



August 2005

State Conservationist Supports Technology

It is an honor and privilege to be the Alabama NRCS State Conservationist. I feel I have hit the ground



running since my tenure began in July. I have met with NRCS

and SWCD field office staff in all corners of the state and have had the opportunity to view and discuss how we are delivering conservation at the grassroots level. I am proud of the successes we are achieving. I offer my full support to our field

office personnel and guarantee an ear when you have challenges you feel you cannot overcome.

A key to our success is the many partnerships we have at the local, state, and federal levels. I have met with several of our partners and I am looking forward to meeting many more of the technology experts in all natural resource disciplines in Alabama.

Technology is extremely important in the work of NRCS. Our web-based technology continues to evolve and can sometimes be frustrating when things don't work like they are supposed to. As an agency, our employees should have access to the

best technology and tools available to help land-owners throughout the state. We are making our agency more efficient and more accessible to our customers through the Internet and other electronic means. Our challenge is to keep innovating and making progress in science and technology that will help our employees, our partners, and our customers put the Farm Bill to work on the land.

Our work in science and technology will, with the assistance of our partners, continue to support the efforts of people to conserve, improve, and sustain our Nation's natural resources and environment.

Alabama Farmers Approved for New CSP Program

On July 26, 2005, conservation partners from across the state gathered in the Wheeler Lake Watershed beef farm of Morgan County livestock producer Thornton Stanley. Stanley hosted an event to celebrate the initiation of the Alabama Conservation Security Program (CSP). CSP is a voluntary

program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, and plant and animal life on Tribal and private working lands. USDA Deputy Under Secretary Merlyn Carlson participated in the celebration.

In the Wheeler Lake Watershed, 56 Alabama producers were awarded \$910,540 in contracts.

CSP will be offered each year, rotating in as many watersheds as funding allows. For more information on CSP and other NRCS programs see <http://www.nrcs.usda.gov/programs/>.

Calendar OF Events

- Sep 7-9 - AL Water Res Conv, Orange Beach, AL
- Sep 7-10 - SE RC&D Mting Orlando FL
- Sep 13-14 - PMC Advisory Com, Brooksville, FL
- Sep 14 - Clean Water Partnership BOD Mting, Livingston, AL
- Sep 14 - St Com/AACD Ex Com Mting, Montg, AL
- Sep 15 - Area VI Annual Supv Mting, Hilton Garden Inn, Orange Beach, AL
- Sep 15 - Sediment Control Field Day, Decatur, AL
- Sep 21 - Cawaco RC&D Qtrly Mting, B'ham, AL
- Sep 22 - Sediment Control Field Day, Prattville, AL
- Sep 25-29 - ASDSO Ntl Conf, New Orleans, LA
- Sep 29 - Sediment Control Field Day, Enterprise, AL
- Oct 13 - Sediment Control Field Day, Mobile, AL
- Oct 6-7 - TREASURE Forest Conf, Auburn, AL
- Oct 20 - One-Day Grazing School, Lauderdale Co, AL
- Oct 24-25 - Jefferson Co Water Festival, Samford Univ, B'ham, AL
- Oct 31- Nov 4 - EBAAG and SCE Ntl Mting, Denver, CO
- Dec 9 - Shelby Co Water Festival, Univ of Montevallo, AL
- Dec 15 - AL Forage and Grazing Land Conf, Troy, AL

