaves sprang up one summer on my farm where I had built a new road. I was fascinated with it. When the leaves fell off the following winter, I thought the cold weather had killed it-there was only a flag pole left standing. The next summer, that flag pole sprouted everywhere and began to grow like mad. By the end of that summer, it was 20 feet tall. I thought to myself that I had to find out about this plant. I began researching and, lo and behold, it turned out to be something called Paulownia. I had never heard of it. In my research I found that some other people were interested. Don Graves of the University of Kentucky got several of us together in 1991 in Paducah, KY, and we ended up forming the American Paulownia Association. I feel the Association has helped a lot of people in deciding to grow or not to grow Paulownia.

Robert Davis with canoe made of Paulownia Wood
May 2002

What are the benefits and drawbacks you envisioned and experienced?

Being associated with the American Paulownia Association, I had the benefit of other peoples' experiences. Attending annual APA conferences, I learned from technical and non-technical people about research and experiments being conducted; and I learned from those with hands-on experience in growing Paulownia. I visited numerous Paulownia plantations and talked with growers of their successes and failures. The biggest drawback was finding information about Paulownia in the early 1990's. There has been a lot of trial and error to get to where we are now.

Is there anything you would have done differently?

If I had known about Paulownia, I would have become involved in growing it at a much earlier age. But hindsight is 20/20. The most expensive lesson I learned the hard way was when I spread tobacco

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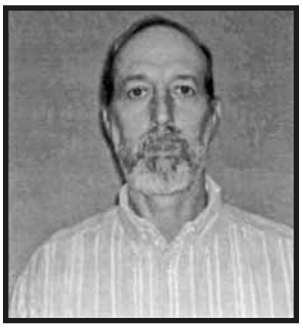
President's Message. . .



April 2005

This Spring edition of our newsletter brings with it a welcome relief from the cold and damp winter, and expectations for another great Paulownia growing season. As you enjoy the articles and pictures, think of someone that you may wish to share the joys of Paulownia with and encourage them to become involved as a timber grower and prepare to meet the demand for this wonderful wood.

The featured article in this edition highlights a charter member and past president, Robert (Bob) Davis. Bob and his wife Louise have been valuable assets to the Association in numerous ways and continue to actively support the Association and it's goals. Over the years Bob has built and/or obtained the most complete and diverse collection of Paulownia made articles that I have seen. Our Editor conducted an interview with Bob addressing past, present and future views about Paulownia. Enjoy the rich history of Bob's story.

Also contained in this issue is a repeat of a presentation that I gave at last year's conference in Dublin Georgia. I have received many inquires from both members and non-members alike about these very issues, and thought you may find it useful. It is a "Scenario of Purchasing, Grading, Processing and Marketing Paulownia". The assumptions and figures contained therein address my specific experiences. Your use should always address local information and be tailored to your specific application.

In closing, I would like to address two planned events to occur in the next several weeks: First, I want to remind the Association Officers and State Directors of the upcoming Board meeting. This business meeting will be conducted at the Antietam Family Restaurant, 13208 Fountain Head Plaza, Hagerstown Maryland, Friday evening May 6, 2005 beginning at 6:00 pm. Our Secretary will be sending separate notices to each Officer and Director; please make plans to attend.

Second, all members are invited to join in for the first-ever "Blooming Spring Fling". Arrangements have been made for a one-day tour of Paulownia groves in the Maryland, Pennsylvania and the West Virginia region. The tour will be conducted as a car caravan and begin from the Plaza Hotel parking lot, Valley Mall, Hagerstown Maryland. Sharon and I will also conduct a tour of our home that utilizes Paulownia both inside and out. Please see the enclosed form for details and registration requirements. There will be no cost to members to enjoy this festive blooming delight.

Wishing each of you a most Enjoyable Spring Growing Season!
Danny

Trees are being used in novel ways to help clean up planet

Plants have long served humanity. The habitats they help create both feed our souls and our bellies. They shelter wildlife and produce the air that we breathe.

Now plants are being asked to take on a new role....that of helping clean up pollution on our planet. Thousands of acres of forests, wetlands, and prairies have been lost to civilization over the years, and until recently, the negative effects of that loss have not been realized. This loss has been compounded with the impact of increased pollution. Plants will have their work cut out for them.

