

Made In The Shade

Agroforestry Can Find A Place In Many Farming Operations

BY RITA BRHEL
P&D Correspondent

Other than providing a wind-break, erosion control along a stream, or a bit of shade in a pasture, trees aren't regarded as a major part of most farms and ranches in the Yankton area, excluding the occasional orchard or tree nursery. And while it was popular a few years ago to plant a grove of high-value timber trees, such as walnut, to be harvested in 50 years as a retirement fund, timber markets have since become slim.

"Timber production for most small-scale landowners comes fifth in importance," said Becky Barlow, forestry specialist at Auburn University in Auburn, Ala. "Number one reason is to enjoy the outdoors."

Growing trees by themselves is simply not considered to be a viable option here, but Barlow wants to help landowners see more options. She's working to bring awareness to uncommon agricultural practices with their roots in the Confederate South that actively incorporates trees into crops or livestock — otherwise known as agroforestry.

There are a variety of agroforestry practices, each of which can also be integrated into a wind-break or soil erosion technique:

- Alley cropping, in which crop strips alternate with rows of trees. As with any agroforestry option, the trees may be grown for high-value timber, fruit, or nut production. There are also nitrogen-fixing trees that improve soil fertility as well as provide a wind-break to the crops. The fallen tree leaves also provide organic matter to the crop soil area.

- Forest farming, where shade-tolerant crops are grown under the tree canopy, such as mushroom or medicinal herbs like ginseng or goldenseal. Another form of forest farming involves non-timber tree by products such as pine straw, greenery, and firewood.

- Silvopasture, through which livestock are grazed in a pasture among a stand of trees also grown for timber, fruit, or nuts.

Silvopasture is most promising, Barlow says, because it gives landowners with high-value timber groves a way to use that grove in the decades before the trees



Silvopasturing — the practice of grazing livestock on pasture containing trees grown for an alternate income — may give landowners an option in planting high-value timber trees without taking away pasture space.

PHOTO: RITA BRHEL

mature for harvest.

"Current market trends are forcing the forestry community to look at other options," said Rick Hatten, field operations director at the Georgia Forestry Commission at Macon, Ga. "A silvopasture system can produce short-term or annual economic returns while being able to produce a high-value timber product over the long term."

"Management of trees, cattle, and forage is more complex than management for single products but can yield profitable returns for many years."

NATHAN BYRD

Grazing among trees is not a new idea. Barlow has a photo of an old Spanish-breed cattle ranging in the forests of the South. The photo dates back to pre-Civil War days when cattle would roam the forests, free of fences. Silvopasture, though, means actively managing livestock, forage, and timber production at the same time.

"From my experience, intensive management is the key to this system," said Lyn Ellison, a producer near Tupelo, Miss. "If a silvopasture is not managed, it won't function properly."

In the Yankton area, silvopasture may naturally occur in

streamside pastures whose trees could eventually be harvested for timber. Producers with silvopastures may plant their high-value timber trees into pastures, or they may incorporate their timber trees into a windbreak and then graze it. This way, pasture isn't lost to tree space and trees can be used for an eventual cash crop as well as environmental or aesthetic benefit. Both cattle and sheep

have been successful used in silvopasturing as well as hogs.

"Management of trees, cattle, and forage is more complex than management for single products but can yield profitable returns for many years," said Nathan Byrd, a silvopasture specialist at the U.S. Forest Service's Southern Research Station in Asheville, N.C. "Each opportunity must be examined on its own merits to determine if the operation is likely to prove profitable. The unique requirements for such multiple-use operations is expertise in both timber and cattle management."

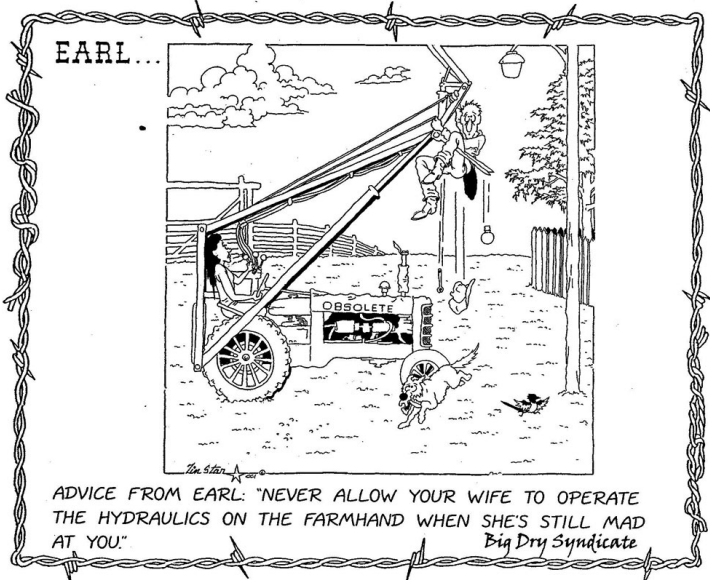
In order to maximize forage production, tree canopy is managed at a 25 to 45 percent cover for warm-season grasses and at 40 to 60 percent for cool-season grasses. This requires thinning at five-to

