



Forestry, Wildlife & Fisheries Update Newsletter

Department of Forestry, Wildlife and Fisheries
George Hopper - Professor and Head

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Calendar of Events - 2003

Jan. 23 - 25	KY-TN Society of American Foresters Winter Meeting Fall Creek Falls State Park Pikeville
Feb. 4 - Mar. 18	Master Wildlifer Short Course - via Satellite
Feb. 18	Aquaculture America 2003 Louisville, KY
Feb. 23 - 26	Southeastern Deer Study Group Meeting Chattanooga

Faculty:

Wayne Clatterbuck, Forest Management
Craig Harper, Wildlife Management
Thomas Hill, Fisheries Management
Sam Jackson, Web Coordinator

George Hopper, Natural Resources
David Mercker, Forest Management
Larry Tankersley, Forest Management

Another Way to Utilize Grass Carp

Tom Hill, Professor, Professor, Fisheries Management

Chinese grass carp (white amur) are well-known for their ability to consume large amounts of plant material in ponds and lakes. Although they have been in this country since 1963, these fish have not yet been generally accepted here as a good source of food for the table.

Grass carp flesh is white and flaky when cooked and is an excellent source of low fat, high protein food. It should not at all be compared to or considered to be like common carp. In many countries grass carp is considered a delicacy and worldwide more than a million tons are harvested for food each year.

Grass carp grow rapidly and individuals may weigh up to 75 pounds when 7 to 8 years old. Unfortunately, they do not continue to be effective aquatic plant controllers when they become large. They need to be caught, removed from the water, and utilized for food. Small grass carp can be stocked as replacements to continue with the aquatic weed control issues.

U. T. Extension publication SP422, "Processing Chinese Grass Carp for Food" was written in 1994 to show how to dress grass carp and avoid problems associated with their boniness. The resulting fillets can then be prepared in any of several delicious way using recipes developed for other kinds of fish.

If you have some grass carp flesh, but want to mask the fish taste, there are ways to do that, too. Grass carp fillets ground with pork fat and sausage seasonings make excellent sausage. Grind the fillets with beef fat and get some outstanding burger meat. In either case, one half pound of fat to one and on-half pound of grass carp is a good ratio. These products can be kept in a refrigerator for a week or for two to three months in a freezer.

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High Quality Fishing from Farm Ponds

Thomas K. Hill, Professor, Fisheries Management

The goal for managing farm ponds with balanced populations of largemouth bass and sunfish (bluegill and redear) is high quality fishing year after year. For the goal to be realized, balance must be maintained. Balance requires that both predator and prey species be present in the proper ratio, natural foods are abundantly available for them. They reproduce every year and both kinds of fish are harvested regularly.

Balance requires a ratio of 3 to 5 pounds of sunfish in various size groups for each pound of largemouth bass. Balance is first established in ponds by stocking 750 sunfish fingerlings in the fall of the year and 100 largemouth bass fingerlings the following spring. In subsequent years, balance depends on several factors, but largely on the food supply for the fish and on the way fish harvest takes place.

The pounds of fish in a pond is directly correlated with the amount of available nutrients that produce natural foods. Usually, the nutrients in ponds will produce enough food to support 100 pounds of fish per surface acre. Fertilize the ponds with high phosphate plant food and about 400 pounds of fish per acre will be produced. In each instance, one-half of the fish will be large enough to be considered harvestable and the other one-half will be varied smaller sizes.

Excessive harvest of largemouth bass in the spring when a pond is first opened to fishing is one of the more common causes for imbalance in ponds. Unless restraint is exercised, 50 to 80 percent of the harvestable size bass can be removed in a few days. When this happens, fishing quality declines rapidly because there are not enough bass left in the pond to keep the sunfish under control.

Try to harvest 3 to 5 pounds of sunfish for each pound of bass. Release bass smaller than 12 inches back into the pond where they will continue to eat sunfish and grow to be caught again later on.

Spread the catch out over several months. Removal of fish regularly and consistently over a long period of time is much better for maintaining balance than rapid harvest.

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Problems with Winter Blackbird Roosts

Craig Harper, Assistant Professor, Wildlife Management

Large congregations of blackbirds are common in Tennessee during the winter. Outside of the nesting season, blackbirds feed together in flocks. After feeding during the day, flocks may fly 15 to 30 or more miles and congregate at roost sites. These large winter roosts can exceed one million birds. Obviously, these roosts are problematic when located around homes, businesses, and other structures. Winter roosts are often located in urban landscape trees, small dense woodlots, or overcrowded clumps of trees. In colder weather, dense coniferous trees and tall shrubs are preferred to provide protection from the elements. Roosts may also be located in buildings and industrial structures during this time.