Urban areas have been a site of increased studies to see what impact loss of tree cover has on the quality of life and the environment. An American Forests study revealed that urban areas have 21% less tree cover than they did just 10 years ago. This equates to more air pollution, drinking water pollution, stormwater management and higher temperatures in what are deemed "urban heat islands". Increasing tree cover will save tax payers billions of dollars

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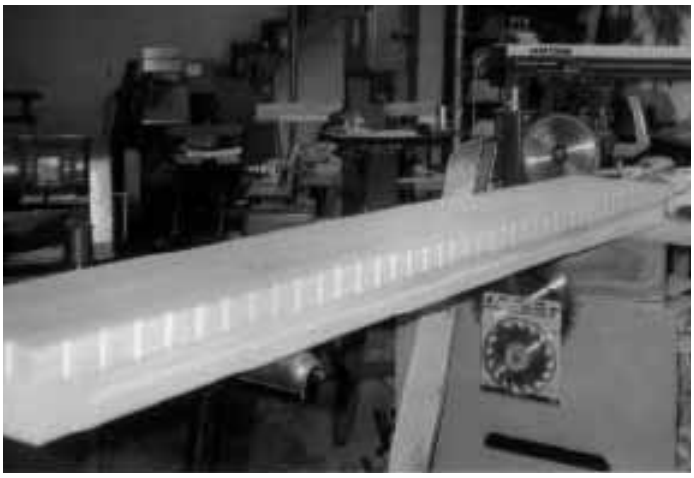

Cindy's Paulownia Mantle made by Robert Davis (Daddy)
Summer 1999

stalks on my plantation, thinking I was doing well. The fungus from the tobacco stalks killed about 10 acres of Paulownia plants. I made lots of other errors in setting the plants, spacing, etc., but none of us knew at the time.

What does your crystal ball say for the future of Paulownia in America and the American Paulownia Association?

The future of Paulownia is good. It seems to be taking time for people to learn the benefits of the wood. It is not a question of if, but only a question of when it will "take off." The future of the American Paulownia Association lies in its ability to attract younger members who will be able to see their plantings mature to harvest; in its ability to provide a supply of wood and attract users; and, in its continued good leadership.

Paulownia window seat for Alison's room
made by Robert Davis - 1999

All the information on the internet can be helpful, but is a disadvantage to the APA. Some feel they can get all the information they need without being a member of APA, when in fact they would receive much benefit from their association with APA members.

Paulownia lingerie chest made by Robert Davis
2004

What do you recommend should be the focus of APA at this time?

We should concentrate on having more growers to provide a supply of wood. This is a "hard sell" to younger people who want the assurance of a market before planting, and who do not want to wait 15-20 years for a payout. The other focus is one I mentioned earlier-attract younger members.

Will you share some stories of products you have made from Paulownia?

I have made two computer centers for my daughters; a lingerie chest for my wife; toy boxes for my grandsons; built-ins (desk, cedar chest, bookcases,

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Paulownia toy box made by Robert Davis
2003

etc.) for my granddaughter's bedroom; boat paddles; roll-out shelves for all cabinets in our house, and small items such as birdhouses, picture frames, and trivets. I have found Paulownia wood to be easy to work with. It is very light; easy to sand and get a good smooth finish; takes stain well; and after drying, it remains very stable.

What about some of the people you have met as a result of the APA?

I have met lots of people who have become good friends-hopefully for life. If I had to pick one person who has done more to make APA the success that it is it would be Lyndle Seaton. He served as our Editor and Publisher of the Newsletter for many years. Lyndle has spent lots of his time and money promoting Paulownia. Thank you Lyndle! Several university personnel have also been of great help in promoting Paulownia and providing assistance to APA, as has our present President and Secretary/Treasurer-Danny and Sharon Blickenstaff.

Paulownia built-ins for Alison's room
made by Robert Davis (Grandpa) - 1999

Robert T. Davis
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nationally and greatly improve everyone's quality of life.

The ability of plant life to clean up the air, water and soil of our planet has a profound economic and environmental impact. One example that the EPA (Environmental Protection Agency) cites is a study that shows one swamp in South Carolina eliminating the need for a $5 million waste water treatment plant.

Using trees to sequester carbon is perhaps one of the newest and most controversial uses of plant life. Now that global warming has become a more internationally accepted phenomenon, and carbon credit trading has become an accepted industry, planting trees to sequester carbon has gained a large amount of economic interest. Large polluters are paying others to plant and maintain trees to offset their emission levels. This has opened up a whole new customer base to the nursery industry and its related businesses.

Trees and other vegetation have long served these environmental cleaning tasks. Humans now are learning to harvest this potential to directly mitigate environmental problems. The next decades will bring to light many more economic and environmental benefits to planting trees.

For further information on quality northern grown nursery stock or to order a catalog contact:
Lawyer Nursery, Inc.,
950 Hwy 200 W, Plains, MT 59859,
(800) 551-9875; FAX: 406-826-5700
WEB: www.lawyernursery.com;
E-mail: trees@lawyernursery.com

Using Trees to Clean the Water

Trees perform many water quality improvements

Water is a very precious resource on this planet. The quality of our water is becoming more questionable. Contaminants from agricultural, industrial and community sources make many of our waters unsuitable for swimming, drinking or for aquatic life. Water quality is another environmental issue that trees can do a lot about. By trapping contaminants and slowing runoff, trees can alleviate many of the potential problems before they enter a water body.

