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Quality Vegetation Management

BY: BOBBY WATKINS

What Is Quality Vegetation Management' (QVM)?

QVM is an approach to land management that promotes the natural, native vegetation across the forest landscape to improve wildlife habitat and animal carrying capacity. QVM uses management activities that cause the lowest disturbance to wildlife and habitat, but the greatest habitat improvement. QVM allows land managers to benefit further by curtailing other, more costly, but less beneficial activities such as mechanical control of hardwood brush, food plots and supplemental feeding. QVM practices can also enhance timber growth by increasing forest health and accelerating pine growth.



Hardwood invasion in recently thinned Pine Plantation

Invasion

Controlling Undesirable Hardwood

Across the Southeast, forestlands can be expected to suffer from invasion of low quality, undesirable and aggressive hardwood species. These undesirable hardwoods crowd out wildlife-quality vegetation and compete for water, sunlight and other site resources. Many land managers attempt to control hardwood by mechanical means (mowing, chopping, Dozer) or through prescribed fire.

While these practices temporarily reduce the above ground portion of hardwood plants, the rootstocks continue to thrive and compete vigorously for site resources such as moisture, nutrients and root zone



Hardwood Re-invasion after a cool season burn in a Pine Plantation

Re-Invasion

space. Some hardwood species can even be invigorated by the disturbance (sweet gum can send up an average of 9 new sprouts with each disturbance). 1-2 years after burning, mowing or chopping, land managers are again plagued by hardwood. These 1-2 year old hardwood re-sprouts may only be a few feet in height, but their looks can be deceiving and their impact



Pine Plantation using QVM™ practices (3 growing season after treatment)

Treatment

underestimated since they are actually growing off of a mature rootstock.

Land managers can use selective herbicides to control unwanted hardwood brush. It is the most effective means of reducing hardwood since it controls the hardwood stem down into the roots and prevents its re-growth. Compared to mechanical or fire, herbicides treatments actually control hardwood, are required less frequently and are more selective in terms of species controlled. Since selective herbicides are highly effective at controlling hardwood, the need for retreating the forest is rare if follow-up practices such as prescribed fire are planned. Otherwise, most landowners expect a 10-year, or more, benefit from the treatment.



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Release High Quality Natural Vegetation

Since herbicides are selective, they eliminate undesirable hardwood species while leaving desirable food source and ground cover plants such as forbes, blackberry and legumes unharmed and released to flourish without competition from hardwoods. Soon after the treatment, other desirable vegetation such as grasses and vines colonize and thrive. QVM shifts the plant species composition of the site from domination by low quality, undesirable hardwood species to a proliferation of valuable, wildlife-preferred quality vegetation that supports healthier, more abundant wildlife populations. With QVM, land managers utilize the available seed bank that already exists on their land. It is free of charge and available for use if only allowed to grow. These native plants don't need to be purchased every year, do not need a prepared seed bed, and don't require planting. Land managers



Recently germinated Partridge Pea

Partridge Pea

won't need to follow the weather forecast to time tillage or worry about germination. These native plants are naturally more drought tolerant, naturally palatable to wildlife and nutritious. Recent Mississippi State University research discovered that species richness increased significantly (150% more plant species present) from QVM. Recent Louisiana State University research discovered that the increase in plant diversity from QVM resulted in a dramatic increase in insect diversity (300% more). A Clemson University study showed greater insect abundance with QVM (100% more). With QVM, more legume plants are present that produce significantly more digestible protein (500% more in Mississippi State University research).

Promote and Stimulate Growth

Site fertilization has also been shown to enhance growth and development of native plants. Nitrogen, phosphorous and potassium are the most important elements and contained within most standard-grade fertilizer formulations (i.e. 10-10-10, etc.). While this is not a necessary practice on many sites, which are not deficient in these elements, research and practical use have demonstrated that the addition of soil nutrients through fertilization will certainly improve vegetative biomass, flowering, fruit, seed and protein production per acre of land. A soil analysis will provide information regarding soil fertility and the relatively need to supplement it with a fertilization. Also, liming and fertilizing large areas may be cost prohibitive and land manager may wish to select areas to implement this practice. In subsequent years, fertilization can be continued over other areas as well. Timber health and growth will also be stimulated by fertilization, helping to justify and pay for the costs of this treatment over time.

Basic Steps To Implementation

1. Herbicide Application

Arsenal™ herbicide Applicators Concentrate and Chopper™ herbicide are the two products most often



A skidder sprayer applies Arsenal[®] to a pine stand.

Spraying

used to improve wildlife habitat and promote habitat diversity. While ARSENAL can be applied safely over the top of pines without injury, CHOPPER must be directed away from the crowns of desirable pines. Both products are considered by the forest industry as the most effective, and considered by wildlife organizations as the most beneficial.

2. Stimulate Germination

While QVM can certainly be successful without fire, a prescribed burn the first winter following the treat-



ment will promote native plant germination and accelerate and enhance the effect of QVM. Fire removes the litter layer, that is acting like a weed suppressing mulch, and stimulates plant germination. Some forest plants are adapted to, and even require fire. Many landowners are in sensitive areas and cannot get burning permits; others elect not to burn due to liability or cost. An alternative to burning is to use a drag. A drag made of Dozer tracks has been fashioned and utilized by some over the years. The results and durability are good, and the cost to operate it are low.

3. Continued Maintenance

With QVM, vegetative maintenance evolves from racing to stay ahead of controlling hardwood, to refining the vegetative structure of the habitat to fit the needs of the wildlife objective. As discussed earlier, without hardwood problems, vegetation maintenance is easier and less costly since maintenance intervals should lengthen allowing for more time between burns, etc. However, at some point, vegetative growth will exceed the desired vegetative structure depending on land productivity, native plant species and annual rainfall. Habitat will be improved since the type and timing of vegetation manipulation will be selected based on what is best for the wildlife objective – not because hardwoods are taking over and have to be controlled no matter what damage it may cause.

Landowners, especially those who live off-property, are pressed for time to “stay on top” of everything. Sometimes it may seem that they have lost track of one of the primary reasons they own the property – to enjoy it. Vegetation management can become a continuous burden that consumes time and money. Mowing, chopping, disking, burning, plowing, spreading, planting, cultivating, spraying, etc. can become just

Recreation

Allowing For More Time For Recreation



Quality Vegetation Management


another job on the weekend for a landowner. When QVM is implemented, most of those activities can be reduced and/or eliminated which leaves time for the real landowner objectives such as fishing, scouting, shooting, walking, hunting, riding, training, cooking, eating, entertaining and relaxing.

Summary

There is no doubt that QVM implementation will improve wildlife habitat and animal carrying capacity and allow land managers to reduce cost and redirect efforts to other objectives. The first step to QVM is to speak to your BASF representative, forest herbicide distributor, private or state wildlife biologist or forestry consultant. It is really best to speak to as many sources as possible as you improve your land management plan with a QVM project. QVM will make a

major difference in your land within 1 year, and the full benefits will begin to be enjoyed 2 years after implementation. Landowners can expect great improvements for wildlife, increased timber growth, improved hunting quality of land (access/view/safety) and enhanced land aesthetics. All these QVM effects will lead to rising land ownership pride and land value.

Always read and follow label directions.

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Authors Bio

Bobby Watkins is a herbicide specialist and can be reached for questions at cointailfarm@bellsouth.net



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