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Managing the Midstory

by Tim Albritton, State Staff Forester, NRCS, Auburn, AL

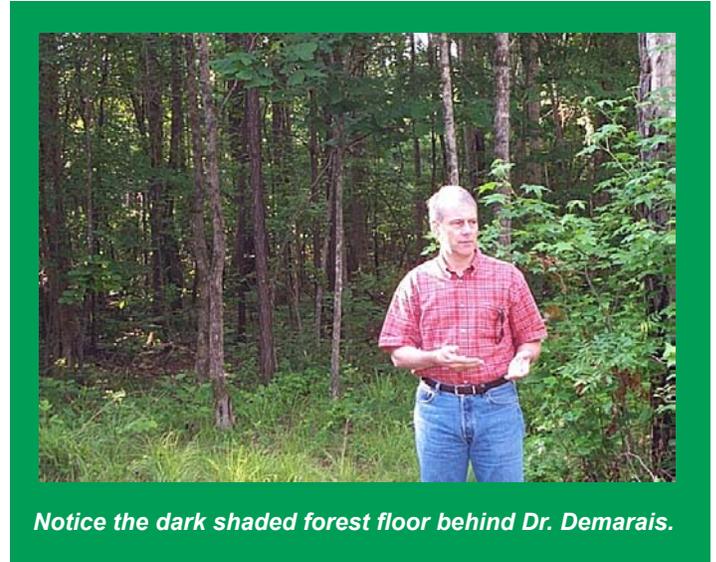
Recently, I had the opportunity to attend a field tour at the Cooksville Forestry and Wildlife Research Area located in Noxubee County, Mississippi. The field tour/workshop was a two-day session that focused on the environmental benefits obtained from midstory management in mature pine stands.

The land is about a thousand acres owned by Dr. Carroll Walker. He has allowed his land to be used for demonstrations since 1989. Mississippi State University professors in conjunction with BASF Chemical Company personnel have developed land management practices

that reflect the latest in wise stewardship to benefit wildlife populations.

Bobby Watkins, a BASF forestry technical specialist, along with the MSU staff, has studied the effects of herbicide and fire treatment on the upland pine habitat for more than fifteen years. The combination of these techniques is known as Quality Vegetation Management (QVM).

Mississippi, like much of Alabama, is blessed with millions of acres of pine forest. These pine stands provide the backbone of our timber industry; however, they require mid-rotation management in order to maintain the multiple-use benefits we have grown



Notice the dark shaded forest floor behind Dr. Demarais.

to expect. Mid-rotation management can be as simple as a prescribed burn once every few years. However, in the absence of fire, southern pine stands very often become invaded with hardwoods. These hardwoods choke the

understory with a dense midstory canopy and prevent sunlight from reaching the forest floor. This impedes the growth of herbaceous species that need sunlight to thrive and grow, as well as competing with timber growth. Once these young hardwoods grow into saplings, it is often impossible to remove them with prescribed fire alone.

During the tour, Dr. Steve Demarais, MSU wildlife professor, discussed the wildlife benefits resulting from the QVM program. The herbicide treatment followed by prescribed burn results in a two-fold benefit. It increases growth of herbaceous understory, which provides food and cover, and it increases pine growth.



Dr. Carroll Walker's land has been used as a demonstration area since 1989.

Our own NRCS wildlife biologist Jeff Thurmond explains in further detail. “Fire has always been a natural component in the southern pine ecosystem,” says Jeff. “These fires traditionally burned the underbrush and promoted ground-level growth of vegetation that was beneficial to wildlife.”

Many southern pine forests today, however, are nothing more than shady thickets as a result of fire exclusion. It seems Smokey Bear has done his job far too well. The thick, low-quality hardwood brush and trees that flourish beneath the unburned pine canopy make wildlife habitat scarce. “In order to restore quality wildlife habitat, we must free the pine forest from the controlling influence of low-grade hardwood species such as hickory and sweetgum,” Thurmond explains. “With the competition eliminated and sunlight increased, many high-quality native herbaceous plants that provide beneficial habitat will return.”

