TREELINES

The Quarterly Newsletter from ArborGen's US Nurseries and Seed Orchards • Fall 2009

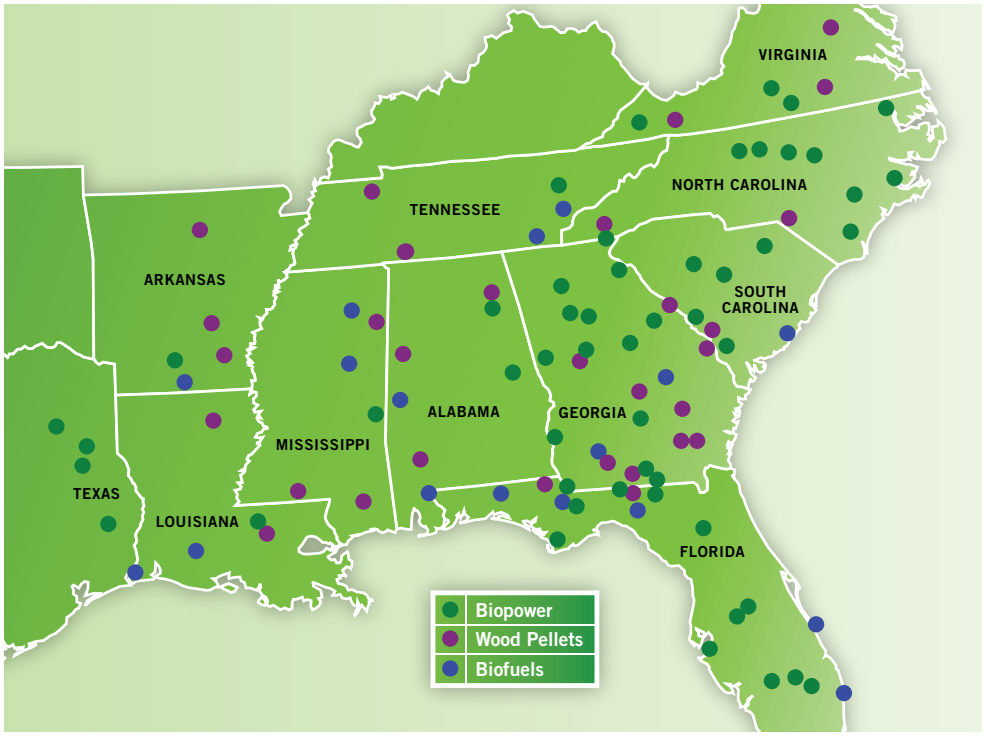
SUPERTREE SEEDLINGS

EMERGING GREEN MARKETS

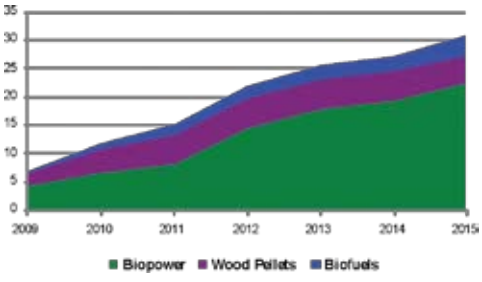
Estimated 31 Million-Ton Demand by 2015

WE ALL KNOW that the business of forestry is in a major state of transition – from the transfer of land to timber investment management organizations (TIMOs) and real estate investment trusts (REITs) to the collapse of the housing market and greater emphasis being placed on cash flows derived from thinning–the market is moving in a new direction. On the surface, it may seem that forestry won't continue to pay, but what if you knew that an emerging market equal to the demands of somewhere between 25 and 50 new pulp mills is right in your back yard?

Renewable energy mandates are creating this new market. Our map shows current designated sites for biomass energy generation facilities, wood pellet production plants and cellulosic biofuels plants, and those alone create a demand for woody biomass that could reach 31 million tons by 2015. With many other facilities projected, that estimate could double. It's your wood that will help meet these renewable energy mandates, and by planting with our new Flex Stand™ System, (page 5) your profits from this market can increase substantially.



