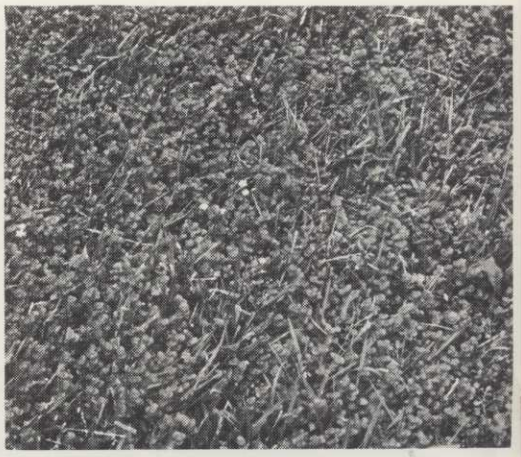
Chemical Control for

Creeping Speedwell



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CREEPING SPEEDWELL (*Veronice filiformis* Sm.) is a many-stemmed creeping perennial that invades lawns growing under cool, moist conditions. It reproduces vegetatively by creeping stems, and its spread is enhanced by soils of high fertility. Its flowers are borne singly on pedicels and in mid-June give a heavily infested lawn the appearance of a bluish-white carpet. Its yellow-green leaves are small and hairy, and appear to completely crowd out turfgrasses in an infested lawn. Closer examination of the lawn reveals the coexistence of a substantial percentage of grass with the weed.

Creeping speedwell was reportedly introduced into Grand Rapids, Mich. (from England more than 40 years ago by a wealthy rock garden enthusiast. To date it has been identified throughout the northeasern United States and Washington.

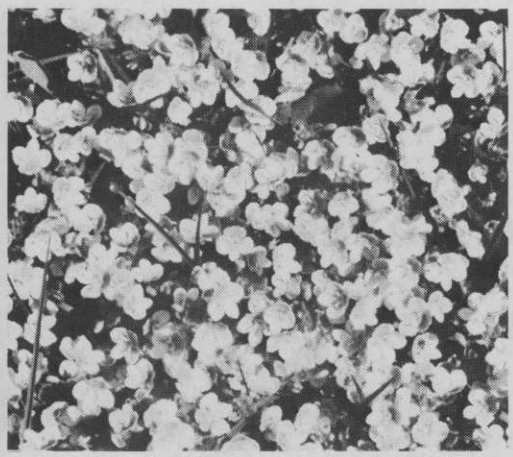
A survey of the literature indicated that selective control of this weed could be achieved with endothall or DCPA, at normal rates of application. Initial greenhouse tests on speedwell-infested turfgrass plugs indicated that conventional broadleaved-weed herbicides were ineffective against this weed. The herbicide treatments include: 2,4-D (2 lb/A), silvex (1.5 lb/A), dicamba (1 lb/A) and picloram + 2,4-D (.5 and 1 lb/A, respectively). When endothall (3 lb/A) was applied to the plugs, complete kill of the weed resulted and the turf recovered after three weeks.

Field tests were initiated July 11, 1969, on a Grand Rapids estate lawn, with the following treatments: endothall (2 lb/A); endothall (2 lb/A) plus vertical mowing; and vertical mowing without herbicide treatment. Nearly complete control of speedwell resulted from the herbicide treatments, while vertical mowing did not give weed control nor significantly enhance the effectiveness of the herbicide.

On Aug. 20, 1969, additional treatments were applied using endothall at ½ lb. and 1 lb/A. This was dur-

Table 1. Evaluation of Treatments on Creeping Speedwell (Veronica filiformis) in a Kentucky Bluegrass Lawn.

Trmt. No.	Treatment	Rate lb/A	Date Applied	Weed Control
1	Endothall	2	July 11	95%
2	Endothhall + vertical mowing	2	July 11	95%
3	Vertical mowing	--	July 11	0%
4	Endothall	1	Aug 20	95%
5	Endothall	½	Aug 20	70%
6	DCPA	15	Aug 20	0%
7	Endothall	1	Sept 22	95%
8	Endothall + oil	1	Sept 22	95%
9	Endothall	½	Sept 22	40%
10	Endothall + oil	½	Sept 22	95%
11	Endothall	¼	Sept 22	20%
12	Endothall + oil	¼	Sept 22	20%



ing a hot, dry period and the lawn was not receiving any artifical irrigation. The 1 lb application rate gave nearly complete weed control, while the ½ lb rate gave fair control averaging about 70%. DCPA was also applied at 15 lb/A. This produced no observable effects on either the weeds or the turf.

On Sept. 22, 1969, endothall was applied at ¼, ½ and 1 lb/A alone and in combination with (1 gal/A) non-phytotoxic oil. Both 1 lb/A rates and the ½ lb/A plus oil treatments gave nearly complete control. The ½ lb/A endothall treatment (without oil) gave only about 40% control and both ¼ lb/A treatments resulted in poor weed control. The weather during this period was cool and soil moisture was high.

In all tests where the herbicide was effective, weed kill was rapid, resulting in an open turf highly susceptible to invasion by other weeds, including knotweed *(Polygonum aviculara* and dandelion *(Taraxacum officinale.*

The results of these tests illustrate several factors which must be considered when attempting to control severe speedwell infestations:

1. Kill of speedwell with endothall is more effective during warm weather than under cool conditions. The desiccating effects of hot, dry weather appear to enhance the contact activity of the herbicide.

2. Vertical mowing is a laborious cultural practice that does not significantly improve the control of this weed when performed in combination with endothall application.

3. The 2 lb/A and 1 lb/A rates of endothall give nearly complete weed control, while the ½ lb/A rate is not satisfactory unless 1 gal/A of non-phytotoxic oil is added to the herbicide solution.

4. Artificial irrigation of the turf several days after chemical treatment with endothall, greatly aids turf recovery.

5. The occurrence of knotweed and dandelions in areas left void by chemical treatment of speedwell illustrates the necessity for a follow-up program. This might include overseeding with desirable lawn grasses about two weeks after endothall treatment; an intensive management program of watering, fertilizing and mowing to encourage rapid spread of the existing turf; and subsequent treatment with appropriate herbicides to control new weeds that may appear.

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