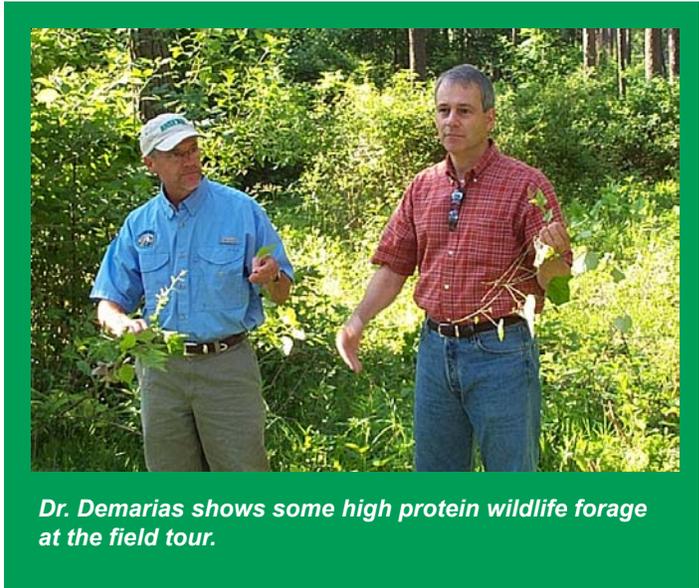
In the QVM regime, Imazapyr* in the form of Arsenal® or Chopper®, is applied. This chemical will not harm pines, but will take out hardwoods. Treatment costs usually run around \$75 per acre, although costs will vary.

After the chemical application, a prescribed burn is conducted during the following winter. The

benefits can then be maintained with prescribed fire every three years.

The lesson to be learned is the use of fire on a regular basis can save money and habitat from the start. However, if fire is excluded long enough to allow hardwood to take over, there is an option for landowners wanting to put wildlife habitat back onto the ground.

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Dr. Demarias shows some high protein wildlife forage at the field tour.

“The effects of herbicide and fire treatment on upland pine habitat is known as Quality Vegetation Management (QVM).”



This pine stand shows good Quality Vegetative Management (QVM).

Landowner Controlling Privet and MORE!

by Tim Albritton, State Staff Forester, NRCS, Auburn, AL

A recent visit with retired landowner Barnett King and his dear wife, Edna, encouraged me to believe that the invasive species battle we are facing in Alabama can be won. Here is King's recipe for success – begin with sound management, use the latest technology, and mix in a “King-size” dose of hard work.

At almost 80 years of age, Barnett King is surprisingly strong and energetic. Instead of resting in an Adirondack chair and taking it easy, he is busy making the chairs and donating them to silent auctions that raise money for forestry in Alabama. With hands that are never idle, King keeps sawdust flying in his workshop, producing handsome chairs, benches, stools, clocks, and more. He uses lumber harvested from

his own trees felled by recent hurricanes like Ivan.

King has applied this same work ethic to a lifetime of wise forest management on the family farm in Crenshaw County.

Recently, he decided to control the privet along the streambank running through his property. Using cut-stump and foliar spray treatments, he has eradicated privet from the streambank and is inner-planting native trees to benefit wildlife. His healthy trees bear silent



Barnett King, center, shows Sarah and Tim Albritton his streambank that is free of privet.

testimony to the effectiveness of this landowner's wise stewardship of his resources.

I have included the methods for controlling privet for your benefit. Pass this on to someone that needs it; your neighbor probably does.

It is estimated that over four million acres of forestland in Alabama are infested with privet and it is not going to go away without a fight.

Successful Privet Control

Privet can be controlled with a concerted effort using methods that have shown

to be effective. A combination of treatments in an integrated manner usually will provide the most effective strategy for successful eradication. All forms of treatment can be used, such as prescribed burning, tractors with rootrakes and mulcher-shredder heads, brushsaws, pulling and digging plants, and especially, effective herbicides. The right combination depends on the size of the infestation and the size of the privet as well as your objectives and budget.

The usual objective is to eradicate privet and



Mr. King makes Adirondack chairs from his own trees to help support Alabama forestry.

allow native plants to re-establish. Selective removal of privet before infestation is the best solution, using treatments that have minimal impact to associated native plants. But large infestations can also be eradicated with a more concerted effort.

