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Soil compaction as the possible cause of wilting and premature ripening of sunflower – Short Communication

Veverka K., Křížková I., Palicová J.:

Plant Protect. Sci., 42 (2006): 112-117

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Brown patches of the size from several square metres to hectares or individual dying plants appeared in otherwise green stands. Affected plants wilt and ripen sooner than healthy ones, causing them to have smaller seeds or none at all in the central part of the heads. Under extreme conditions the plants wilt and die in early summer when they are less than 50 cm high. No infective agent was found as a causal organism. Disturbed plants root only in the upper 10 cm layer of the soil, or just below the surface. Poor soil structure and aeration are supposed to be responsible for limited root development. It prevents a sufficient supply of water to the plants during the hot and dry summer months and causes them to wilt. In contrast to cereals, winter rape and some other field crops that ripen during July, sunflower grows very intensively and needs a good supply of water even towards the end of August and in the first half of September. Thus, sunflower plants

rooting only in the shallow uppermost layer of the soil suffer much more than other crops from hot and dry conditions.

Keywords:

sunflower; roots; premature ripening; soil compression; soil aeration

[[fulltext](#)]

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