

ADVANCED FOOD PLOTTING

State-of-the-art tips and techniques for high-level land managers

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FOR FOOD PLOT MANAGEMENT

2,4-D: CHEAP, EFFECTIVE BROADLEAF CONTROL ON OATS PLUS AND OTHER SMALL GRAINS

Food plotters have few options for broadleaf weed control.
Here's one that works and won't break the bank.

In today's economy, bargains are tough to come by. But if you have planted oats, wheat, triticale, rye or Oats Plus, there is still a low-cost option for broadleaf weed control. The cheap, effective broadleaf weed control herbicide 2,4-D is considered a bargain to keep your fields clean.

BACKGROUND

2,4-diphenoxyacetic acid (2,4-D) was discovered in 1942 as a plant growth regulator. However, in 1944, USDA scientists reported that 2,4-D killed dandelion, plantain and other broadleaf weeds in a bluegrass lawn. This discovery of 2,4-D was the beginning of the chemical revolution in agriculture. 2,4-D is in the family of synthetic auxin herbicides. The auxins are growth regulators found naturally in plants and are responsible for cell division, and root and shoot growth. That basically means that 2,4-D kills broadleaf weeds by making them grow themselves to death. The symptomology broadleaf weeds express after the herbicide application is called epinasty. The cells elongate on one side of the plant, causing the plant to bend outward and downward.

USES AND FORMULATIONS

2,4-D is a cheap, effective broadleaf herbicide that is used on cereal grains, corn, sorghum, grass forage crops, turfgrass, rights-of-way and aquatics. It's absorbed by the plant through foliar uptake, so it has very few soil residual properties. When applied post-emergence, it's ineffective on grasses and sedges. However, it has a small amount of soil residual properties as a pre-emergent with grasses, although this is rate dependent. I mention this because we often recommend 2,4-D as a burn-down in summer, and after applying 2,4-D, you should wait about three weeks before planting.

2,4-D is available in two formulations: ester and amine salt. The formulations have different chemical structures attached to the end of the 2,4-D parent molecule. The parent molecule is the herbicidally active portion. However, the different additions alter the chemical and physical properties of the herbicide, changing use patterns. The ester formulation has a higher vapor pressure and is thus more prone to volatilization (off-target drift) by conversion from a liquid spray droplet to a gas compared to the amine salt formulation. The amine salt formulation is the better choice for weed control in crops, specifically cereal grains. Therefore, the amine salt formulation is the recommended formulation for the purposes of this article.

APPLICATIONS

Oats Plus is composed of WTI Oats and triticale. Both are small grains that are tolerant to 2,4-D applications. 2,4-D can be applied over the top of Oats Plus at any stage, as well as wheat, rye, triticale, and ryegrass. However, spraying early (the three-to-six-leaf stage with three tillers) will be necessary for optimum weed control.

Reading online, you will see recommendations such as, "not



■ Herbicides with 2,4-D are commonly sold at big-box stores, and using 2,4-D is typically a low-cost investment for weed control.

to apply 2,4-D to small grains in the fall." They're referring to small grains grown for grain. Research has demonstrated that 2,4-D can reduce grain yields if applied before tillering in certain small grains. However, food plotters grow Oats Plus and other small grains for forage, not grain yield. Our main objective is to produce leaves for deer to forage without having weed competition. This is where cheap 2,4-D applications fit in nicely with a weed management plan.

The cost of 2,4-D is also a great benefit. Prices will vary but 2,4-D is about \$4 to 5 per acre, which is a low-cost investment for weed control.

One thing to mention is that brassicas are very sensitive to 2,4-D. Do not use 2,4-D on products containing cereal grains mixed with brassicas and other forage species (such as Pure Attraction and Destination).

2,4-D-containing herbicides are commonly sold at many big box stores for homeowner use. It's sold as a stand-alone product in addition to many weed and feed products. This illustrates the proven safety and value of this product.

In addition, cleaning up your fields during winter will reduce the weed seed bank of broadleaf weeds for your spring plantings.

We have very few options for broadleaf weed control in food plots, so this is an opportunity to clean up your fields with a cheap, effective product.

