

The biology and non-chemical control of Thyme-leaved Speedwell (*Veronica serpyllifolia* L.)

W Bond & G Davies

HDRA, Ryton Organic Gardens, Coventry, CV8, 3LG, UK

Thyme-leaved speedwell *Veronica serpyllifolia* L.

Occurrence

Thyme-leaved speedwell is a common native perennial. The subspecies *serpyllifolia* is found on waste and cultivated land, paths, lawns, open grassland and woodland rides throughout the UK (Stace, 1997). It is a common weed on light soils and is often abundant on chalk (Morse & Palmer, 1925). It also occurs as a garden weed (Clapham *et al.*, 1987; Copson & Roberts, 1991). The subspecies *humifusa* is found locally in damp mountainous places. Thyme-leaved speedwell is recorded up to 3,700 ft in the UK (Clapham *et al.*, 1987).

In a study of seedbanks in some arable soils in the English midlands sampled in 1972-3, thyme-leaved speedwell was recorded in 50% of the fields sampled in Oxfordshire and 6% of those in Warwickshire but never in large numbers (Roberts & Chancellor, 1986). In a survey of seeds in pasture soils in the Netherlands in 1966, while thyme-leaved speedwell was uncommon in the sward it was well represented in the soil seedbank (Van Altena & Minderhoud, 1972).

Biology

Thyme-leaved speedwell flowers from March to October (Clapham *et al.*, 1987). There are 5 to 110 seeds per capsule (Kelley, 1953). The 1,000 seed weight is given as 0.052 g.

When seeds were sown in a 75 mm layer of soil in open cylinders in the field and stirred periodically some emerged in the autumn immediately after sowing (Roberts, 1986). In the following and subsequent years the main emergence period was from February to October with a peak in September and a smaller one in February-March. Emergence of some seedlings also followed cultivations in autumn. A reducing number of seedlings emerged over the 5 years of the study. Seedling emergence tended generally to follow soil disturbance.

The creeping stems root at the nodes (Clapham *et al.*, 1987).

Persistence and Spread

Seeds can persist in cultivated soil for at least 5 years (Roberts, 1986). Seeds have been recorded in large numbers in the soil beneath pastures even though the plant may be poorly represented in the vegetation (Chippindale & Milton, 1934). Seed recovered from house demolitions and dated at 30 years old has been found to germinate (Ødum, 1974).

Stem fragments root strongly from the nodes and from the basal end of the stem (Harris & Lovell, 1980).

Seeds have been found in cattle, horse and goat droppings (Salisbury, 1961).

Management

Cereals should be harrowed well early in the season and root crops kept clean (Morse & Palmer, 1925). Only pure crop seed should be sown.

In grazing studies, thyme-leaved speedwell was unaffected by different strategies of tight and lenient grazing in pasture (NERC, 2006).

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