

# WEED CONTROL NOTES

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## WEED CONTROL IN SMALL GRAINS

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(Revised)

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Yields of small grains are often reduced by weeds. Yield reductions of as much as 20% have been caused by henbit and chickweed. With a mixture of bittercress, chickweed, knawel (German moss), mayweed, and vetch, the yield of barley was reduced more than 35%. Knawel can completely eliminate barley and wheat.

Weeds impair the quality of small grains. Considerable dockage due to presence of wild garlic or onion bulblets occur each year. Many growers experienced \$2.50 dockage or more per bushel of small grain in 1974. Buyers will not accept grain containing cockleseed.

All of the proven production practices; preparing a good seed bed, using proper fertilizer and lime programs, planting high quality, clean seed of the adapted varieties, planting at the proper time and at the optimum rate, contribute to good stands with optimum growth of small grains. The use of herbicides should be considered as a supplement to these factors and not as a replacement for any one of them.

Herbicides are available to control many weeds in small grains. Research has indicated that these herbicides can cause injury to the small grains but the effect of elimination of weeds will offset these injurious effects. Most problem weed seeds germinate soon after the small grains are planted. Observe your fields soon after planting, ascertain your weed problem, then be prepared to apply the proper herbicide at the correct rate and time.

### Factors to consider in using 2,4-D:

1. All small grains can be injured by excessive rates of 2,4-D. Oats are more susceptible than barley, rye or wheat. Calibrate your sprayer, add correct amount of herbicide and apply at suggested rate of application.
2. The least amount of injury occurs when applied at the fully tillered state (all side shoots produced) but before joining (stem elongation) of the small grain. Applications before or after this stage of growth can severely reduce yields.
3. Growth of weeds must be occurring for 2,4-D to act; therefore, the temperature should be about 60° F during the middle of the day before applying.
4. Wild garlic and onion will be stunted and twisted downward by the 0.75 lb rate of 2,4-D (LVE) permitting harvest of reduced amount of aerial bulblets. Higher rates of 2,4-D would be more effective but too injurious to small grains.
5. The proper time of application of soluble nitrogen and 2,4-D do not coincide.

### Prevent Spray Drift:

1. Spray only when wind is less than 5 mph.
2. Keep sprayer pressure between 20-30 psi.
3. Use proper size nozzles.
4. Keep spray nozzles as close to top of foliage as feasible for good coverage.
5. Calibrate sprayer.

## Barley, Oats, Rye, Wheat

Weed Problem	Chemical Rate/A (Product/A)	Remarks
Corn chamomile, corn gromwell, cow cockle, henbit, knawel (German moss), mayweed, pennycress, pepperweed, shepherdspurse, wild mustard, wild radish, winter vetch, yellow rocket	bromoxynil 0.375-0.5 lb  (Brominal 1.5-2 pt or Buctril 1.5-2 pt)	Destroy all weed seedlings before seeding small grains. Look for weeds as soon as small grains start to germinate. Apply after small grain is beyond 2-leaf stage, and weed seedlings have no more than 3-4 leaves or rosettes 1 1/2" across. Use higher rate on larger weeds (4-5 leaf stage). Poor control has resulted when applied to larger weeds. Bromoxynil's short residual may permit subsequent weed seed germination. Thorough weed coverage is necessary for effective control. Do not apply if small grains form a canopy or during or after boot-stage. Late winter or early spring applications have been relatively ineffective. Do not contaminate streams, lakes and ponds with this material. Don't graze treated fields for 30 days after application. Do not feed bromoxynil treated grasses grown for seed to livestock.
Black mustard, blessed thistles, bulbous buttercup, burdock, cornflower (Ragged Robin), corn poppy, curly dock seedlings, fanweed, goatsbeard, hairy vetch, pennycress, plantain, primrose, prickly lettuce, rock cress, shepherdspurse, wild mustard, wild radish, wild turnip, fleabane, chicory	2,4-D amine 0.5 lb  (1 pt of a 4 lb/gal formulation)	Apply spray in early spring when small grain is 4-7" tall. Make sure grain is fully tillered (stooled), and has not begun to joint. <u>Oats may be injured</u> . Wait 1 or 2 weeks after treatment before seeding legumes. Do not spray from boot to dough stage. Do not forage or graze treated fields within 2 weeks after treatment. Do not feed treated straw to livestock.
	MCPA 0.25-0.5 lb  (0.5-1 pt of a 4 lb/gal formulation)	Apply in spring after small grains have fully tillered (stooled) and before early boot stage. Legumes may be injured if not protected by weed canopy. Use lower rate on small grains underseeded to legumes. See remarks above for 2,4-D.
Above weeds, garlic and wild onion	2,4-D ester 0.75 lb  (1.5 pt of a 4 lb/ gal formulation)	Spray when grain is tillered, but before jointing stage. Overdosage may result in damage to crop. Onion or garlic is prevented from forming aerial bulblets. Oats are susceptible to injury at rate necessary to control garlic. See remarks above for 2,4-D.
Harvest aid; Above weeds listed for 2,4-D	2,4-D amine 1-1.5 lb  (1-1.5 qt of a 4 lb/ gal formulation)	Apply after dough stage to harvest as an aid to harvesting on barley, oats, and wheat. Do not feed treated straw to livestock.
Corn chamomile, cow cockle, dandelion, dog fennel (mayweed), goatsbeard, knawel (German moss), mustards, vetch and many other broad-leaf weeds listed above for 2,4-D	dicamba 2 oz + 2,4-D 4-6 oz or MCPA 4-6 oz  (Banvel 0.25 pt + 2,4-D or MCPA 0.5- 0.75 pt of a 4 lb/ gal formulation, Banvel K 0.8 pt on winter wheat)	Make application immediately after winter dormancy and before small grains start to joint. Do not graze or feed treated forage to dairy cattle prior to crop maturity. This is not registered for use on rye. See 2,4-D above.

Trade and brand names are used only for the purpose of information and the Virginia Cooperative Extension Service does not guarantee nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.

KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.

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