

Project Title : Investigation on the efficacy of olive processing waste and corn gluten meal for weed control in strawberry

Start /End Date : 2001-2005

Supporting Body : GDAR

Leader : Filiz ALBAY

Co-researchers : -

Summary : This study was conducted to survey weeds of strawberry fields in Köşk and Sultanhisar districts of Aydın province and to determine effect of olive processing waste (OPW), corn gluten meal (CGM), soil solarization and some of their combinations on weeds 2001-2002 and 2002-2003 strawberry growing seasons. In surveys, which were carried out before mulching and during harvest, widespread weed species were found as *Portulaca oleracea* L., *Amaranthus* spp., *Cyperus rotundus* L., *Raphanus raphanistrum* L., *Conyza canadensis* (L.) Cronq., *Chenopodium* spp., *Poa annua* L. and *Setaria* spp. In a field experiment established in Sultanhisar district in 2001-2002 strawberry growing season, treatments were solarization of bare soil (standart solarization) by using 0.22 mm transparent polyethylene sheets (38 days), olive processing waste (30 ton/ha), corn gluten meal (4 ton/ha) and combinations of these materials with solarization. In the second experiment (2002-2003), raised beds were solarized (49 days) with PE in case of bare soil. Untreated plots served as a control in all experiments. Solarization increased max. soil temperatures by 10-15 °C in 5 cm soil depth as compared to control. In the experiment area coverage of annual weeds were more than perennials. Frequently observed annual weeds were *Portulaca oleracea* L., *Poa annua* L., *Conyza canadensis* (L.) Cronq., *Capsella bursa-pastoris* (L.) Medik., *Polygonum aviculare* L., *Amaranthus retroflexus* L., *Polygonum persicaria* L. ve *Stelleria media* (L.) Vill. and most common perennials were *Convolvulus arvensis* L. ve *Cyperus rotundus* L.. None of the treatments decreased coverage of *Conyza canadensis* (L.) Cronq., *Polygonum persicaria* L., *Polygonum aviculare* L. and *Cyperus rotundus* L. significantly.

As the results of observations, most effective treatment was OPW+standart solarization in decreasing coverage of weeds in 2001-2002. This result sometimes replaced by treatment of OPW alone in the second season.

Data obtained from the plots showed that OPW alone or in combination with standart solarization increased the yield of strawberry in 2001-2002 growing season. In the second season all of the treatments except CGM increased the yield but most fruitful treatments were found as solarization on raised beds alone and solarization+OPW.