

IF blackcurrant living mulch summary November 2024

Norfolk site (2): interim summary

Aim: To compare living mulches in blackcurrants to the standard herbicide treatments for weed suppression and effects on crop growth and yield.

Design: There were four treatments in total. A standard herbicide treatment, two living mulch treatments, and a woodchip mulch treatment (Table 1). The plot size is 20m x 1.5m. There are two replicate blocks of the treatments that have been randomised (Figure 1). The seeds were sown by the grower in early June 2024 into established blackcurrants. Herbicide treatments and the woodchip mulch was also applied by the grower. This was an established blackcurrant crop (Figure 2).

Table 1 Treatment list

Treatment No.	Treatment	Notes
1	Standard herbicide treatment	
2	Wild white clover straight	(9kg/ha)
3	Wild white clover + yellow trefoil	(9kg/ha)
4	Woodchip mulch	Applied to a minimum coverage of 5cm

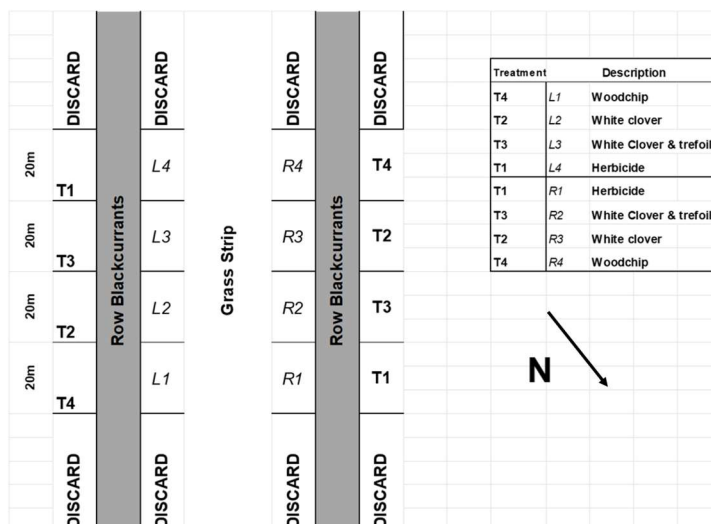


Figure 1 Trial plan for Norfolk site 2



Figure 2 Overview of established blackcurrant crop at Norfolk trial site, July 2024.

Results to date:

Plots were assessed on 24 July 2024 by ADAS. The weeds and living mulch species were recorded as percentage ground cover using five x 0.25m² quadrats per plot (20m length).

There was very good emergence of the white clover species from the living mulch seed mix. The trefoil emergence was patchy and poor. Photos of each treatment are shown in Figure 3.

Results for each treatment and weed species recorded are shown in Table 2. The main species present were willowherbs (*Epilobium* spp.), groundsel (*Senecio vulgaris*), perennial rye-grass (*Lolium perenne*), annual meadowgrass (*Poa annua*), blackcurrant suckers (*Ribes nigrum*), and thistles (both creeping thistle and sowthistles). Other species present included ivy (*Hedera helix*), mayweeds (*Matricaria* spp.) and cleavers (*Galium aparine*) but they were all at a very low level (less than 1% ground cover so are not presented in the result table).

Table 2 Species present (% ground cover) on 24 July 2024 assessment in year one of living mulch establishment. Mean of two replicates.

Species: Mean % ground cover	Treatment			
	Herbicide	White clover	White Clover & trefoil	Woodchip
Clover	0.0	32.0	35.1	0.0
<i>Ribes nigrum</i> sucker	5.2	2.1	1.7	1.3
<i>Epilobium</i> spp.	3.7	2.5	2.3	2.1
Thistles *	6.4	2.8	3.7	1.6
<i>Poa annua</i>	2.1	2.6	1.0	0.6
<i>Lolium perenne</i>	11.7	8.1	10.0	4.1
<i>Taraxacum</i> agg.	0.8	2.9	1.5	0.0
<i>Senecio vulgaris</i>	2.0	2.1	2.0	0.1
<i>Festuca</i> sp.	2.8	0.9	0.9	0.6
<i>Helminthotheca echioides</i>	0.4	2.3	0.0	0.2
Total plant cover	36.3	59.25	58.45	10.9

*mainly creeping thistle (*Cirsium arvense*) but some sowthistle (*Sonchus* spp.)

The woodchip treatment has provided a good level of ground cover and so plant species are very low in that treatment. The herbicide treatment has been moderately effective, however total ground cover of plants was 36%, with perennial ryegrass and thistle dominating the sward.