Dots on the map represent currently designated sites for facilities designed to meet renewable energy mandates – equaling a proposed demand for 31 million tons by 2015. It is projected that the number of facilities – and their tonnage demand – could actually be double what is shown here. The graph at right shows the breakdown of tonnage by type of facility. As mandates increase, so does tonnage demand.



The Changing Marketplace

The transfer of managed forestland in the southeastern United States from long-standing integrated companies into the hands of TIMO and REIT organizations is resulting in newly defined investment and financial parameters. Investment horizons are being defined in decades or less instead of over multiple rotations, and financial expectations are being calculated annually and re-evaluated. Demonstration of rapid asset value enhancement and early cash flow expectations is now very important.

In addition, the collapse of the housing market has reduced and altered the

(Continued on page 5.)

Use the Flex Stand™ System for increased profits from biomass.

ARBORGEN®

WITH MORE than 10 million seedlings of over 80 species grown annually, SuperTree Seedlings is one of the largest hardwood growers. Our seedlings start with meticulously selected natural seeds from many geographic areas so that we can match seedlings to your specific site for best results. Seedlings are graded in the field, undercut and laterally root pruned to help facilitate planting and save time. Seedlings are chilled in coolers and the roots sprayed with a moisture-retention gel before shipping.

Hardwood seedlings are used for reforestation, wetlands mitigation, wildlife habitat and stream restoration, and we can handle any order – whether its 25 Sawtooth Oak shipped to a residence or 90,000 seedlings custom mixed with seven species delivered in a refrigerated van that will stay on sight for two weeks. All customers benefit from the experience and insight of our forestry-trained experts.

Order early, as there is a limited supply of certain species. We grow hardwood seedlings in three of our nurseries, but orders can be placed at any SuperTree Seedlings facility.