Land use is one cause of water problems. Development, agriculture and forestry have permanently altered many areas of vegetation. This vegetation used to perform the function of slowing runoff and filtering out pollutants. With a loss of vegetation near watersheds, water flows more rapidly, moving along greater amounts of pollutants and contributing to streambank erosion. When vegetation is present, the water flow is slowed and soil particles and nutrients can be contained within a plant's roots. Trees serve as the best filters, as they have a large amount of biomass to process and store pollutants.

Trees can be reincorporated into the altered environment in many ways. Windbreaks, shelterbelts and riparian buffer zones all serve to protect watersheds. By trapping airborne pollutants in foliage, windbreaks can prevent large amounts of dust and debris from ever reaching streams or lakes. Due to their location, riparian buffer zones

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often benefit watersheds the most. They are the final line of defense before water enters the system. Here, the roots of trees and other vegetation absorb excess nutrients and pollutants as they also slow down incoming runoff. Trees then store needed nutrients in their wood and release excess filtered water through their foliage into the atmosphere.

In agricultural land, other agroforestry techniques can also be utilized to protect water quality. Use of alley cropping includes rows of crops between rows of trees. The trees trap airborne dust, prevent soil erosion and absorb excess fertilizers or contaminants in their roots. The trees can also create a secondary economic resource as sources of wood products or as landscape ornamentals. On ranches, trees can be incorporated into grazing areas to absorb and slow contaminants from animal waste. This technique is called silvopasture and can also create a secondary income from tree products.

Along community or urban roadways and parking areas, planting islands of vegetation can do a great deal to absorb and slow down stormwater runoff. These islands can be incorporated into large areas of paved space to create permeable surfaces where water can drain.

On a larger scale, acres of trees can create natural wastewater treatment and stormwater management without the large price tag of building facilities. By absorbing excess runoff and transpiring it into the atmosphere, trees reduce the amount of water that needs to be managed. Any water intake is filtered through the tree's system before it is released, reducing water pollution. Large and fast growing trees can contribute significantly to these municipal projects as they uptake excess nutrients and pollutants rapidly.

As man continues to pave his way to the future, man also needs to learn to adapt in order to protect and improve his environment. Incorporating plantings of trees in any new development will increase water and air quality and help better manage the land of which we are stewards.

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Lawyer Nursery, Inc.,
950 Hwy 200 W, Plains, MT 59859,
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Paulownia Inquiry & Response - March 2005

Sir,

I'm currently looking to buy a pine plantation here in North Carolina and stumbled across your website. Where is this lumber processed and how strong is the market? Is there a sawmill in the southeast US that wants to buy this type of lumber? How profitable is this lumber if it is grown overseas at a rapid pace? Thanks for your time.

TP

Dear TP,

Thanks for your inquiry concerning Paulownia. I will answer your questions to the best of my ability.

Commercially grown plantation Paulownia is a relatively new venture in the United States. I am not aware of any large mature plantings (greater than 25 acres) being harvested in the US. Most of the larger plantations are relatively young, under 10 years old, and are in the thinning phases at this time. The SE states are able to produce minimum harvest size Paulownia (16+ inches dbh) if the proper species and cultural practices are used in 10 years and maybe less if intensely managed, irrigated, fertilized and planted on the proper spacing. Northern states require a colder species cultivar and a longer growing period, normally 15 years and more to reach minimum harvest size.

Mill and Paulownia timber and log buyers are very regional because it is currently considered a minor wood species and the supply is spotty. A robust market does exist for the wild very slow growth premium timber (30+ year old trees) that is exported and also used domestically in the high-end furniture and instrument markets. The little volume of mature plantation grown Paulownia, that has reached the domestic market, has generally been used for research and sold to niche markets for use such as: crafts, low-end domestic furniture, house siding and molding, core material for such things as boats, surf and snow boards, etc. There are markets currently waiting for enough plantation Paulownia to supply the plywood, composite board and other housing construction and commercial uses. For example, I recently received an inquiry for 40K bf for shipment to Canada and another 20K bf for garage door construction. There are 2 large domestic companies that are ready to ramp-up commercial fabrication if enough Paulownia can be assured annually. We need individuals and companies to begin planting large holdings of Paulownia to meet this current pent-up demand for plantation Paulownia and also to prepare for future requests sure to follow.

Overseas growers have made Paulownia available in the past. Experience has told us that the cost of transportation from both South America and Asia is costly and provides the American growers with great flexibility with respect to market potential and profit. I do not believe that in my lifetime there will be enough domestically grown Paulownia to meet even a modest increase in demand in this country, much less a surge in demand that may be likely because of; domestic harvest and import restrictions, transportation and fuel cost increases, environmental issues, population and housing growth, etc., etc. Until that time, small growers, end buyers, and users will remain regional and require local marketing efforts to be successful.

