

Insect frass enhances yield and improves product quality in a Greek variety of pepper



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The use of insect frass, which is a byproduct of insect farming, as a soil improver and fertilizer has recently gained considerable scientific and commercial attention, due to the encouraging results concerning its effectiveness in plant growth promotion. This study evaluates the efficacy of frass in optimizing pepper yield and quality compared to commercial chemical fertilizers, as well as poultry manure, a widely used organic fertilizer.

The Greek pepper variety "Florinis" was cultivated for three months in pots filled with either medium-to-heavy or sandy soil under 6 treatments:

- negative control (only water)
- positive control (chemical inputs)
- 0.5% and 1% w/v frass
- 2.5% and 5% w/v poultry manure.

- sugars, and pH).





Conclusions

- both soil types, compared to the other treatments.
- and 34.1% over the positive control. In the sandy soil, the corresponding increases were 81.1% and 62%.
- fertilizers for improving both pepper productivity and the quality of the final produce.



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• 1% frass and 2.5% poultry manure amendments both significantly increased all measured yield and quality characteristics in

• In the medium-textured soil, the 1% frass treatment increased total fresh pepper biomass by 50.5% over the negative control

• The optimizing effect of frass and poultry manure on all parameters assessed was more pronounced on the infertile sandy soil compared to the medium textured soil. This study highlights the potential of frass and poultry manure as effective organic

This research is supported by the EU-PRIMA program project ADVAGROMED (Prima 2021 - Section 2)







The PRIMA programme is supported under Horizon 2020 the European Union's Framework Programme for Research and Innovation.