The living mulch treatments have a good level of white clover present (a mean of 32 and 35%) however it was hoped this would have been higher to provide more weed suppression. Again, perennial ryegrass was the main weed species in both treatments when assessed in July.

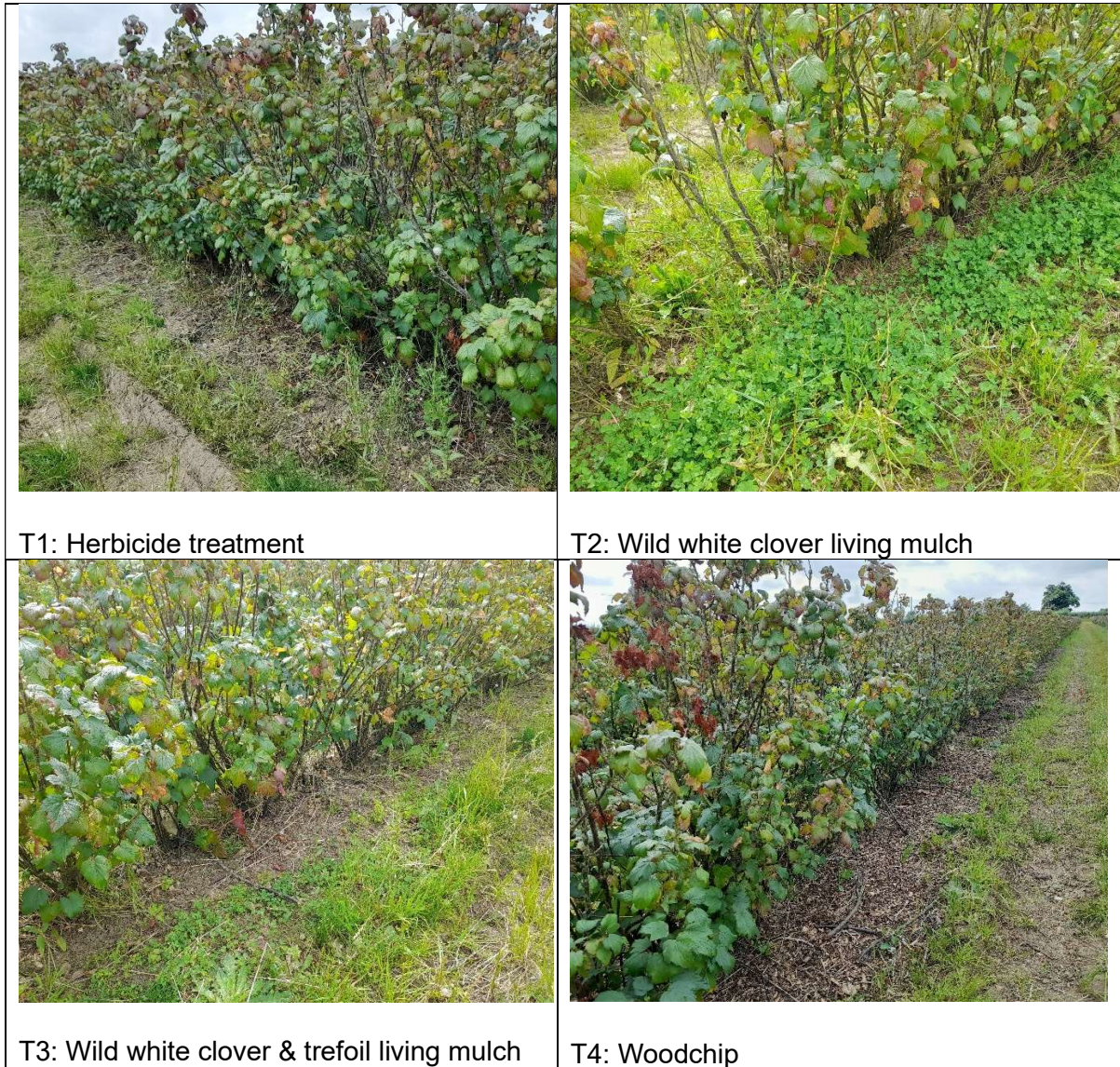


Figure 3 Photos of each treatment taken at assessment on 24 July 2024

Conclusions/notes to date:

- The woodchip provided a good level of weed suppression which was very visual at the time of assessment in July 2024
- The wild white clover has established well, but the trefoil establishment was poor.
- The soil conditions were very dry in July and perhaps the establishment on the living mulch species were affected by dry conditions at sowing.
- The treatments will continue to be monitored but a decision needs to be made as to whether more living mulch seed should be sown in early spring 2025.
- It is difficult to sow seeds into the base of the mature blackcurrant crop as cultivation of that area below the bush is difficult.