

**Title** The fungicide solution in pre-harvest crop protection for an improved shelflife

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### Abstract

Fruits and vegetables represent a group of commodities highly susceptible to waste and losses: according to the FAO, between 25% and 50% of the initial production is lost at different stages of the food chain. Among the multiple causes between field production and consumption, fungi are responsible for the majority of losses in the field and in storage. To preserve fruits and vegetables from problematic latent diseases, Bayer CropScience develops LUNA<sup>®</sup> solutions based on fluopyram; a fungicide from the new chemical class of the succinate dehydrogenase (complex II) inhibitors. Fluopyram affects the fungi at all stages of development and shows a unique spectrum of activity with an excellent activity against Powdery mildew species, *Botrytis* spp. and *Monilia* spp. By controlling the latent contaminations, LUNA<sup>®</sup> enables the producer to enlarge the period of safe storage increasing the shelf life of fruits and vegetables. Trials carried out on stone fruits in 2009 and 2010, showed that about 50% of the visually healthy fruits stored were infected after several days of storage. In the same conditions more than 85% of the produce coming from LUNA<sup>®</sup> protected plots showed no decays. This protection was also measured on crops with short shelflife (e.g strawberries, lettuce, and mango) or produces with a longer storage period (e.g apples, onions). LUNA<sup>®</sup> allows the farmer to increase significantly its produced yield but also to minimize harvest losses in the distribution channel. Fluopyram will be developed worldwide with globally established MRLs and import tolerances. In all, LUNA<sup>®</sup> compounds give to the fruit producer an innovative solution for more sustainable production, better sanitation and an easier free trade.