

***In vitro* antifungal properties evaluation of blended kiwifruit: a circular approach to reduce food losses.**

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Due to the low sustainability and resilience of agricultural systems, food losses, related to the inefficient use of resources, can generate impacts not only at the environmental but also at the societal level. These could be overcome by introducing sustainable methods, in line with circular economy principles, to prevent and reduce food losses and waste through a reuse and enhance approach. In this context, a big issue of food system is related to the fruit left in fields even if fully suitable for human consumption and rich in bioactive biomolecules, fibre, and phytochemicals, but not for sale just because lacking in precise esthetical commercial requirements (shape, size, colour, ...).

In the present work, ability of blended kiwifruit (*Actinidia deliciosa*) to inhibit *in vitro*, the growth of three fungal contaminants of fruits such as *Botrytis spp*, *Aspergillus spp* and *Penicillium spp*, was observed. During a ten days infection, fungal biomass, sporulation and mycotoxin production and parameters related to oxidative stress (CAT and SOD activity, pH, antioxidant activity, total polyphenols content) were monitored in presence of different concentration of blended kiwifruit, tested alone or in combination with other molecules.

Soon, an *in vivo* challenge test experiment will be carried out to evaluate the applicability of the blended kiwifruit to control fungal growth in field and in the post-harvest, considering the complexities of plant-pathogen-environment interactions.

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