



# IPM strategy for disease control in open field strawberry production

A. Evenhuis & J.A.M. Wilms

## Introduction

Open field production of strawberries is threatened by various pests and diseases. To control grey mould and powdery mildew the strawberry crop is sprayed regularly. Maximum residue limits of fungicides are established to ensure a healthy product. However, to meet public concern retailers demand additional measures. The aim is to produce strawberries with a minimum of residues while the quality of the strawberry fruit is assured.

## Field experiments

In 2011 and 2014 field demonstrations were carried out to show farmers the results of adapting new control strategies. In 2012 and 2013 field experiments were carried out at the Experimental Farm Vredepeel-NL.

Strawberries ('Elsanta') were grown on flat field beds. Spray strategies based on decision supports systems (DSS) were compared with a traditional spray scheme with a spray interval of 4 to 5 days and an untreated control.

Strawberry yield, quality and residues were assessed.



Figure 1: Lay out of the field experiment in 2013

## Results

Residue levels could be reduced substantially by using a DSS (Figure 2), without yield or quality loss (Figure 3).

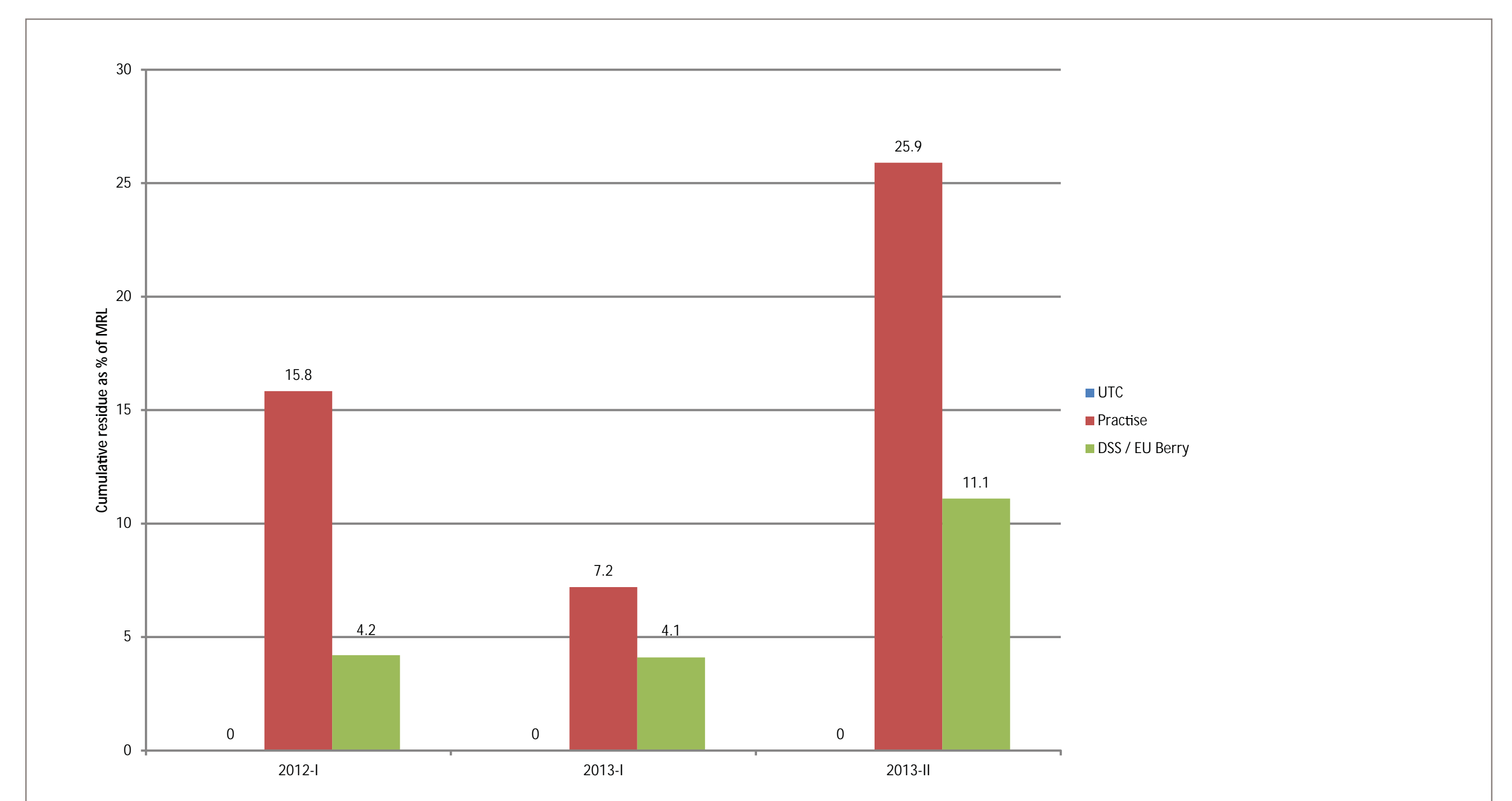


Figure 2: Fungicide residues on strawberry fruit as a cumulative percentage of the maximum residue limit, UTC = untreated control.