Sincerely,
Dan Blickenstaff, President, APA

"The following presentation was made by Danny Blickenstaff at the American Paulownia Association Conference held in Dublin Georgia September 2004"

Purchasing, Processing, Grading & Pricing Paulownia

"A SCENARIO"

Assumptions:

1- Start with a P. "tomentosa" log, D or E grade that is 26" diameter and 16' long.
2- The "Doyle Rule" is used for wood volume calculations.
3- The band saw mill has a kerf of 1/8" and there will be a total of 18 cuts.
4- 50% will be premium lumber and 50% will be grade no. 1 & 2 lumber.
5- Grades No. 1 & 2 lumber will be re-sawn into premium & grade no. 1 lumber at a 70% recovery rate.

Wood Volume Calculations:

Log Volume: (26"-4") x (26"-4") x 16'/16' = 484 Board Feet
Center Pith Cut: 4" x 4" x 16' = 21 Board Feet
Kerf: 1/8" x 16'x 18 cuts = 46 Board Feet
Therefore, the resultant total usable board feet equals 417 (484 - 21 - 46)

Recovery Calculations:

Premium lumber equals 208 board feet (417 x 0.50)
Grade No. 1 & 2 lumber equals 208 board feet (417 x 0.50)
Re-sawn lumber equals 145 board feet of premium & Grade No. 1 lumber (208 x 0.70)
Therefore, the total volume recovery equals 353 board feet (208 + 145)
Total recovery percentage equals 73% (353 / 484)

A Question of Price and Profitability:

$500.00	Log cost ($1.00/bf Doyle Rule)
$ 50.00	Log loading & equipment cost (estimate based on past experience)
$100.00	Transportation cost (Assume 100 miles rt. @ $1.00/mile)
$150.00	Labor (2 persons for total of 6 hrs loading, transportation, & unloading; $15.00/hr primary + $10.00/hr assistant = $25/hr.)
$145.00	Sawmill cost (417 bf x $0.35/bf) On site with assistance.
$ 25.00	Sticking and banding (1 hr @ $25.00/hr)
$212.00	Air dry storage, sales, and marketing costs (estimate at $0.60/bf x 353/bf)
$1,182.00	**Total Cost**

$1040.00	Sale of 208 bf premium lumber @ $5.00/bf
$ 580.00	Sale of 145 bf no.1 grade lumber @ $4.00/bf
$1,620.00	**Total Gross Income**
$ 231.00	**Net Income After Cost & Taxes** ($1620-$1182-$207 taxes @40%)
$ 0.47	**Net Profit per Board Foot** ($231.00 / 484 bf)

Conclusions:

1- Under the above scenario, you only have the flexibility of $ 0.47/bf for any cost increase until you render the venture break even or worse a loss.

2- Working for $15.00 per hour is considered a "labor of love" and obtaining reliable assistant help at $10.00 per hour is becoming difficult.

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3- A bad assessment of log quality will quickly render the venture a very expensive loss. I no longer purchase any standing timber (on-the-stump) for this reason.

4- My total labor estimates are very conservation and it does not account for the low $ 0.35/bf saw mill cost attributable to my providing personal assistance to the operator and the use of my skid loader. I also, did not account for any re-stacking, commercial drying, additional handling and moving, and long-term storage costs.

5- The sales and marketing costs may appear high; however, a full costing will quickly confirm the estimate to be very conservative. Such things as the following are often overlooked: computer and telephone time with potential clients; packaging, transportation and shipping time; record keeping; and, communications and computer equipment depreciation and operation costs.

6- In this scenario, I made the assumption that all of the final product would be sold promptly. However, in the real world, I have come to realize that buyers are very selective and you often end up with some product leftover that may remain in storage indefinitely. For this reason, I normally sell only by the rough bf volume and the buyer pays for all the subsequent waste.

7- I have never paid more than $1.37/bf for Paulownia timber in log form and never more than $2.50/bf in wholesale lumber form. Even at that price, I am successful in winning only about 35% of the purchase contracts that I bid on locally.

8- Grade No. 2 lumber has not been marketable in my situation. Therefore, all grade No. 2 is re-sawn and sold as smaller dimension higher grade stock or glued into panels and sold as panels or re-sawn glued lumber. The glued lumber makes an excellent paint grade wood and compares favorably with the commercially available glued poplar used in trim for the "high-end" housing market.

9- The Paulownia business is not a "get rich prospect", regardless of whether you are: an investor, grower, harvester, broker, processor, or product manufacture. It can however be a very enjoyable business and also be profitable if wise and prudent decisions are made at all stages of the business processes.

Dan Blickenstaff, Mt. Hope Farms, Hagerstown, MD September 2004

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