

Ranman Top, again a step forwards in late blight control

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INTRODUCTION

'Ranman' is a contact fungicide already on the European market at a rate of 0,2 l/ha of Ranman A (active ingredient) and 0,15 l/ha of Ranman B (surfactant). 'Ranman A+B' was registered in the UK in 2000 on potato and in France in October 2001 on potato, tomato and in December 2005 on melon, cucumber and gherkins. Registrations were obtained in other European countries since 2002 (The Netherlands, Belgium, Germany, etc.).

'RANMAN TOP' is a new formulation based on cyazofamid with 160 g ai/l; it is an SC formulation. The dose rate is 0.5 l/ha (80 gai/ha).

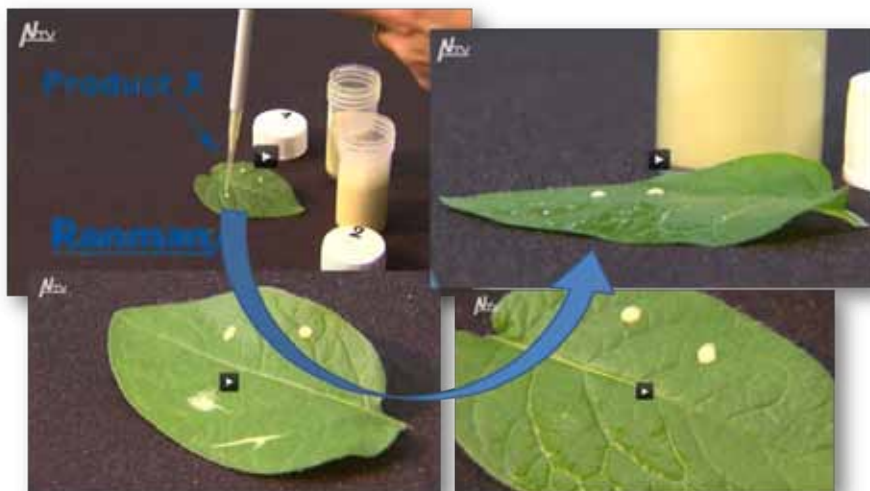
'RANMAN TOP' is RTU formulation with the adjuvant built-in. The EU first registration in 2009 was in the UK. Today we obtain in the most EU countries a registration for use in potatoes, tomatoes, melons and cucumbers,...(depending the country) The maximum number of applications on potato is generally 6 applications in Europe with an interval between two applications of generally seven days.

'RANMAN TOP' can be applied from the beginning till the end of the season (no restriction on potato).

Its active ingredient, named cyazofamid, is a representative of a chemical class based on the cyanoimidazole group. The active substance is specific to the inhibition of Oomycete diseases, specifically late blight of potato (*Phytophthora infestans*) and downy mildew of grape (*Plasmopara viticola*). Cyazofamid inhibits mitochondrial respiration of the fungus at 1 micron M, and its activity was specific to Oomycete fungi at the level of mitochondria. Cyazofamid works by inhibiting complex III on the mitochondrial electron transport system. It is suggested to bind the Qi centre site on cytochrome b.

SPREADING EFFECT

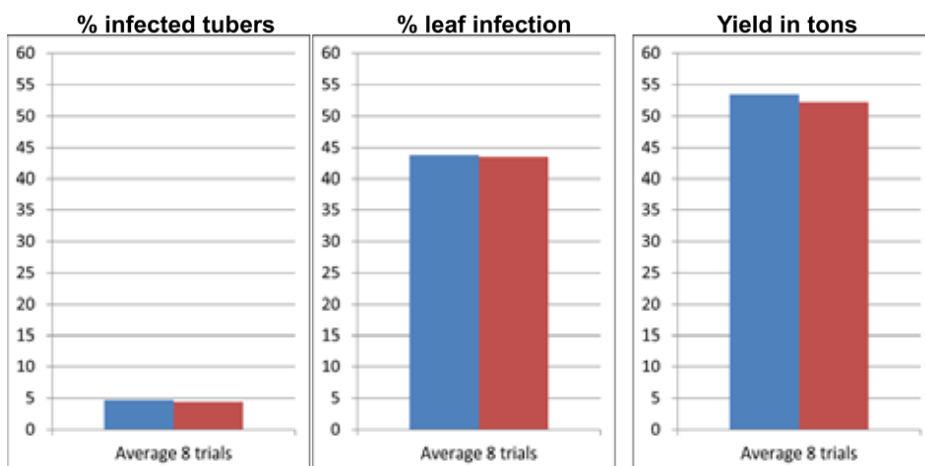
Ranman Top has a unique distribution on the leaf. The spreading effect of the adjuvant, build in the Ranman Top formulation, ensures that the active ingredient is perfectly distributed on the plant. The good distribution allows that the active ingredient penetrates also in the smallest parts to ensure the necessary protection. This is unique to Ranman. This feature can also explain why Ranman as a contact fungicide is able to protect the new growth. The good distribution also gives the advantage that the potato grower can spray with lower volumes of water per hectare, a good spraying technique remains of great importance.



EFFICACY WITH RANMAN TOP

'RANMAN TOP' is an excellent fungicide to be used in potato against *Phytophthora infestans*. This compound is similar to 'Ranman twin pack' (= 'Ranman' A+B).

Trials have shown that independently of climatic and crop conditions in North-West Europe, Ranman Top can achieve a level of efficacy equal to or superior than standard products used as a comparison. Beside the excellent efficacy the product is completely selective to the treated crops.



- Performance: 'RANMAN TOP' at 0.5 l/ha (80 g ai/ha active ingredient) consistently achieved significantly better or similar foliar control versus the standards used in the majority of the trials. 'RANMAN TOP' at 0.5 l/ha gave very similar foliar control versus 'Ranman A+B'. This also holds true, when subsets of trials, selected for certain criteria are compared: whatever the disease level in the untreated plots, the arrival of disease (early or late), the disease pressure (high, medium or low), the variety (Bintje or other varieties) and the method of contamination (artificial or natural).

- Yields: The treatments generally achieved an increase in yield compared to the untreated plots. 'RANMAN TOP' at 0.5 l/ha achieved a 76% mean increase (on 15 trials) in yield compared to 'Dithane' at 2.1 kg/ha.
- Tuber blight: 'RANMAN TOP' will strongly reduce the percentage of blight affected tubers at harvest and after storage. 'RANMAN TOP' is also similar in its efficacy to 'Ranman TP'.
- Rainfastness: 'RANMAN TOP' formulation demonstrated good rain fastness. There is no need to renew the protective spray cover immediately after a significant rainfall event.

The applications should be made "preventive", before conditions favorable to blight development occur. The first application of 'RANMAN TOP' should be made as soon as a blight warning is issued or when conditions are favorable for infection. Under conditions of repeated infection periods, applications at 7 day intervals will be recommended.