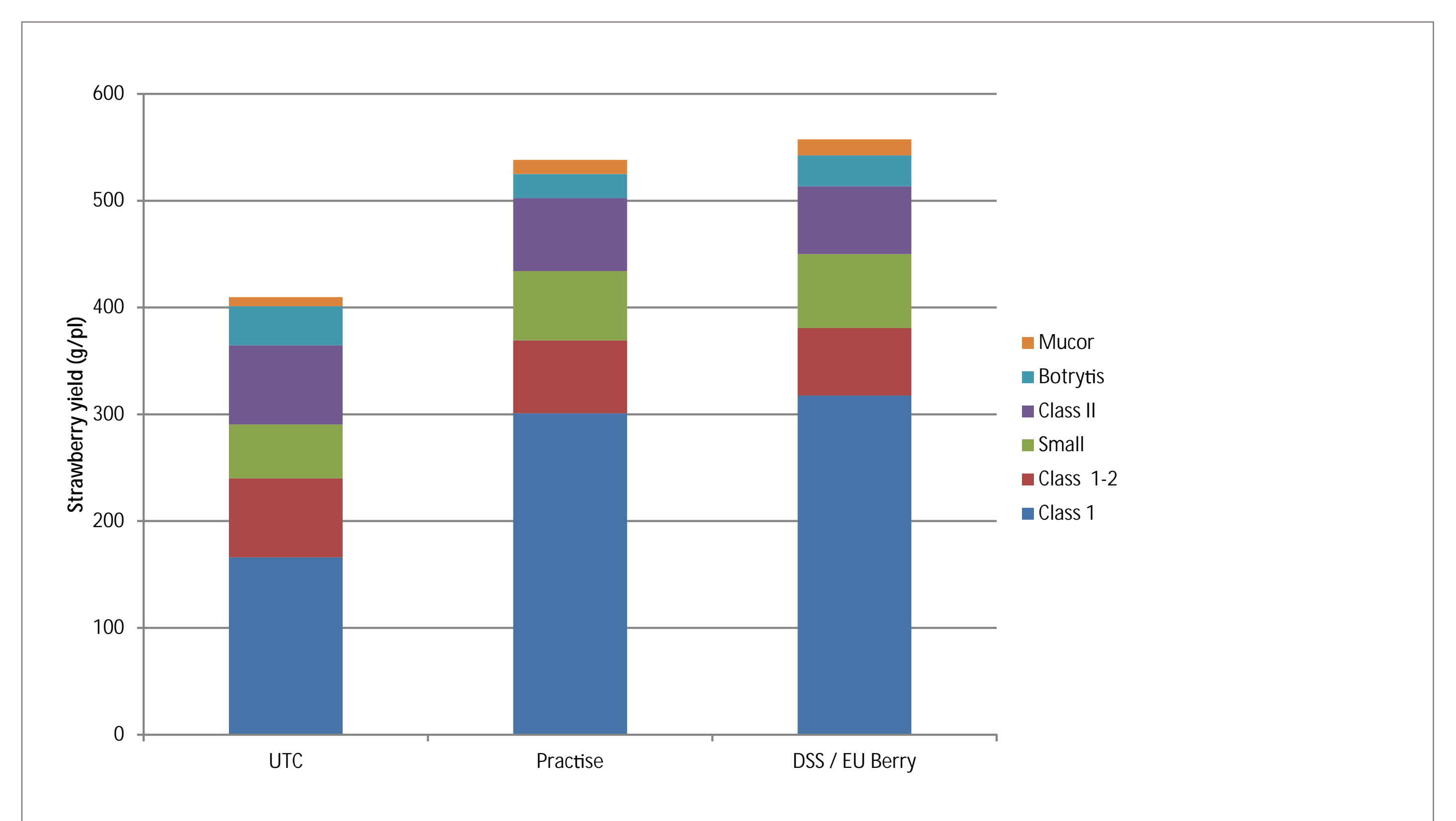


Figure 3: Strawberry yield in quality classes, average of three experiments

## Conclusions

- Residue limits are not exceeded by common horticultural practise
- By pin point spray application and fungicide choice, residue levels can be reduced with 40 to 70%, compared to common practise
- Yield and quality of strawberries in the DSS strategy was comparable to common practise and both were significantly better than the untreated control.