



We create chemistry

Professional Vegetation Management

# Arsenal® AC Herbicide Uses

The Full Treatment



# Life-Cycle Management with Arsenal® AC herbicide

The perfect solution for controlling  
competing vegetation throughout the  
pine forest life cycle.

**Site Prep and Herbaceous Weed Control** in  
the critical first and second seasons.

**Pine Release** to boost merchantable volumes  
by controlling hardwood brush in young pine  
stands. (Please refer to label and directions.)

**Mid-Rotation Release** to clear hardwood  
brush halfway through pine stand rotation, with  
an estimated average potential rate of return  
topping 11% per year.

**Arsenal® herbicide applicators concentrate  
(Arsenal® AC herbicide)** controls competing  
vegetation, before and after planting – and  
throughout the forest life cycle – to help boost  
pine survival and support healthy growth.

By freeing growing pines from the herbaceous  
weeds, grasses, vines and hardwood brush  
that compete for sunlight, moisture, nutrients  
and root space, **Arsenal AC herbicide**  
promotes healthier stands, faster growth, larger  
merchantable volumes – and higher returns on  
the timberland investment.





# Site Prep and Herbaceous Weed Control

## In the critical first or second seasons

**Arsenal AC herbicide** effectively controls a broad spectrum of herbaceous weeds that compete with newly planted seedlings during the critical first and second growing seasons, without targeting young pines or the legumes wildlife use for food. This means your pines have a stronger and healthier headstart – with bottom-line benefits you can bank on for years to come.

## The Clear Path to Growing Success.

Pine seedlings – and profits – have many enemies. Hardwood brush and herbaceous weeds rob young pines of resources needed for healthy growth: sunlight, moisture, nutrients and root space.

- **Better seedling survival rates.** Uniform, fully stocked stands for maximum volume production.<sup>1,2</sup>
- **More than double the early pine volume growth after a single treatment.** Gives pines a strong head start over future competition.<sup>3</sup>
- **Quicker return.** Faster stand growth means earlier commercial thinning.<sup>4</sup>
- **Bigger volumes and faster stand development.** Research has found stand development accelerated by an average of three years.<sup>4</sup> Instead of waiting to harvest at age 25, the same volumes could be harvested at age 22. Plus, faster development means shorter, more compressed rotations.

1. Creighton JL, Zutter BR, Glover GR, Gjerstad DH, Planted pine growth and survival response to herbaceous vegetation control, treatment duration, and herbicide application technique, South. J. Appl. For., 1987; 11(4): 223-227.  
2. Dougherty PM, Survival and Growth Responses of Loblolly Pine to a Range of Competition Control, Georgia Forestry Commission: 1990, Georgia Forest Research Paper 81.  
3. Lauer DK, Glover GR, Gjerstad DH, 1993, Comparison of duration and method of herbaceous weed control on loblolly pine response through mid-rotation. Canadian Journal of Forestry Research 23: 2116-2125.  
4. Glover, GR, Creighton JL, Gjerstad DH, Herbaceous weed control increases loblolly pine growth, J. Forestry, 1989; 87(2): 47-50.  
\* Source: J.P. Caulfield, B.D. Shiver, L.V. Pienaar, and H.E. Quicke. 1999. Estimating Financial Returns from Mid- Rotation Release in Coastal Plain Loblolly Pine Plantations. Southern Journal of Applied Forestry 23 (2): 94-99.