SUPERTREE SEEDLINGS 2009-2010 OAK SPECIES

COMMON NAME	SCIENTIFIC NAME	WILDLIFE FOOD/HABITAT	WETLANDS USES	FOREST PRODUCTS	RECLAMATION USE	PRICING/1,000	PRICING/100	PRICING/25	SPECIES DESCRIPTION
Oak, Bur	*Quercus macrocarpa*	X	X	X		300	60	40	Moderately tall, slower-growing tree adapted to growing in a variety of soil types. It has a broad crown and large trunk. Tree is moderately drought tolerant and can grow on bottomlands to urban environments. Produces large acorns favorable to wildlife.
Oak, Cherrybark	*Quercus pagoda raf.*	X	X	X	X	250	60	40	Highly sought after stately tree valued for its many uses in wildlife, lumber, wetlands, and beauty. Mature heights can be over 100 feet with diameters of 3 feet.
Oak, Chinkapin	*Quercus muehlenbergii*	X	X	X	X	300	60	40	Medium sized upland tree reaching heights of 20-50 feet at maturity. Frequently found growing on limestone outcrops, dry bluffs, and rocky river banks. Acorns are sweet and palatable to all wildlife.
Oak, Gobbler Sawtooth	*Quercus acutissima (gobbler)*	X				300	60	40	Fast growing tree which produces small acorns early in life. Very popular for wildlife plantings, especially turkey as its name implies. Can mature to 50 feet.
Oak, Laurel	*Quercus laurifolia*	X	X		X	300	60	40	Naturally occurring in wetter swampy areas and along creek banks, but also grows well on drier soils. This tree grows quickly and works well for mitigation and wetland projects. The small acorns provide food for squirrel, duck, and other wildlife.
Oak, Live	*Quercus virginiana*	X	X			300	60	40	Acorns are an important food source for many birds and mammals. Shrubby to large and spreading form. Nearly evergreen, reaching heights of 50 feet at maturity. Grows in moist to dry sites and can withstand some flooding.
Oak, Northern Red	*Quercus rubra*	X		X		250	60	40	Fast growing, prefers upland, well-drained soils achieving heights of 60-80 feet. Valued for timber and food for wildlife.
Oak, Nuttall	*Quercus nuttallii*	X	X	X		250	60	40	A large, fast growing red oak found on heavy, poorly drained soils. Valuable food source for duck, deer, and squirrel due to its abundant production of acorns. Mature heights can be over 100 feet.
Oak, Overcup	*Quercus lyrata*	X	X	X		300	60	40	Large white oak found in swamps and along rivers with sizeable acorns valuable for wildlife food. Will grow on the poorest bottomland sites, good for wetland restoration.
Oak, Pin	*Quercus palustris*	X	X	X		250	60	40	Characteristically a bottomland species, yet grows in a variety of soils and areas in the central and eastern United States. At maturity can attain heights of 50 to 60 feet. The small acorns provide food for squirrel, duck and other small wildlife.
Oak, Post	*Quercus stellata*	X				250	60	40	Long lived, slow growing to 50 feet. Prefers upland shallow, well-drained soils. Widespread in eastern and central US. Acorns are a good food source for deer and turkey.
Oak, Sawtooth	*Quercus acutissima*	X				250	60	40	Fast growing tree which produces large acorns early in life. Popular for wildlife plantings and makes a nice ornamental tree. Can mature to 50 feet.
Oak, Shumard	*Quercus shumardii*	X		X	X	250	60	40	Very large, fast growing red oak adaptable to many sites. Widely used as an ornamental but also provides excellent timber. Mature heights of 85-100 feet common.
Oak, Southern Red	*Quercus falcata*	X		X		250	60	40	Fast growing southern upland oak reaching heights of 70-80 feet. Very desirable timber tree for poor, dry soils. Excellent ornamental or shade usage.
Oak, Swamp Chestnut	*Quercus michauxii*	X	X	X	X	250	60	40	Performs well on moist and wet loamy soils of bottomlands, along streams, and borders of swamps. The acorns are sweet and a favorite food for a variety of wildlife. A favorite for wetlands mitigation and restoration projects.
Oak, Swamp White	*Quercus Bicolor*	X	X	X	X	250	60	40	A relatively fast grower, prefers better drained lowland soils, along stream banks and swampy areas, and is ideal for wildlife and wetlands projects. The tree will feed many varieties of wildlife, especially ducks.
Oak, Water	*Quercus nigra*	X	X	X		250	60	40	Grows well in different soils, especially along streams to mature heights of 75-90 feet. A great tree for afforestation or mitigation projects and popular yard or shade tree. Small acorns provide abundant food for wildlife.
Oak, White	*Quercus alba*	X	X	X	X	250	60	40	Grows well on a variety of sites and its high quality wood is valued for fine furniture construction and cabinetry. Nuts enjoyed by wildlife as well as humans.
Oak, Willow	*Quercus phellos*	X	X	X	X	250	60	40	Generally a bottomland tree, growing on poorly drained soils. Great for mitigation and afforestation projects. Small acorns are a popular food of turkey and duck.
Oak, White	*Quercus alba*	X	X	X	X	250	60	40	Grows well on a variety of sites and its high quality wood is valued for fine furniture construction and cabinetry. Nuts enjoyed by wildlife as well as humans.
Oak, Willow	*Quercus phellos*	X	X	X	X	250	60	40	Generally a bottomland tree, growing on poorly drained soils. Great for mitigation and afforestation projects. Small acorns are a popular food of turkey and duck.