The noise created by the birds is tremendous and their droppings can present a health hazard, especially at habitual roosts where fecal matter accumulates over time. At these sites, the fungus *Histoplasma capsulatum*, which causes histoplasmosis, may grow in the soil beneath the roost. Spores from the fungus become airborne in dry weather, especially if the soil is disturbed.

“Blackbirds” include common grackles, red-winged blackbirds, brown-headed cowbirds, and a few other species not generally found in Tennessee. Most of the blackbirds seen during winter in Tennessee are grackles and are members of the taxonomic family Icteridae. Many people also consider starlings “blackbirds,” however, starlings are classified in a different taxonomic family (Sturnidae). Regardless of how they are classified, both blackbirds and starlings commonly roost together in large congregations during winter.

The most effective method in deterring winter roosting is scare tactics. Repellents and toxic baits are of relatively little use because the birds are coming to the site to roost, not eat. Pyrotechnics (fireworks), firearms, gas-operated exploders, alarms, and banging on pots and pans have been used in dispersing these roosts. To be successful, scare tactics should begin when the birds show up in the evening and persist for five or six consecutive days, or until the birds no longer return. Scaring operations should conclude at dark.

Because blackbirds are native, migratory birds, they are protected under the Federal Migratory Bird Treaty Act; however, they may be harassed or killed when “committing or about to commit depredations upon ornamental or shade trees, agricultural crops, livestock or wildlife, or when concentrated in such numbers and manner as to constitute a health hazard or other nuisance,” as stated in federal laws regarding migratory birds. Starlings are non-native birds that were introduced into the United States from Europe in 1890 and 1891. Because starlings are exotic pests, they are afforded no legal protection from the federal or state government. However, legal protection may be provided through local ordinances (i.e., city bird sanctuaries).

For technical assistance in dealing with blackbird and starling roosts, contact the USDA Wildlife Services at (615) 736-5506. This federal agency specializes in wildlife damage management.

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Pine Pulpwood Sees Declining Demand

David Mercker, Extension Associate, Forest Management

It's understood that there is a direct relationship between the strength of our domestic paper industry and the price landowners receive for their pine pulpwood. When the industry suffers, so do forest landowners. Further, an indirect relationship exists between increases in supply of pulpwood and its price. When pulpwood is readily available, price premiums are scarce.

A number of changes have occurred in Southern forestry over the past three decades that have resulted in remarkable progress in growth and utilization of pine. The result has been a swelled supply of pulpwood. Other factors, external to the paper industry, have lowered export demand.

Consider the following (Forest Landowner Magazine, July 2002):

- > Enhanced genetics has allowed paper companies to grow wood faster, with better disease resistance, allowing trees to remain healthier and stronger.
- > The establishment of pine plantations on private lands soared in the 1980's and 1990's due in large part to government incentive programs and strong pulp prices. Many of these trees are now (or soon will be) ready for commercial thinning.
- > Intensive forest management has improved yield and survival.
- > A doubling of recycling wood fiber occurred during the past 20 years.
- > American paper exports have become less competitive in the global market, a result of the strong U. S. dollar.
- > Environmental constraints in the U. S. make new and expanded production capacity difficult. Asia and South America do not face the same levels of constraints
- > Pulp yields from wood have increased and such efficiencies have decreased pulpwood demand.

Not to be discouraged, the era of pine pulpwood is not over. As long as mills exist, there will be demand for pulpwood. But prices have seen a sharp peak, and are now leveling off to a more sustainable level. Plus, periodically there are natural disturbances (such as the Southern Pine Beetle or a hurricane) that have potential to eliminate large inventories of standing pine, causing sharp, often temporary price escalations, forcing mills to pay premiums and haul raw material from outside normal supply zones.

As a final consideration, remember that land supporting pine trees is likely better suited to trees than any other agricultural crop. Erosion is controlled, wildlife habitat is enhanced, recreation is expanded, land values are improved and a modest return on forest investment is realized.

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Streamside Management Zones (SMZs)

Wayne Clatterbuck, Associate Professor, Forest Management and Silviculture

Streamside Management Zones may be the most critical Best Management Practice (BMP) during harvesting operations. SMZs are a vegetated zone that serves as a buffer between harvested areas and water bodies (streams, creeks, rivers, lakes) to trap sediment before it enters the water. SMZs provide other benefits. Trees and other vegetation in the SMZ provide shade to the waterway to prevent elevated stream temperature that affects aquatic organisms. These buffer strips also serve as travel corridors and cover for wildlife.