seven-year intervals. Young trees need to be protected from livestock such as by electric fence or rigid mesh tubes around the trunk until they have grown above grazing height. Grazing is managed by forage height as in intensive grazing management of pastures without trees. An added management technique specific to trees grown for timber is pruning, which begins when trees are 15 to 20 feet tall with a diameter of five to six inches and continues until trees are 18 to 32 feet tall, during which the tree is pruned to ensure a straight, knot-free wood.

While silvopasture is intriguing, Barlow says it's not an agricultural practice suitable for drought areas, as the pasture under trees can only be grazed for a short time relative to the long recovery periods between grazings. This grazing schedule doesn't pair well with dry weather.

But, in planning for options once the region recovers from the current drought, silvopasture or another agroforestry practice may be something to try, especially for landowners who have invested in a timber grove.

"Most producers are not at all familiar with agroforestry," said Emily Stutzman Jones, a colleague of Barlow's at Auburn's forestry department. "When people have better options, they can make better decisions."



Conservation Stewardship Program Apps Due

WASHINGTON — Agriculture Secretary Tom Vilsack has announced that the Natural Resources Conservation Service's Conservation Stewardship Program (CSP) will provide nearly \$175 million in funding for up to 12.6 million additional acres of enrollment this year.

"The Conservation Stewardship Program is different than other USDA financial assistance programs," said Vilsack. "CSP offers payments to producers who maintain a high level of conservation on their land and agree to adopt higher levels of stewardship. It's about conservation activities on the entire operation focusing on multiple resource concerns."

Vilsack explained that although applications are accepted all year, farmers, ranchers and forestland owners interested in CSP should submit applications by May 31 to their local NRCS office to ensure they are considered for this year's funding.

The voluntary program allows producers to go the extra mile in conserving natural resources while also maintaining or increasing the productivity of their operations. Playing a significant part in conserving and improving our nation's resources, producers enrolled an additional 12.1 million acres in CSP last year, bringing the total number of acres to more than 50 million.

Many of the CSP enhancements improve soil quality, which helps land become more resilient to extreme weather. Several other improvements are available for producers, including intensive rotational grazing, intercropping and wildlife friendly fencing.

Because of the extreme weather in 2012, more interest and participation in the cover crop enhancements is expected this year, according to NRCS experts. A CSP self-screening checklist is available to help producers determine if the program is suitable for their operation. The checklist highlights basic information about CSP eligibility requirements, stewardship threshold requirements and payment types.

For the checklist and additional information, visit the CSP website at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp/> or visit your local USDA NRCS office.

Wetlands Reserve Program Deadline May 31

HURON — A deadline for accepting applications has been extended for the Wetlands Reserve Program (WRP) enrollment for Fiscal Year 2013 funding. Applications are accepted year round for the program, however the cutoff for consideration for 2013 funding is extended to May 31, 2013. Interested landowners must sign an application at their local Natural Resources Conservation Service (NRCS) office by that date, according to Jeff Vander Wilt, NRCS Assistant State Conservationist for Programs.

The WRP is a voluntary program where landowners enroll eligible wetlands and adjacent land into a 30 year or perpetual easement. The purpose of the program is to restore the land for wildlife habitat. Interested landowners need to work with their local office as soon as possible to complete the application process.

Easement payments are based on an established rate. To check out the 2013 rate for your county go to <http://www.sd.nrcs.usda.gov/programs/WRP.html>

Jeff Vander Wilt, assistant conservationist for programs, says funds are available, but he encourages any landowner not to wait until the last minute to visit their local U.S. Department of Agriculture Service Center. "Now is the time to look at the economic return on those marginal acres, and think about enrolling them into the WRP."

For more information about the WRP, contact your local NRCS office or the NRCS WRP Manager, Sara Thompson, at (605) 352-1281. For more information about technical assistance and conservation programs go to <http://www.sd.nrcs.usda.gov>.

Opinion

We All Must Work To Monitor Pesticide

BY RITA BRHEL
P&D Correspondent

Where would our world food supply be without pesticides? In many ways, pest-killing chemicals are a miracle for modern agriculture. They, along with synthetic fertilizer, genetic hybridization, and irrigation, have created crop yields high enough to not only ensure producers make a living off their labor but also to enable wide availability and easy access to foods.