SUPERTREE SEEDLINGS 2009-2010 HARDWOOD TREE AND SHRUB SPECIES

COMMON NAME	SCIENTIFIC NAME	WILDLIFE FOOD/HABITAT	WETLANDS USES	FOREST PRODUCTS	RECLAMATION USE	PRICING/1,000	PRICING/100	PRICING/25	SPECIES DESCRIPTION
Alder, Tag	*Alnus serrulata*		X		X	300	60	40	A well-known shrub, growing in clumps and forming thickets on the borders of ponds or rivers, or in swamps.
Apple, Wild	*Malus pumila*	X				300	60	40	A small, round-topped tree. Heights can reach 30 feet at maturity. Important wildlife food eaten by almost everything. Grows best in moist soils near clearings and forest borders.
Arrow Wood	*Viburnum dentatum*		X		X	500	60	40	A deciduous shrub (potentially a small tree) with slender trunk(s) and arching branches. It occurs in mesic woods, usually growing in the understory of mixed hardwood forests of oaks, magnolias, maples, hickories, American beech and the like. Arrow-wood grows on both poorly drained and well drained soils.
Ash, Carolina	*Fraxinus Caroliniana*		X		X	250	60	40	Carolina Ash is a small understory tree that occurs in swamps and lagoons that are flooded most of the year. Deciduous trees that grows to 30-40 feet.
Ash, Green	*Fraxinus pennsylvanica*	X	X	X	X	250	60	40	For watershed protection and shade. Extremely hardy to climatic extremes. Produces small fruit for wildlife and strong dense lumber. Mature heights can be over 70 feet.
Baldcypress	*Taxodium distichum*	X	X	X	X	250	60	40	Large, long-lived tree common throughout southeast on many types of soils, especially wetlands and swamps. Excellent for wetlands or as a yard tree. Can grow to 150 feet.
Beautyberry, American	*Callicarpa americana*	X	X			250	60	40	A shrub that can reach 5 feet at maturity. It produces a small, bright purple fruit that is readily eaten by many bird species. Requires full sun to partial shade.
Beech, American	*Fagus grandifolia*	X	X			300	60	40	American Beech is a long lived Eastern deciduous tree, useful for its wood quality and production of nuts that are valuable to wildlife. Slow growing and very shade tolerant.
Birch, River	*Betula nigra*		X		X	250	60	40	Fast growing, attractive, multi-stemmed tree with reddish bark that peels and flakes into light tan layers. Excellent for wetland reclamation and as a yard tree. Can mature to 80 feet.
Buttonbush	*Cephalanthus occidentalis*	X	X			250	60	40	Mature height 5-15 feet. A deciduous shrub with fragrant bell-shaped flowers. Seed is consumed by birds and small mammals. Good reclamation and wetland plant.
Buttonbush, 16" cuttings	*Cephalanthus occidentalis*	X	X			450	100	60	Mature height 5-15 feet. A deciduous shrub with fragrant bell-shaped flowers. Seed is consumed by birds and small mammals. Good reclamation and wetland plant.
Buttonbush, 24" cuttings	*Cephalanthus occidentalis*	X	X			600	100	60	Mature height 5-15 feet. A deciduous shrub with fragrant bell-shaped flowers. Seed is consumed by birds and small mammals. Good reclamation and wetland plant.
Catalpa, Southern	*Catalpa bignonioides*	X	X			250	60	40	Height to 50 feet at maturity. Host plant for catalpa worms, a very popular fish bait. Worms are also eaten by a variety of birds. Grows in a variety of places, especially near water.
Cherry, Black	*Prunus serotina*	X		X	X	300	60	40	Found throughout the Eastern US. Fast growing tree used for veneer and furniture. Attracts birds, turkey, deer, squirrels and rabbits. Prefers full sun.
Chinkapin, Alleghany	*Castanea pumila*	X	X			500	100	60	Chinkapin is a moderate growing tree which produces nuts that are excellent wildlife food for squirrel, deer, and birds. Grows well on all soil types except clay.
Chokeberry, Red	*Aronia arbutifolia*		X		X	300	60	40	A shrub native to eastern and central North America, this adaptable shrub is easy to grow and thrives even on poor soils. It will grow well in half-shade, but full sun encourages the best fruit production.