When should SMZs be applied? SMZs should be applied adjacent to *perennial* or *intermittent* streams. These streams have a well-defined channel and support aquatic life. Although these streams flow during most times of the year, they may dry up during drought periods. SMZs should still be applied. *Ephemeral* streams, commonly referred to as drains, draws, or dry washes, typically have no well-defined channels and flow only during and for short periods following rainfall. Aquatic organisms are not present. SMZs are not required for ephemeral streams, but care must be taken to minimize disturbing soil in these concave depressions before they enter intermittent or perennial streams.

How wide should a SMZ be? There is no uniform formula to determine the width of the SMZ. The objective of the SMZ is to trap any sediment that might erode from disturbed areas. The steeper the slope, and the more erosive the soil, the wider should be the SMZ. The minimum width of a SMZ is 25 feet on each side, measured from the stream bank, not the centerline of the stream. Hay bales and silt fences can be used to ensure that sediment does not reach a stream if adequate SMZ width cannot be attained

Can we cut trees in the SMZ? Yes, but extreme care must be observed. We prefer that SMZs be “no equipment zones” where timber must be pulled or winched from the zone. SMZ guidelines specify that no more than 50 percent of the tree cover can be harvested, leaving at least 50 percent to maintain the functionality of the buffer strip.

SMZs may be the most productive forestland because of the proximity to water. These areas should be managed for maximum benefit for water quality and the growth of trees. Too often, SMZs are high-graded with little potential for future value. In other areas, they are left alone, with little management becoming unhealthy and susceptible to insects and disease.

Can we have roads in the SMZ? Preferably not, but existing roads do occur. Maintain existing roads within SMZs with adequate water control structures --- dips, wing ditches and water bars. Do not divert water directly into the stream; divert water in the filter strip so sediments may settle out. Minimize stream crossing and locate new roads outside the SMZ. Locate log decks, staging areas and skid trails outside the SMZ. Remember, SMZs should be treated as no equipment zones to minimize site disturbance.

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The New Forest Landowner – TIMOs

Wayne Clatterbuck, Associate Professor, Forest Management and Silviculture

Institutional investors – pension funds, foundations, endowments and large family trusts are a rapidly growing forest ownership in Tennessee. They are acquiring forest land so they can benefit from its favorable investment traits: attractive rates of return, good cash flow, low volatility of returns (and thus low investment risk) and countercyclical – forest lands tendency to generate positive returns when returns on many financial assets are negative.

These investors hire Timber Investment Management Organizations (TIMOs) to acquire and manage their portfolios. TIMOs are charged with structuring and managing investments to meet clients' objectives (primary increased investment returns) over the long run, usually at least 7 to 10 years, but often much longer.

Returns on forest land accrue in part from biological resources. Timber growth, i.e., more wood volume over time, plus more value per unit volume as diameter increases, provides a majority of the total return. Returns also come from timber price appreciation, land price appreciation, and the net of nontimber cash flows such as hunting lease income, recreation income, non-timber product sales (ginseng, pine straw, etc.), land management costs and fees paid to TIMOs by investors.

TIMOs in Tennessee are acquiring large tracts of forest land primarily from larger family ownerships and private forest industry. Almost 800,000 acres of forest industry land (nearly 50% of the total industry ownership) in Tennessee was on the market to be sold in the past year. Forest industry is finding that they can reduce their costs in the short term by buying timber from private landowners and not growing it themselves on their own land. This has created a great opportunity for TIMOs and longer-term investments.

TIMOs may also create a higher demand for various forest certification systems as an increasing number of institutions seek to document that their investments are socially responsible. Many insurance companies (Prudential, John Hancock) and financial institutions (AmSouth, Wachovia) are examples of TIMOs with active programs in forest land management.

Forest land with an active timber management program is an attractive investment with low volatility over the long term. Considering the appreciation of land and timber with time and the projected increases in population and demand for southern timber, TIMOs provide an opportunity for positive returns on investment, even during poor market conditions for both the institutional investor and for private investors who pool their resources with others. Check it out!

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Timber Tax Brief

Larry Tankersley, Extension Assistant, Forest Management

It's that time of year and no doubt you will start getting questions about taxes. My buddy in Atlanta, Larry Bishop, has prepared his annual newsletter, "Tax Tips for Forest Landowners for the 2002 Tax Year".

The discourse is available at the following website:

http://www.southernregion.fs.fed.us/spf/coop/taxation/Tax_Tips_Final%20_2002.pdf

Also recall, timbertax.org, the National timber tax website.

