



Scala® sensitivity update

It is widely known that botrytis can and has developed resistance to fungicides. Experience with the benzimidazole (Group A) and dicarboximide (Group B) groups in grapevines are examples. Since the introduction of Scala in France in 1994 regular sensitivity monitoring of field populations of botrytis have been conducted both in Europe and Australia.

In Australia, Scala (Group I fungicide) was launched in the 1996 growing season. Sensitivity monitoring commenced in 1997 to establish base line data for populations of the pathogen never before exposed to pyrimethanil, which is the active ingredient of Scala. This baseline data is used as a reference point for future monitoring to determine whether populations of the pathogen exposed to pyrimethanil have become more tolerant (less sensitive) to it. In simple terms this means we can measure if the pathogen is becoming harder to control with Scala, after consecutive years of use. Since 1997 over 700 strains of botrytis have been tested from Australian vineyards where Scala has been used on a regular basis. This has involved sampling from the same block in the same vineyard from year to year and then testing isolates as part of global sensitivity monitoring co-ordinated in the UK.

The baseline sensitivity of Australian *Botrytis cinerea* populations never before exposed to pyrimethanil showed that:

- Some natural populations of *B. cinerea* are very easily controlled by Scala, with 50% growth reduction occurring at only 0.064 ppm in 1% of isolates
- Some natural populations of *B. cinerea* are harder to control with Scala – with almost 2% of isolates requiring a pyrimethanil concentration of more than 64 ppm to demonstrate 50% growth reduction on agar plates
- The “hardest to kill” isolates were more than 1,000 times less sensitive than the easiest to kill isolates – even in a population that had never been exposed to pyrimethanil.

A similar degree of variation in sensitivity between the easiest to kill and the hardest to kill isolates occurs each year, even when populations have been exposed to Scala sprays each season.

However, the overall picture of botrytis sensitivity to pyrimethanil remains fundamentally unchanged from that seen in 1997, prior to any commercial use of Scala.

It is therefore considered that the current sensitivity of botrytis to pyrimethanil observed in Australian vineyards does not pose any immediate risk in the use of Scala for management of botrytis bunch rot, if the Avcare resistance management strategy is adhered to.

Bayer CropScience congratulates and thanks vineyard managers and advisors on their adherence to the Avcare resistance strategy and encourages continued adoption to ensure highly valued chemistry, such as Scala is retained as a highly effective botrytis management tool.

Please refer to below for Group I Avcare resistance strategy.



Avcare Group I Resistance Management Strategy

1. If 3 or fewer bunch rot sprays are applied in a season, use only one spray per season containing a Group I fungicide. If four or more bunch rot sprays are applied, use no more than two sprays containing Group I fungicides. Alternate applications of Group I containing fungicides with effective fungicides from other fungicide groups
2. Late season fungicide treatments should be applied before grey mould infection reaches unacceptably high levels in the vineyard
3. DO NOT apply more than two consecutive sprays from the same fungicide group, including from the end of one season to the next