Cottonwood, 15" cuttings	*Populus deltoides*	X	X	X	X	300	60	40	Fastest growing North American tree to 150 feet. Growth is rapid, but intolerant of competing vegetation. Valuable wildlife habitat, mainly roosting and cover. Used in stripmine reclamation. Established by cuttings. Grows best in moist bottomlands.
Crabapple, Southern	*Malus angustifolia*	X	X			250	60	40	Attractive and useful, the Southern Crabapple is found throughout the southern U.S. on moist, well-drained soils. It prefers full sun and adds to the food sources for many species of birds and mammals.
Cypress, Pond	*Taxodium distichum var. nutans*	X	X		X	300	60	40	Moderate growing tree which reaches heights of 50-80 feet. Grows well in swampy ground where water is standing. Small seeds are used by some birds and squirrels.
Dogwood, Flowering	*Cornus florida*	X	X		X	300	60	40	Deciduous tree with beautiful white flowers used ornamentally, as wildlife food, and for soil stabilization. Reaches about 30 feet in height.
Dogwood, Gray	*Cornus racemosa*	X			X	250	60	40	A moderate growing shrub which reaches a height of 15 feet. Grows best on rich, moist, well-drained soils. Good food/cover for deer, birds, and small mammals.
Dogwood, Silky	*Cornus amomum*	X	X			250	60	40	Adaptable to a variety of sites, but prefers wetter soils. Excellent source of food for wildlife and is also widely used for erosion control and watershed protection. Mature height 10 feet to 15 feet.
Elderberry	*Sambucus canadenisis*	X	X			250	60	40	A shrub that can reach a height of 13 feet at maturity. Produces a small, juicy purple-black fruit used in jellies and pies. Ripe fruit eaten many bird species, esp. wild turkey. Grows in wet soils, especially in open areas near water at the forest edge.
Elderberry, 16" cuttings	*Sambucus canadenisis*	X	X			450	100	60	A shrub that can reach a height of 13 feet at maturity. Produces a small, juicy purple-black fruit used in jellies and pies. Ripe fruit eaten many bird species, esp. wild turkey. Grows in wet soils, especially in open areas near water at the forest edge.
Elderberry, 24" cuttings	*Sambucus canadenisis*	X	X			600	100	60	A shrub that can reach a height of 13 feet at maturity. Produces a small, juicy purple-black fruit used in jellies and pies. Ripe fruit eaten many bird species, esp. wild turkey. Grows in wet soils, especially in open areas near water at the forest edge.
Elm, American	*Ulmus americana*	X	X			250	60	40	Large tree when grown in open areas. Height 80-100 feet at maturity. Seeds eaten by game birds; twigs browsed by deer and rabbit. Grows best in moist soils, especially valleys and flood plains.
Elm, Cedar	*Ulmus crassifolia*	X			X	500	100	60	Bottomland tree that will also grow on limestone hills. Height to 60 feet at maturity. Planted as an ornamental shade tree in native areas. Seeds are a mainstay of wild turkey diet in Texas, but also eaten by a variety of other birds.
Hawthorn, Washington	*Crataegus phaenopyrum*	X	X			250	60	40	Very dense shrub or small tree. Fruits are small and apple-like. Fruit often remains on plant all winter, providing food for quail, turkey, rabbit and deer throughout winter. Provides nesting area for many songbirds. Important honey plant. Grows best in moist soils.
Hazelnut, American	*Corylus americana*	X	X			300	60	40	A shrub that can reach 10 feet tall at maturity. Produces edible nuts enclosed in husks that are eaten by squirrels, deer, grouse, and quail. Very tasty to humans, but usually eaten by wild animals first.
Hickory, Mockernut - 1.0	*Carya tomentosa*	X		X	X	450	100	60	Slow growing, deciduous tree typically reaching 65-100 feet. Prefers a deep, fertile soil. Valuable species for watershed. Provides food/forage for squirrels, deer, quail, and turkey.