For large, multi-acre infestations of large privet, tractors with rootrakes or mower heads are often the best approach. Some of the over-sized "brush-hogs" or "mulcher-shredders" used on utility right-of-ways can grind large privet shrubs to chip mulch. Another approach would be to chainsaw or brushsaw large privet. Of

course, all stumps should be immediately treated with Garlon 3A or a glyphosate herbicide as a 20% solution (2.5 quarts per 3-gallon mix) in water with a surfactant to prevent resprouting, unless you plan to spray resprouts. If safety to surrounding trees is not an issue, then Arensal AC, Chopper, or Velpar L as 10% solutions (1 quart per 3-gallon mix) can be used, recognizing their soil activity. With all cut stump treatments, sawdust and chips should be swept from the stump before application to prevent deactivation. Applications can be made with a backpack sprayer, a utility spray bottle, a



Because of Mr. King's hard work, his property is privet free.

wick applicator, a dropper bottle, or a paintbrush.

Tree injection, hack-and-squirt, and basal stem sprays are other methods for treating privet stems larger than 1-inch

in diameter. Privet injection and hack-and-squirt are difficult methods because of the need to treat multiple stems. The long tube of an E-z-ject injector can permit easier treatment of the multi-stemmed base while a machete and squirt bottle will aid with treating each stem. The same herbicides and mixtures specified above for cut stumps can be used with the same considerations for non-target plant safety.

Basal stem sprays use Garlon 4 as a 20% solution (2.5 quarts per 3-gallon mix) in commercially available basal oil, diesel fuel, or kerosene with a penetrant (check with herbicide distributor) are effective on stems up to three inches in diameter. Thoroughly wet the lower one foot of each privet stem with this mixture.

Foliar spray treatments are the most cost-effective way to eradicate privet and



Barnett King and his wife, Edna, enjoy sharing their home. Sarah Albritton shows how sturdy his crafts are by standing on a table he built.

should be used whenever the foliage can be reached using spray applications. Resprouts of privet that are topkilled by burning or brush mowing can be easily treated with foliar sprays. A test of most forest herbicides as foliar sprays was conducted in resprouted Chinese privet near Auburn, Alabama, using September applications. The results reveal that glyphosate herbicides (like Accord) are the most effective with Arsenal AC being next most effective at the rates tested. Additional tests have shown that glyphosate used during warm-days of winter and spring are even more effective than in September, while treatments during summer dry periods are least effective.

For Chinese privet control, thoroughly wet all leaves with one of the following herbicides in water with a surfactant - April or October to January: a glyphosate herbicide as a 3% solution (12 ounces per 3-gallon mix) or Arsenal AC as a 1% solution (4 ounces per 3-gallon mix). Remember that Arsenal can injure or kill desirable plants having roots in the treated area and is not advisable for use under hardwoods and pines that are to remain.

For the waxy-leaved glossy and Japanese privet, thoroughly wet all leaves with one of the following herbicides in water with a surfactant - August through September: Arsenal AC as a 1% solution (4 ounces per 3-gallon mix) or Garlon 4 as a 3% solution (12 ounces per 3-gallon mix); and March to June: a glyphosate herbicide as a 3% solution (12 ounces per 3-gallon mix).

Foliar sprays are applied using backpack sprayers or sprayers mounted on tractors, ATV's, or helicopters. Directed foliar sprays are those that are directed towards the target plant with care to minimize spraying desirable neighboring plants.

One or more treatments will be required to be successful with any privet control strategy and follow-up surveillance and treatment of new arrivals is a must. It may be necessary to coordinate treatments with your neighbors to prevent reentry.

I am more convinced than ever. If Barnett King can control an invasive species along his streambank, the rest of us have no excuse for not trying.



Horizontal shaft mulching machine.

