

Agroecological engineering to foster IWM

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A success story

- Durum wheat + subterranean clover living mulch
- 2 rows of wheat + 25-cm band of clover
- Complementarity of resource use

**Developed at Coop. Biologica Collevale Agrinatura
Bomarzo (Viterbo), Italy (420 ha)**

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A success story

- Durum wheat yield: ca. 10-15% less than in standard
- With 50% less wheat seeds
- Reduction of fertiliser costs for sunflower
- Extra income: grazing rent = ca. 500 Euro/ha

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Weed management effects

Durum wheat: total weed density in 1997 (plants m⁻²)

FERTILISATION TYPE	TILLERING	HARVEST
Nil	16.2 a	1.5 a
Chicken manure 15 cm*	8.7 b	1.1 ab
Chicken manure 40 cm*	12.6 ab	0.7 b

*Depth of incorporation in soil

Total (average) weed biomass at harvest: 11.1 g m⁻²

Bàrberi *et al.* (1998)

Five take home messages

1. The success of IWM is based on **diversity** and **ecological knowledge**
2. Successful weed management starts from targeted redesign of **crop rotation**
3. There are no silver bullets in IWM: need of a **system approach**
4. Weed management solutions promoting homogeneous cropping systems do not work in the long run (e.g. herbicide-resistant crops)
5. Policy instruments are **already in place**