SUPERTREE SEEDLINGS 2008-2009 HARDWOOD TREE AND SHRUB SPECIES (CONTINUED)

Hickory, Shagbark	*Carya ovata*	X		X	X	450	100	60	Shagbark Hickory is rapid growing and reaches up to 90 feet. Grows on a great variety of soils. Preferred by many wildlife species. Used for furniture and floors. Nuts are sweet and edible.
Hickory, Shellbark	*Carya laciniosa*	X		X	X	450	100	60	Moderate growing tree that reaches height of 100 feet. Grows best on deep, fertile, moist soils. The nuts, largest of all hickory nuts, are sweet and edible.
Hickory, Water	*Carya aquatica*	X	X	X	X	250	60	40	Water Hickory grows well on moist to wet soils where other hardwood species do poorly. Good for mitigation along stream, ponds, rivers, and flood plains. The nuts are eaten by a variety of wildlife.
Holly, American	*Ilex opaca*	X		X	X	500	100	60	American Holly is a native evergreen tree that grows to 50 feet. Occupies a wide variety of soils. Grows best in moist, slightly acidic, well-drained sites. Very shade tolerant. Fruits eaten by birds, turkey, squirrels, and deer.
Ironwood	*Carpinus caroliniana*		X		X	300	60	40	A common and widespread understory tree in lowland mixed forests throughout eastern North America. It grows in bottomland forests, swamps and along rivers and streams in with other deciduous hardwoods including maples, ashes, oaks,ches, alders and hickories.
Lespedeza (all)	*Lespedeza*	X			X	55	N/A	N/A	Lespedeza - Bicolor, Attaway, and Thunberg - A shrub reaching 4-8 feet tall. Grows on moderately dry to moist soils and will tolerate some shade. Excellent wildlife food and cover, soil stabalizer, and nitrogen fixer.
Loblolly Bay	*Gordonia lasianthus*		X		X	300	60	40	An attractive evergreen tree the can grow to 70 ft in height with trunk diameter up to 1.5 ft. It inhabits swamps, bogs, wet flatwoods and similar wet areas
Locust, Black	*Robinia pseudoacacia*	X	X		X	250	60	40	Grows best in full sunlight. Excellent source of firewood. Good food and cover for quail. Most frequently used tree for mine soil cover, a nitrogen fixer.
Magnolia, Sweetbay	*Magnolia virginiana*	X	X			600	60	40	Tree with narrow crown that sheds leaves in winter, but almost evergreen in the South. Grows in wet soils in coastal swamps and borders of streams and ponds. Showy, cone-like fruit. Important forage for deer.
Maple, Drummond	*Acer rubrum var. drummondii*	X	X	X	X	300	60	40	Drummond Maple almost always occurs in wetlands in the Southeast US. Grows to a height of 70-90 feet. Seed used by birds and small mammals. Good for deer browse.
Maple, Red	*Acer rubrum*	X	X	X	X	250	60	40	A versatile tree reaching 70 feet, useful in soil stabilization, wildlife plantings, and as ornamental.
Maple, Sugar	*Acer saccharum*	X		X	X	300	60	40	Sugar Maple is a slow growing tree that reaches heights up to 100 feet. It is the primary source for maple syrup. Food for deer and squirrels. Good habitat for birds.
Mayhaw	*Crataegus opaca*	X	X			250	60	40	Found in wet, shady sites, well adapted to drier, better-drained land. A wild native fruit tree found along river bottoms and swamps from Texas, east to Georgia and Florida. The red fruit ripens in the summer.
Mulberry, Red	*Morus rubra*	X	X			250	60	40	Height of 30-60 feet at maturity. Fruits are red/black and tasty to squirrels, songbirds, numerous game birds, and humans. Grows best in moist soils in hardwood forests.
Ninebark, Common	*Physocarpus opulifolius*	X			X	250	60	40	A native, deciduous shrub that grows in sun or shade. Grows in acid or alkaline, wet or dry soil conditions. Can grow to a height of 10 feet. Attractive to bees, butterflies, and birds. Foliage is eaten by deer.
Pawpaw	*Asimina triloba*	X	X		X	300	60	40	The Pawpaw is the largest edible fruit native to America and thrives on deep, fertile soil that is moist, but well drained and slightly acid. Wildlife and humans alike favor the fruit.
Pear, Wild	*Pyrus communis*	X	X			300	60	40	Hearty plant growing in well drained and clay soils. Produces large fruits liked by humans and animals alike. Can grow to 40 feet.
Pecan	*Carya illinoinesis*	X		X		250	60	40	Generally found in moist well-drained soils and can achieve heights over 120 feet. Valuable chiefly for its fruit that is produced in large amounts and its wood.