# Pine Release

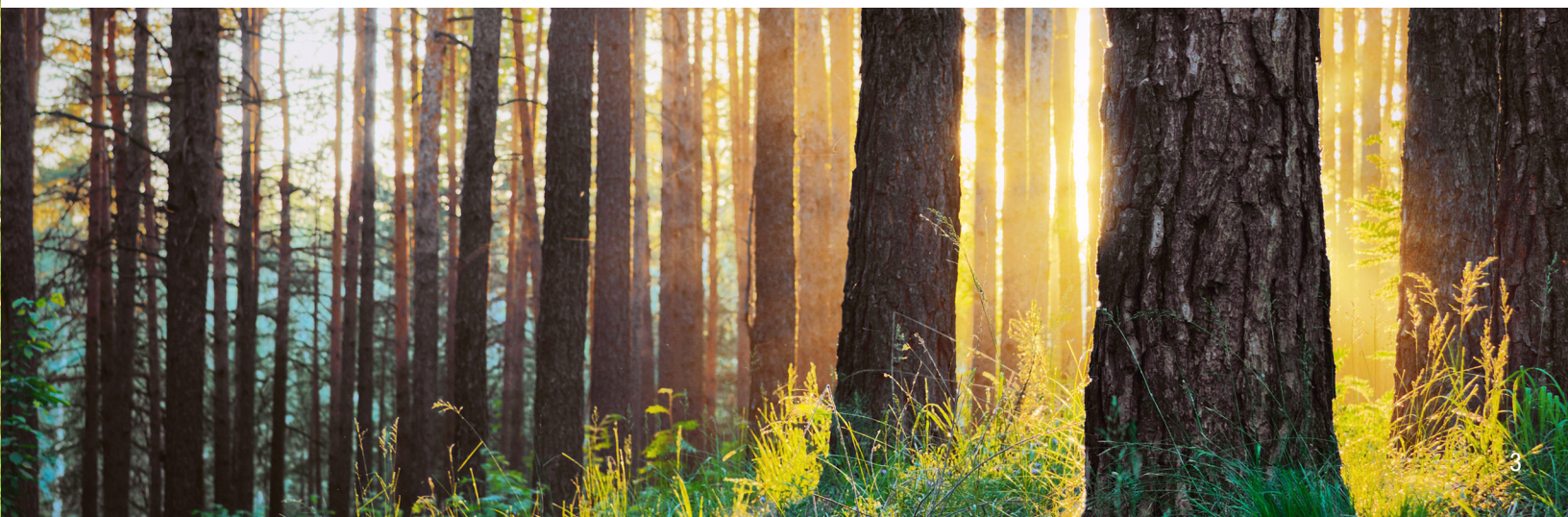
**Arsenal AC herbicide** gives you outstanding, long-term control of even the most troublesome hardwoods. The result? Maximum pine growth and return on investment. When you compare a vegetation management program using **Arsenal AC herbicide** with other herbicide programs, the results may look similar a year after treatment. But in the long run, **Arsenal AC herbicide** gives you far better long-term control.

In one study, hardwood vegetation was removed from a 7-year-old natural loblolly stand. Ten years later, total merchantable volume in treated plots was 30% greater than in untreated plots.\*

## The Clear Path to a Better Habitat.

Releasing young pines with **Arsenal herbicide Applicators Concentrate (Arsenal AC)** after planting frees them from hardwood competition that can rob them of sunlight, nutrients, moisture and root space.

- **Boosts merchantable pine volume** by as much as 30% or more.
- **Lowers fire risk.** Thanks to reduced fuel loads.
- **Controls the toughest competitors.** Hardwoods, brush, waxy species, broadleaves and grasses.
- **Helps enhance wildlife habitat.** **Arsenal AC herbicide** increases plant diversity and doesn't target the legumes wildlife use for food.





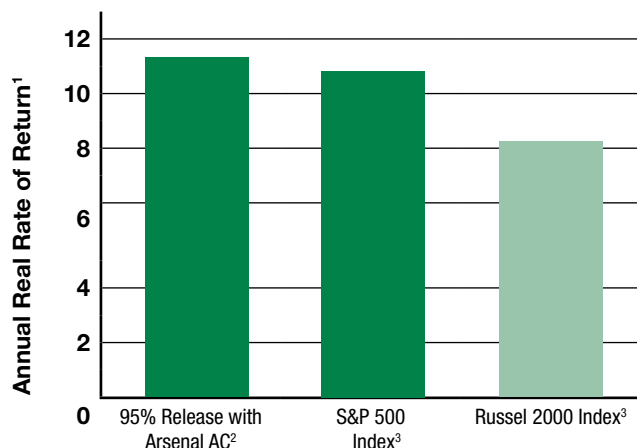
## Mid-Rotation Release

Even in older stands with a closed pine canopy, understory brush and other competitors can rob moisture and nutrients and can undercut pine growth – and profits. **Arsenal herbicide Applicators Concentrate (Arsenal AC)** keeps competitors at bay throughout the forest life cycle, yielding big potential increases in both merchantable volumes and timber value. In one study **Arsenal AC herbicide** cut hardwood competition in a 14-year-old loblolly stand by 76% - and increased pine volume by 20% after six years.<sup>1</sup>

### The Clear Path to Land Value.

**Arsenal AC herbicide** used during mid-rotation eliminates hardwood competition and increases the value of your stand by making your land more accessible and attractive to hunters, recreationists and wildlife.

- **Increase pine volume** by as much as 20% over 6 years.
- **Increase pine diameters** for higher value timber.
- **Significant return on investment.** Average real rate of return 11% per year.
- **Improves accessibility and land value** for hunting and recreation.
- **Pine tolerance to Arsenal AC herbicide** increases plant diversity and doesn't target the legumes wildlife use for food.



1. The real rate of return is the nominal rate minus the inflation rate.  
2. Fifteen years after treating a 10-year-old stand.  
3. 1986-1996, adjusted for inflation.

1. H. E. Quicke and P. J. Minogue, 2001, Sixth-year responses following operational scale mid-rotation release with Arsenal AC: The 1994 Waverly Hall Study. BASF Forestry Research Report 2001-03.  
AP-5004-0215



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Always read and follow label directions.

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