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Weed Management in Clover[1]

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Cool-season clovers are important for grazing systems in Florida. Clover provides grazing flexibility during winter and spring while warm-season grasses/forages are dormant. Weeds are problematic in clover fields and weed control can be more challenging because clover plants are sensitive to many pasture herbicides. There are also fewer herbicide products registered for use on clover compared to other forage species, so chemical weed control programs have to be chosen carefully. Table 1 provides information on herbicides that can be applied for weed control in clover production systems.

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Table 1. Weed management in clover.

Herbicide Active Ingredient (Trade/ Product Names)	Mode of Action Group (MoA)	Application Rate per A (Total per A/ Season or Year)	Reentry Interval (REI)	Comments
Preplant Incorporated				
EPTC (Eptam) 3.5 pt	8	3.5 pt (7 pt)	12 hrs	For winter annual grass and some broadleaf weed control, incorporate 2 to 3 inches deep before planting. Do not use on white Dutch clover. Do not use if a grass or grain crop is to be planted with the clover.
benefin (Balan 60DF)	3	2 lb (2.5 lb)	12 hrs	May be used on alsike, ladino, and red clover. For winter annual grass and some broadleaf weed control, incorporate 2 to 3 inches deep before planting. Do not use if a grass or grain crop is to be planted with the clover.
Postemergence—Seedling Clovers				
pronamide (Kerb SC)	3	2–2.5 pt (5 pt)	24 hrs	For preemergence control of winter annual weeds, spray prior to weed emergence in November or December. Do not graze or cut for hay for 120 days after treatment. In fall-seeded clovers, applications should be made after clover has reached the first trifoliate leaf stage. In spring seeded clovers, applications should be delayed until the following fall or early winter.
sethoxydim (Poast)	1	1–2.5 pt (6.5 pt)	12 hrs	Apply with crop oil concentrate at 2.0 pt/acre to control annual and perennial grasses. Use the high rate for johnsongrass and bermudagrass. Do not apply to grasses growing under drought-stressed conditions. Apply to annual grasses less than 8 inches tall. Do not apply Poast within 7 days of feeding, grazing, or harvesting undried forage, or within 14 days of cutting for dry hay.
imazethapyr (Pursuit)	2	3–4 fl oz (6 fl oz)	4 hrs	Apply to seedling clover with a minimum of two trifoliate leaves and when weeds are 1 to 3 inches tall, or before rosette-forming weeds exceed 3 inches in diameter. Pursuit requires a 1-hour rain-free period. Pursuit may cause a temporary reduction in height or slight leaf yellowing. DO NOT feed, graze, or harvest for 30 days after application. A maximum total of 2.16 oz/A of Pursuit may be applied per year. Add a nonionic surfactant at 0.25% v/v or a crop oil concentrate at 1.25% v/v to the spray solution. If replanting is necessary in a field treated with Pursuit, do not plant for 4 months following the application of Pursuit. Do not apply more than 1.44 oz during the last year of the stand.
Postemergence—Established Clover				
sethoxydim (Poast)	1	1–2.5 pt (6.5 pt)	12 hrs	Apply with crop oil concentrate at 2.0 pt/acre to control annual and perennial grasses. Use the high rate for johnsongrass and bermudagrass. Do not apply to grasses growing under drought-stressed conditions. Apply to annual grasses less than 8 inches tall. Do not apply Poast within 7 days of feeding, grazing, or harvesting undried forage, or within 14 days of cutting for dry hay.
pronamide (Kerb SC)	3	2–2.5 pt (5 pt)	24 hrs	Controls winter annual grasses and some broadleaf weeds in clovers, birdsfoot trefoil, and crown vetch. Apply from November through February. DO NOT graze or harvest for hay for 120 days after application. KERB is a restricted use herbicide.
imazethapyr (Pursuit)	2	3–4 fl oz (6 fl oz)	4 hrs	Apply to established clover in the fall, or in the spring to dormant or semi-dormant alfalfa. Spring treatments should be made before excessive clover growth (less than 3 inches of new growth) to reduce spray interference. Apply when weeds are 1 to 3 inches tall or before rosette-forming weeds exceed 3 inches in diameter. DO NOT feed, graze, or harvest alfalfa for 30 days after application. A maximum total of 2.16 oz/A of Pursuit may be applied per year. Add a nonionic surfactant at 0.25% v/v or a crop oil concentrate at 1.25% v/v to the spray solution. If replanting is necessary in a field treated with Pursuit, do not plant for 4 months following the application of Pursuit. Do not apply more than 1.44 oz during the last year of the stand.

Table 2. Estimated effectiveness of recommended herbicides on common weeds in Florida clover.

Time of Application	PPI	PPI	PRE	POT	POT
	Balan	EPTC—Eptam	Kerb	Poast or Select	Pursuit
bahiagrass	P	P	P	F	–
bermudagrass	P	P	P	F–G	P
bitter sneezeweed	P	P	P	P	–
blackberry	P	P	P	P	–
bracken fern	P	P	P	P	–
briars (Smilax)	P	P	P	P	–
broomsedge	P	P	P	P	–
bulrush	P	P	P	P	–
buttercup	P	P	P	P	–
chickweed	F	E	G	P	E
crabgrass	E	G	F	G–E	F
cudweed	P	P	P	P	–
curly dock	P	P	P	P	F
dallisgrass	P	P	P	P	–
dandelion	P	G	P	P	–
dodder	P	P	E	P	–
dogfennel	P	P	P	P	–
evening primrose	F	F–G	P	P	–
foxtails	G	G	P	E	G
gallberry	P	P	P	P	–
goldenrod	P	P	P	P	–
henbit	F	G	P	P	E
honeysuckle	P	P	P	P	–
horsenettle	P	P	P	P	–
horseweed	P	P	P	P	–
Italian ryegrass	G	E	G	E	P
johnsongrass	P	P	P	G	P
kudzu	P	P	P	P	–
little barley	G	G	E	F	–
mayweed	–	–	P	P	–
nettle, stinging	P	P	P	P	–
nutsedge	P	F	P	P	F
palmetto	P	P	P	P	–
perilla mint	P	P	–	P	–
persimmon	P	P	P	P	–
pigweed species	G	G	–	P	G
pokeberry	P	P	P	P	–
prickly pear	P	P	P	P	–
ragweed	P	P	P	P	F
red sorrel	P	P	P	P	–
sandbur	E	G	P	G	–
shepherd's purse	P	G	G	P	E
sicklepod	P	F	P	P	–
smutgrass	P	P	P	P	–

swinecress	P	G	F	P	–
Texas panicum	G–E	G	P	E	–
thistles	P	E	P	P	P
tropical soda apple	P	P	P	P	–
vaseygrass	P	P	P	P	–
Virginia pepperweed	P	G	P	P	–
wax myrtle	P	P	P	P	–
wild cherry	P	P	P	P	–
wild garlic	P	P	P	P	–
wild radish	P	P–F	P	P	G-E
wild plum	P	P	P	P	–
wild rose	P	P	P	P	–
woolly croton	P	P	P	P	P

Estimated effectiveness based on rates recommended in this report. Effectiveness may vary depending on factors such as herbicide rate, size of weeds, time of application, soil type, and weather conditions.
Weed Control Symbols: E = 90–100% control; G = 80–90% control; F = 60–80% control; P = less than 60% control; – = insufficient observations.
Time of Application Symbols: PPI = preplant incorporated; PRE = preemergence; POT = postemergence over the top.