

Cover crop mixtures as dead mulch for rotational field vegetables

Cover crop mixtures terminated as dead mulch for no-till establishment of field vegetables

Readiness for use: 

Efficacy: 

How it works

- Cover crops can be established as intermediary service crops in early fall on soil prepared by minimum tillage
- Alternatively, they can be undersown as living mulch in the preceding winter cereal crop (e.g., wheat) in early spring together with flex tine harrowing, and then kept on the soil until field vegetable sowing/transplanting
- If undersown in winter cereals, late post-emergence herbicide application against dicots should be avoided due to phytotoxicity against the cover crop (better pre-emergence or early post-emergence applications)
- Cover crop grass:legume mixtures should be preferred to pure stands when planted as intermediary crops, to reduce the risk of cover crop establishment failure due to extreme weather events
- Few days before vegetable crop transplanting/sowing, a roller crimper or a cut-roller should be operated to terminate the cover crop as a long-season dead mulch to prevent from weed infestation
- Better to operate the rollers at late stages of cover crops (milky-dough for cereals, 70% flowering for legumes) to increase their effectiveness
- Flaming can be operated after the roller pass to increase the cover crop termination rate
- A strip-tillage machine or a no-till transplanter are needed to establish the vegetable crop
- Drip irrigation and in-furrow fertiliser application +/- fertigation should be implemented to reduce weeds
- Better to grow robust vegetable cultivars
- Incorporate the cover crops into the soil instead of terminating them as dead mulch if their biomass is too low



Figure 1. Squarrosium clover:rye mixture allows weed control and N cycling for the following processing tomato crop



Figure 2. Tomato directly transplanted and drip irrigated on rye dead mulch



Figure 3. Poor biomass production in cover crops affect the weed control potential of the resulting dead mulch

Read more

[Inspiration sheet on roller crimpers](#)

[Evaluation of the Agronomic Performance of Organic Processing Tomato as Affected by Different Cover Crop Residues](#)

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