

# Calibrating Your Back-Pack Sprayer (or Power Sprayer Hose Nozzle)

- τ Measure out and mark an 18.5' x 18.5' area. This represents 1/128<sup>th</sup> of an acre.
- τ Time how long it takes to spray the area to wet, but not soaked. Hold the wand or nozzle with a comfortable grip.
- τ Spray into a bucket, using the same hand pressure or grip, for the same amount of time.
- τ Measure the contents of the bucket in ounces.
- τ The **ounces** sprayed to cover the 18.5' x 18.5' area equals the gallons per acre you would spray.
- τ To calculate for the ounces of herbicide you would need to mix per gallon, divide the recommended rate per acre (in ounces) by the number of gallons per acre you sprayed.
- τ Sample: If the recommended herbicide application rate per acre is 5 ounces and your spraying rate per acre is 36 gallons:  $5 \div 36 = 0.1389$  ounce per gallon.
  - τ One ounce equals 2 Tablespoons, 1 Tblsp equals 3 teaspoons.
  - τ You would mix your activator first into a gallon of water in your pack, then add ½ tsp of herbicide into the gallon, then add the surfactant.
- τ Activator and surfactant rate recommendations are by volume of water, varying by brand or type, check the label for specifics. Generally, add 1 Tblsp of activator and 1/4 - 1/2 tsp of surfactant per gallon of water.



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## HERBICIDE RECOMMENDATIONS FOR NOXIOUS WEED CONTROL ON NON-CROPLANDS

These recommendations are from WSU Cooperative Extension, and are intended as guidelines only for driveways, pasture, range, habitat, and other **non-production** areas. **ALWAYS READ AND FOLLOW ALL LABEL INSTRUCTIONS ON THE PRODUCT YOU PURCHASE TO APPLY - IT'S THE LAW.** Grazing restrictions are also found on the label.

The Weed Board has back-pack and slip-in power sprayers available for public use. The general guidelines for mixing herbicides to use in back-pack sprayers are to choose product needed to control your weed in the table below. Add that many **teaspoons** of product per every gallon of water mixed into the sprayer tank **except** when using milestone or escort use as directed in chart. Also mixing 1 teaspoon of an activator such as Miracle-Gro plus 1 teaspoon of a spreader/sticker such as R-11 per gallon of water will increase control quality.

WEED	Growth Type		Herbicides - In Pints Of Product/Acre					
	A,B,P <sup>1</sup>	2,4-D (Hi-Dep)	Escort	Weed Master	Roundup	Tordon*	Prescott	Milestone
Bugloss, common	P	NR	.5gR	4	5	2	-	½ tsp
Dalmatian toadflax	P	NR	.8g	-	-	3-4	-	NR
Field bindweed	P	6 <sup>2</sup>	.4-.8gR	4 <sup>3</sup>	15 <sup>2</sup>	3-4	-	-
Hawkweeds	P	2-4 <sup>8</sup>	-	-	4	1	5	½ tsp
Houndstongue	B	4	.4-.8g	4	-	2	-	½ tsp
Knapweed, diffuse	B	2-4 <sup>8</sup>	NR	4	6	2-3 <sup>8</sup>	2-6	½ tsp
Knapweed, meadow	P	NR	NR	4	NR	2-3 <sup>8</sup>	2-4	½ tsp
Knapweed, spotted	P	2-4 <sup>8</sup>	NR	4	6	2-3	2-6	½ tsp
Knotweed, J & G	P	-	-	-	2&1/2 <sup>9</sup>	1 <sup>10</sup>	-	½ tsp <sup>6R</sup>
Kochia	A	3	.2g <sup>11</sup>	2 <sup>2</sup>	3	NR	-	½ tsp
Leafy spurge	P	6-15 <sup>5</sup>	-	4	15R	3-4	-	-
Mullein	B	2R	.4g	2	4-6	2	-	½ tsp <sup>8</sup>
Ox-eye daisy	P	2	.2g	1-2	-	2-3	2-4	½ tsp
Rush skeletonweed	P	4R	.4g <sup>11</sup>	4	NR	3-4	2	½ tsp
St. Johnswort	P	2-4 <sup>7</sup>	.4g	-	NR	3-4	-	½ tsp
Tansy,common	P	-	.4g	-	NR	2	4	½ tsp
Thistle, bull, musk, Scotch and plumeless	B	6-15 <sup>8</sup>	.4g	2	4	1 <sup>7</sup>	2-4	½ tsp
Thistle, Canada	P	6-15 <sup>2R</sup>	.6g	2	6-8 <sup>2</sup>	2-3 <sup>12</sup>	2-4	½ tsp

Key: \* = WSDA Pesticide Applicators' License required; g = gram; tsp = teaspoon; R = repeated application within the year; NR = not recommended; - = unknown; (1) A = annual, B = biennial, P = perennial; (2) post-bud (seedhead initiation in grasses); (3) in the fall, prior to killing frost; (4) full-bloom to early seed; (5) spot spray 2% solution at early to late bloom stage spray to wet; (6) in early summer; (7) apply at rosette stage; (8) at the rosette stage to mid-bolting stage; (9) measure is in ounces per gallon; (10) tank mix with 2 pints per acre of triclopyr only where water is NOT present; (11) only recommended with a three-way tank mix; (12) apply after basal leaves emerge & before bud stage.