Types of Herbicide Applications

Directed foliar sprays: herbicide-water sprays aimed at plant foliage to cover all leaves to the point at runoff, usually applied with a backpack sprayer (use low pressure, drift retardants, and spray shields to avoid drift).

Stem injection (including hack-and-squirt): herbicide concentrates or herbicide-water mixtures applied into downstream incision cuts spaced around woody stems made by an ax, hatchet, machete, brush ax, or tree injector.

Cut-treat: herbicide concentrates or herbicide water mixtures applied to freshly cut stumps (outer circumference) or stems (entire top surface) with

a backpack sprayer, spray bottle, wick, or paintbrush.

Basal sprays: herbicide-oil penetrate mixtures sprayed, or daubed onto the lower portion of woody stems, usually applied with a backpack sprayer or wick applicator.

Soil spots: application of Velpar L herbicide as metered amounts to the soil surface around target woody stems or in a grid pattern for treating many stems in an area; usually applied with a spot gun or with a backpack sprayer equipped with a straight stream nozzle.

Adapted from: Jim Miller. 2004 *Nonnative Invasive Plants of Southern Forests: A Field Guide for Identification and Control*. USDA Forest Service, Southern Research Station, Gen. Tech. Rep. SRS-62.

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Wide Woods Roads

by Joel D. Glover, NRCS/ADCNR Wildlife Biologist, Alexander City, AL

“Would you please pull in that side mirror?” the landowner asked as we started down the woods road on his property. With both mirrors pulled in against the cab, we eased along the narrow trail through his woodlands with the tree limbs brushing each side of the truck. “Have you ever thought about widening your roads,” I asked? He responded, “Well, I couldn’t do it without cutting some of the trees.” To which I responded, “Yeah, I guess you’ll need that income to get your truck repainted!”

Each year I meet with numerous landowners and provide recommendations for the management of their property. These meetings range from very enjoyable to just better than a root canal. One of the primary reasons that a visit turns bad is the lack of access to the property. I’m not referring to a property that is land locked by another owner. I’m referring to landowners who cannot adequately access their property due to a lack of roads. Don’t misunderstand me; areas without roads are desirable in some situations. However, when it comes to

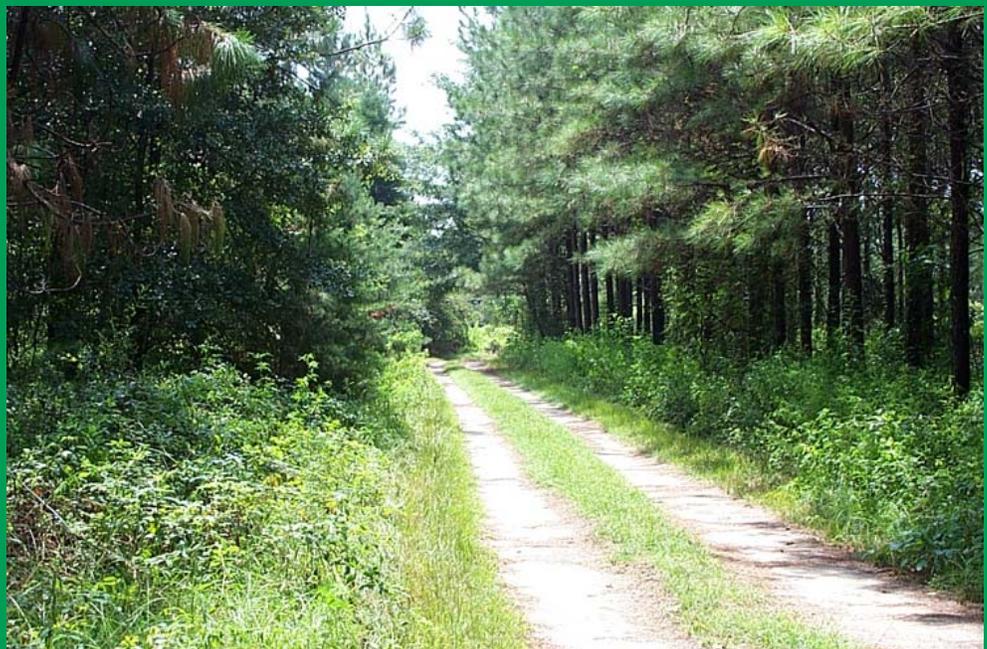
accessing a tract to thin a pine stand, maintain a wildlife opening, or suppress a wildfire, it’s a good thing to be able to reach the area with the needed equipment. A good road network is essential on any property that is going to be managed. Well-developed roads provide many benefits in addition to access to the property.

