10+ Years of Cover Crops... What is the Impact on Processing Tomatoes?

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**Experimental Design**
- Initiated in 2007 and repeated in 2008
- Pea-cover crop (cc), sweet corn-cc, spring wheat-cc, tomatoes-cc, grain corn, squash-cc, soybeans, winter wheat-cc, tomatoes-cc, peas-cc, sweet corn-cc, winter wheat-cc, tomatoes (2019 and 2020)
- Sandy Loam, 3.8% organic matter, 6.7 pH, 8.8 CEC
- In the spring, rye was terminated (glyphosate sprayed on whole trial)
- Cover crop residue was incorporated into the soil, two passes with a field cultivator
- Tomatoes grown according to typical Ontario production practices

**Cover Crops**
- Winter Cereal Rye 60 lb/ac
- Radish 12 lb/ac
- Radish + Rye 9 + 30 lb/ac
- Oat 72 lb/ac

**Tomatoes in plots without cover crops had more defoliation than those with cover crops**

Previous research on this trial has indicated improved soil health among cover crop plots compared to no cover crop control

It is predicted that soil health differences will translate to enhanced fruit nutrition and quality

**Preliminary Conclusions**
- Yields with cover crops were greater or as good as yields without cover crops
- Greater defoliation in the no cover crop plots
- No cover crop plots had more red fruits with anthracnose lesions
- This is the 1st year (out of 5) that solids were greatest in radish