Basically, persons who sold timber last year should report the income as a capital gain. If they have had the timber for more than twelve months, or inherited it, the proceeds are a long-term capital gain which is taxed at most 20 percent. Folks in the 15% tax bracket pay 10% on their long-term capital gains.

In filing, the forms will ask for dates purchased and dates sold and for basis and expenses. Expenses associated with a timber sale including consulting fees, paint, legal fees, etc. should be subtracted from the gross proceeds. This also is where a “depletion” deduction is allowed if you’re keeping up with a timber account/basis. Pub. 1691, discusses timber basis and should be helpful. Capital gains taxes are paid on the net gain. Note: Between netting out basis and expenses and filing at lower long-term capital gains rates you are **saving your timber owners** a good bit of **money**. Congratulations!!

Reforestation tax incentives continue to be a good thing for landowners planting trees or otherwise establishing a new forest. The 10% tax credit should be reported on line three of Form 3468. The amortization deduction is reported on Part 6 of the form 4562 for businesses and farms. Investors report it on line 34 on the 1040. Forest owners should be reminded if they are in the middle of an amortization schedule as these run for eight tax years.

Casualty losses for damaged timber are also popular discussions. Losses due to ice, wind, thefts, etc. may be allowed, but are typically limited to the dollar value of the adjusted basis. Publication PB1691 is helpful in discussing timber basis.

Let us know if we can help you sort through this subject. We have had some pretty good winter meetings talking about this subject.

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Homeowners and Trees

Larry Tankersley, Extension Assistant, Forest Management

Don’t forget the “Trees for Tennessee Landscapes” series of publications, when homeowners start asking you to recommend a tree for them to plant. These publications are on the utextension website.

There are at least five or six “lists” of trees to choose from, with publications listing trees for a variety of reasons such as small size or unique fall color. The series also includes some good material on tree care and maintenance. Homeowner tree calls seem to be pretty common. This series should provide you with some handy support.

Tree care is also a good subject for Master Gardeners. Keep in touch!!

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4-H Forestry

Larry Tankersley, Extension Assistant, Forest Management

Now's a good time to get started! Spring Forestry contests are not that far off so now would be a good time to recruit a team and some volunteer leaders and set up a practice schedule. The Forestry Contest rules will not change this year. If you have rule books from last year they will be useful right away. We are producing a new "rule book" and will get it out soon.

Recall the National Invitational website at www.invitational.uiuc.edu.

We also have CDs for: 1) Insect and Disease training, and 2) comprehensive training material from the national website. If need support or have questions, contact us here in Knoxville and we'll get you the information you need.

FYI: Contests are set for May 12, Smoky Mountain District
May 13, Cumberland District
May 14, Central District
May 15, Western District

Locations are to be arranged which means they can be arranged to suit you. Help your District leader select a site. We will be simultaneously conducting the District Wildlife Contest as well so **keep this in mind in considering sites.** Enjoy!

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Tennessee Forest Products Market Report - 4th Quarter 2002

David Mercker, Extension Associate, Forest Management

	East Tennessee	West Tennessee	Statewide Average
<u>Stumpage</u>			
Pine Sawtimber \$/MBF Doyle	184	323	253
Oak Sawtimber \$/MBF Doyle	203	302	253
MXD HDW Sawtimber \$/MBF Doyle	185	175	180
Pine Pulpwood \$/Ton	4.69	7.1	5.9
HDW Pulpwood \$/Ton	4.37	2.53	3.45
<u>Delivered</u>			
Pine Sawtimber \$/MBF Doyle	303	416	360
Oak Sawtimber \$/MBF Doyle	481	491	486
MXD HDW Sawtimber \$/MBF Doyle	288	276	282
Pine Pulpwood \$/Ton	20.70	21.43	21.06
HDW Pulpwood \$/Ton	20.93	19.75	20.34

Note:

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Explanatory Notes:

Prices: Prices given in this report are average prices in the current issue of *Timber Mart-South*. Prices for specific timber stands or products may vary significantly from the average prices listed due to location and accessibility of the timber, volume per acre, area included in the sale, restrictions placed on the harvest, size, quality and species of the stand or delivered product, and local demand.

Stumpage price is the price of timber standing in the woods.

Delivered price is the price of harvested products paid at the mill or the loading point (with no freight included).

Prices for sawtimber are given in dollars per thousand board feet (\$MBF) based on the Doyle log rule. The Doyle rule is the predominate rule for measuring tree and log volume in Tennessee. To convert prices to International rule, multiply the price by .61. This rule is for average values and cannot be used to convert individual log or tree volumes.

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