A well-designed road system, one that includes turnouts and water bars where needed, can afford the property owner many benefits from both a wildlife and forestry perspective. From a wildlife standpoint, a day-

lighted woods road, i.e., one that has had encroaching vegetation removed to allow sunlight to reach the ground, will normally produce numerous plants that are beneficial to many species of wildlife. Natural foods often found along a day-lighted road include various lespedezas, milk peas, butterfly peas, beggar ticks, ragweed, blackberry, honeysuckle, greenbrier, partridge peas, and various grasses. These natural foods are excellent for many species of wildlife. Not only do these areas provide feeding

opportunities, they also provide nesting and brood rearing habitat for several species.

Wide woods roads are excellent sites for planted wildlife forages as well. The linear shape provides excellent edge. Many times I will plant a road and then bulb it out on the end with a ¼ or ½ acre opening. Due to the resulting shape, I sometimes refer to these as thermometer fields. Although any wildlife planting should not be visible from a public road, interior roads are excellent for this practice. In addition to planting forages, mast



Landowners benefit from a good road system by making the land accessible to equipment for maintenance and wildfire suppression, and by allowing in sunlight to produce plants beneficial to wildlife.



A forest road may need to be gated or restricted to discourage others from using it without permission and destroying turkey and quail nesting habitat.

producers such as crabapple, persimmon, and various oaks may be planted along the woods edge to provide additional diversity and edge. When planting a mast producer along a woods edge, you should keep the trees/shrubs at least 25 feet from the woods and 15 feet from the road edge. This will allow enough room for equipment to get between the mast producers and the woods during a prescribed fire and will allow the road enough daylight to produce desirable natural foods or planted forages. Another added benefit of a day-lighted roadway is a reduction in the amount of maintenance required to keep the road in good condition. The sunlight on the road will allow for faster drying and a vegetative cover helps prevent erosion.

In addition to providing a travel way for the landowner, good roads also provide travel

corridors used by many species of wildlife. Species such as deer, turkey, quail, rabbit, songbirds, and other small mammals readily use woods roads as travel corridors. These “paths of least resistance” are often used by turkeys as strutting zones as well as for dusting and as a grit source. Whitetail bucks often use roads for scrape lines. Just as wildlife use these corridors, so can those who are pursuing the wildlife. I can’t count the number of times I’ve set up on a gobbling turkey in a woods road, or stalked down a quiet woods road looking for deer or squirrel. A good road system is valuable to both wildlife and landowners.

When recommending a wide woods road, I am often met with resistance from the landowner who doesn’t want to take that land “out of timber production.” It is obvious that a firebreak or road

may require the removal of some timber. Of course, the most economical method would be to include the plans for the roads as part of a thinning operation, or after a harvest and prior to replanting. However, even if it wasn’t planned initially, developing a good road system is usually worth more than its cost. I am quick to share with landowners that my experience has been that a good road network is often literally more valuable than a few rows of trees when it comes time to sell timber. This is often met with skepticism until it is explained. The explanation is really very simple. When someone decides to sell timber, in the vast majority of cases, they should send a prospectus to several timber buyers. Of course this should only be done after consulting with a forester who can cruise the timber and give the landowner an idea as to how much timber is actually on the property. This is a step that many landowners bypass and in so doing they often cost themselves several thousand dollars! I digress.