But, as with nearly every man-made "miracle," there comes a point where pesticides are too good to be true.

It's true that they can make crops nearly impervious to pest attacks. And it's true that as long as pesticide labels are followed, residues are unlikely to make it to the consumer.

But it's not true that pesticides don't pose some risk.

DDT, first discovered in 1939, was one of those miracles. It was broad spectrum, it didn't break down quickly and wasn't water soluble and so didn't need to be reapplied often, and it was inexpensive and easy to apply. It was so effective that it was used beyond agriculture as well, including to delouse soldiers and to spray communities for mosquitoes, around the world. We all know today that DDT is really bad to the environment. It was first brought to our attention in 1962 at the dawn of the Environmental Movement when an article showed a correlation between DDT and non-target animals such as birds and fish. At first, pesticide manufacturers discredited the claims, but further research proved the article's accuracy and more — DDT was tested in the fatty tissues of seals and Eskimos, far from any area of use, as well as breast milk in levels high enough that would've made it illegal if it was cow's milk.

Most pesticides available today are relatively safe. They have gone through and continue



Rita
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to go through rigorous testing. But there is one bit of pesticides that remains troubling: the effect on our water supply.


The U.S. Geological Survey's National Water-Quality Assessment

Program's Pesticide National Synthesis Project assesses pesticide levels in surface water and groundwater across the U.S. mainland. You can access it here: <http://water.usgs.gov/nawqa/pns/p/>. There are maps for every pesticide, and the current featured pesticide is atrazine plus deethylatrazine in groundwater and the likelihood that the levels of this chemical will exceed drinking water standards. And right smack in the middle of the

country, like a bull's eye, is Nebraska — especially Northeast Nebraska and South Central Nebraska, marked brown as the areas with the highest likelihood that our drinking water will contain more of this pesticide than is safe. There are skiffs here and there in South Dakota, Iowa, Minnesota, Wisconsin, Illinois, Kansas, New York, Florida and other states, but Nebraska is certainly the state you don't want to be in. Furthermore, the article predicts that 95 percent of the nation's agricultural areas are not likely to exceed thresholds, but apparently nearly all of that 5 percent is in Nebraska.


My point is that while pesticides are miracle products for agriculture, they all have risks. Some have more than others, but living in an area with pesticide use means that our drinking water is always at risk. It doesn't mean that it's always contaminated, or that it's dangerous to drink or use, just that it's not in-

herently safe because we're in the 21st century and there's rigorous testing and there's great advancements in the science of pesticide manufacturing. It's just something we should be keeping an eye on, not necessarily worrying about it but also not taking for granted that pesticide development and use is inherently safe just because manufacturers say so. We don't want a repeat of DDT and we likely won't, but we as producers and consumers have a part in the responsibility of monitoring pesticide use, too.

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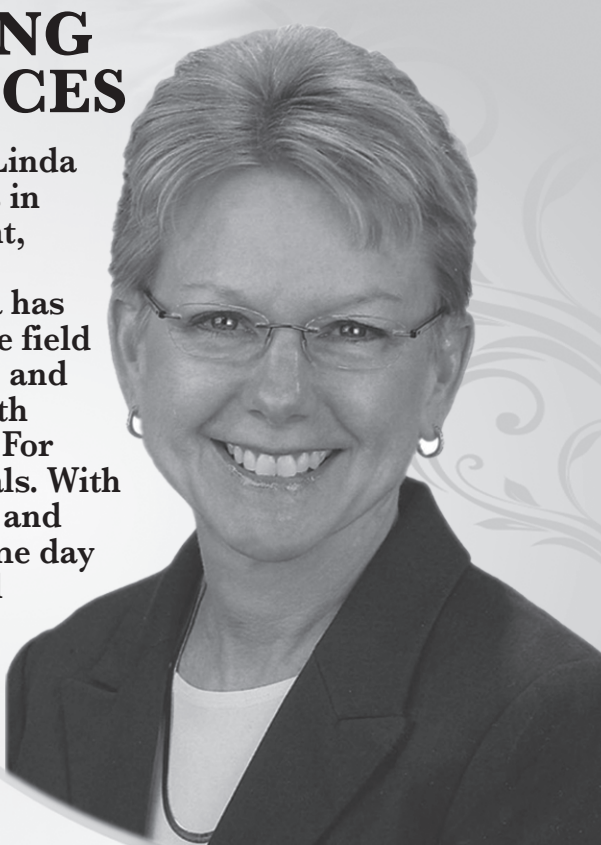
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