Persimmon	*Diospyros virginiana*	X				250	60	40	Small tree, with mature height 40-60 feet, that produces edible fruit preferred by certain wildlife. Wood is heavy and strong.
Plum, Mexican	*Prunus mexicana*	X				500	100	60	Grows in central and southern US to 30 feet. Smothered in white blossoms in the spring. Grows best as understory plant on deep, well-drained soils. Purplish-red fruit that is beneficial to wildlife.
Plum, Wild	*Prunus americana*	X	X	X		300	60	40	Wild Plum has white, aromatic flowers in early spring and will multiply. Grows well on very wide variety of soil types. Great wildlife and human food sources, and for windbreak and soil stabilization projects.
Poplar, Yellow	*Liriodendron tulipifera*	X	X	X	X	400	100	60	Most valuable hardwood tree in the US, found in bottomland and rocky sites. Good tree for wetland and afforestation projects. Popular as a shade tree. Lumber is valued for high-grade use.
Red Bay	*Persea borbonia*		X		X	600	100	60	A shrub of the southeastern Coastal Plains found in hammocks, sandy hills and scrub areas.
Red Bay, Swamp	*Persea palustris*	X	X		X	300	60	40	Beautiful medium sized evergreen tree which grows commonly in wetlands and dry, upland areas along the coast. Slow growing tree which typically reaches height of 35-40 feet. Fruit attracts wildlife.
Redbud, Eastern	*Cercis canadensis*	X	X			300	60	40	Brilliant pink flowers in clusters make this small tree great for yards and parks, as well as for wildlife plantings and afforestation projects. A nitrogen fixer with an approximate mature height of 30 feet.
Sourwood	*Oxydendrum arboreum*		X		X	400	60	40	Usually grows as a pyramid or narrow oval with a more or less straight trunk to a height up to 60 feet. Excellent native tree; shallow root system; flowers attract bees and butterflies; seeds for bird.
Sugarberry	*Celtis laevigata*	X	X	X	X	250	60	40	A moderate to fast growing tree; grows well in broad moist flats or shallow sloughs within the flood plains of southern creeks and rivers. Works well in mitigation and wildlife projects serving as a food source.
Sumac, Flameleaf	*Rhus copallinum*	X			X	300	60	40	Fast growing, short lived shrub to 25 feet. Grows best on well drained bottomlands in full sunlight. Browsed by deer, seeds eaten by birds and turkeys. Thickets provide protection for wildlife. (aka, Winged Sumac)
Sweetgum	*Liquidambar styraciflua*		X		X	250	60	40	Extremely hardy tree found on well drained, fertile soils and growing to 80-100 feet at maturity. Excellent for use in hardwood plantations or as a yard tree.
Sycamore	*Platanus occidentalis*		X	X		250	60	40	Very fast growing, favors wetter areas but will grow in many soil types. Wood is hard and strong and is used for furniture, veneer, and pulp. Excellent for afforestation or mitigation projects.
Tupelo, Blackgum	*Nyssa sylvatica*	X	X	X	X	250	60	40	Black Gum or Black Tupelo grows best in fertile bottomlands and grows well in other drier soils. Mature tree serves as a soil stabilizer. Beautiful yard tree, turning bright red in fall. Small, dark fruit favored by wildlife.
Tupelo, Swamp Blackgum	*Nyssa sylvatica var. biflora*	X	X	X	X	250	60	40	Performs best on heavy organic or clay soils of wet bottomlands covered in shallow slow moving waters. This is an excellent tree for wetlands. The tree provides deer browse and fruit for birds.
Tupelo, Water	*Nyssa aquatica*	X	X	X		250	60	40	Native to swamp or frequently flooded soil. Birds favor the medium-sized dark fruits produced. Valuable lumber and pulp source. Mature height can be 100 feet.
Walnut, Black (Improved)	*Juglans nigra*	X		X	X	450	60	40	This improved seed source was selected for improved growth and lumber potential.
Waxmyrtle, Southern	*Myrica cerifera*	X	X			300	60	40	Small evergreen tree or shrub growing on wet or dry sites. A nitrogen fixer; works well mixed in a variety of forest types, on open wetter areas and for mitigation. Food and cover for variety of birds, including quail and turkey.
Witch Hazel	*Hamamelis virginiana*		X		X	400	60	40	A deciduous shrub growing to 15 ft at a slow rate. Found in woodland, sunny edges, and dappled shade.