After the buyers are contacted, many will want to cruise the timber before making an offer. This is when a good road network pays for itself. Property that can easily be traversed and accessed is automatically

worth more than the property where the buyer has to sharpen his machete before entering. In addition, when a timber buyer realizes that roads will have to be created on a property, the cost of developing those roads is normally deducted from the bid. It’s as simple as that. Even if the value of the trees lost to the road system is not regained, there are still other values that must be considered. With so much land in young pine plantations today, it is essential that a landowner or their agent be able to access and monitor the stand.

During the past few years, the Southern Pine Beetle (SPB) has run rampant in many areas of the state. An SPB infestation can be devastating in a pine plantation if it is not detected and controlled early. On several occasions I’ve heard of landowners who, although they live on the property, didn’t realize they had a SPB spot because it was in an area they could not easily access. In addition to affording the landowner

“... a good road network is often literally more valuable than a few rows of trees when it comes time to sell timber.”



This road needs to be widened to allow landowners or their agents full accessibility to the land.

or manager an opportunity to monitor the stand, a good network of wide roads may actually serve as a barrier to pine beetles that are moving through a stand.

Yet another important use of a good road system is as a firebreak for prescribed burning, and perhaps more importantly, the suppression of wildfire. For young plantation owners, access for firefighting alone is a sufficient reason to develop a good road system. While a head fire is raging through a young plantation, firefighters don't have the luxury of deciding on the best location for a new road. Without access, substantial timber could be lost to fire and to the firefighters who must access the property with suppression equipment.

Although there are many benefits to good roads, there is also a drawback. A good road through a property invites

the landowners and others to use it. After all, that is what it is for.

A wide woods road with day-lighted areas on each side is often excellent nesting areas for both quail and turkey. Landowners should limit the traffic on their roads, especially during wet weather and during nesting season. In addition, wide woods roads, especially those with well-managed vegetation along each side, are aesthetically pleasing. Because of this, landowners may need to restrict the access of unwanted visitors by erecting gates.

As you can see, woods roads afford many and varied benefits to property owners. Whether you want to receive top dollar for your timber, improve your wildlife habitat, increase your fire protection, or simply have a good place to walk in the woods, a good road network is essential.

How Blessed I Am

*As I walked along the road
one day I took in sights
and sounds*

*The birds seem to guide
my way and a deer antler
I found*

*The colors were so vivid
and the air fresh and clean*

*And as I walked along a
vast knowledge I began to
gleam*

*It's funny how all the
pieces just seem to fall in
place*

*How things seem to flow
smoothly here away from
the rat race*

*I thought how thankful I
was just to be a part*

*Of a creation so splendid
and dear to my heart*

*How blessed am I to have
a road to walk, wild things
to hear and see*

*To think that the God of
the universe would share
it all with me*

*Thank you Lord for
another day to spend
doing what I love*

*Thank you for creation
and all good gifts from
above*

*Poem supplied by
Joel D. Glover*

Alabama Irrigator's Pocket Guide

Alabama NRCS is working with the National Center for Appropriate Technologies to develop and print an Alabama Irrigator's Pocket Guide. The Guide which can fit in your pocket or on the dash board of your truck should be a valuable tool for those involved in irrigation.

This book is divided into two halves. One half is for Water Management and focuses on conserving and protecting water, soil, energy, and other natural resources, as well as providing information on soils, water application and crop needs, efficiency of irrigation system, and water quality. The Equipment Maintenance half of the book gives specific instructions for keeping your irrigation system running properly. Topics covered include recommended installations, pumping plant maintenance, distribution system maintenance, and saving energy.

After printing, the Guide will be made available to field office staff and a supply will be available for cooperators in the state who are very involved with irrigation.

For more information contact Perry Oakes, NRCS State Conservation Engineer, Auburn, AL (334-887-4536), perry.oakes@al.usda.gov.