Flex Stand™ System: How you plant is how you'll grow.

To keep your forestlands profitable, you've got to plan for multiple markets and utilize new advancements in forestry wisely. By using our Flex Stand System of planting and managing forests, you'll reap the maximum benefits from any and all markets.

The Flex Stand System optimizes production of multiple products on the same acre by alternating rows for sawtimber and biomass. For sawtimber, the improved genetics of MCP® Seedlings and varietal SuperTree Seedlings greatly increase yield and quality with their rapid growth and superior stem quality. And for biomass, you'll use an open pollinated (OP) seedling that has been genetically proven to be good at capturing inherent site resources and converting them to biomass. The Flex Stand System allows for many configurations, but the simple one is one row sawtimber, one row biomass, etc.

The Flex Stand System takes you from site prep to planting and site management to derive maximum benefit and profits. With this system, you'll be able to tightly control your use of herbicides, fertilizers and other treatments to your high-value sawtimber crop trees and have easy access to your biomass trees for optimum thinning advantages.

By using this system of forest management, you'll capitalize on advancements in forestry, increase production and quality of timber, and create a forest that can be optimally managed for carbon sequestration and resource conservation. The yield of each product is optimized, and input costs are applied based on the expected value of each product component. Designating products by row within a Flex Stand can also improve harvesting efficiencies.

If you want to recoup your forest establishment capital as soon as possible or obtain period cash flows throughout a rotation instead of deferring investment returns, use our Flex Stand System as your new method of forestry.

Get Your Flex Stand™ System Guide
Call 1-888-888-7158 or go to www.supertreeseedlings.com.

Emerging Green Markets

(Continued from page 1.)
type of timber demands. Solid wood sawtimber is in low demand, leading to a decrease in clearcutting. More emphasis is being placed on cash flows derived from thinnings. This shift in harvesting patterns could influence product price recovery in the future. While an expanded and extended focus on thinning would be expected to reduce future supplies of pulpwood, it would also increase the accumulating standing inventory of chip-n-saw (CNS) and sawtimber. Lower prices for solid wood timber products could continue for an extended period of time.

What About Carbon Credits?

The need for today's forests to assist in carbon sequestration to help abate the rise in atmospheric carbon dioxide is well recognized. Protocols have been defined by the California Climate Action Registry (CCAR) and the Chicago Climate Exchange (CCX) for officially accounting for the role forests can play in offsetting atmospheric carbon dioxide increases. Though the role that improved productivity of intensively managed forests can play in increasing carbon sequestration is not fully understood and acknowledged, many managed stands being established today are sequestering carbon dioxide at a rate twice that of the previous stand, since poorly managed forests eventually become saturated with carbon and lose their abilty to store more. The impact of intensive management on acres that are being converted from low to intensively managed forests would be even greater.

Carbon credit markets are still emerging and haven't become clearly enough defined to calculate financial benefits for forest landowners. However, there are established carbon markets in the United States including Regional Greenhouse Gas Initiative (RGGI), APX's Voluntary Carbon Standard Registry (VCS), and CCX. Federal mandates requiring carbon caps are still up in the air, but the EPA has projected that if the proposed federal mandates are made law and phased in, the value of carbon could increase $13–$23/ton by 2012 and $16–$30/ton by 2020.

A recent article by John Fenderson, Environmental Affairs and Outreach Coordinator, Tennessee Department of Forestry, advises landowners to learn more before getting into long-term contracts, as a mandatory cap and trade program will cause the price of carbon credits to increase. Fenderson also states that it currently takes about 1,000 acres to make carbon trading worthwhile although some have done it with as few as 100 acres.

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- **Allows you to grow trees specified for multiple end products (timber, biomass or pulpwood) on the same acre.**
- **Gets the most bang for your buck from top genetics like MCP® Seedlings and varietal SuperTree Seedlings.**
- **Focuses resources such as herbicides, fertilizers and protection treatments directly on valuable crop trees.**
- **Permits deploying higher cost genetics and technology across more acres.**
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- **Allows accounting to be based on the expected function of each stand component, which is important in certification for both timber and carbon.**
- **At a price of $10/Gton for pulpwood, $15/Gton for CNS and $39/Gton for sawtimber, the first thin from a Flex Stand™ is estimated to bring in $200/ac more than a conventional OP stand. At final clearcut, that increases to $350.00/ac more.**

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For further information about ArborGen SuperTree Seedlings, please visit **www.SuperTreeSeedlings.com**.