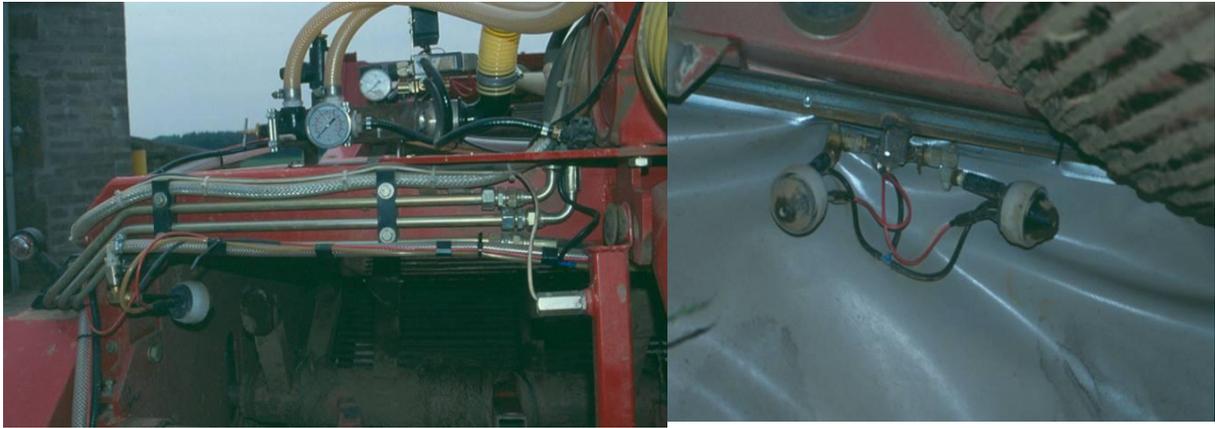


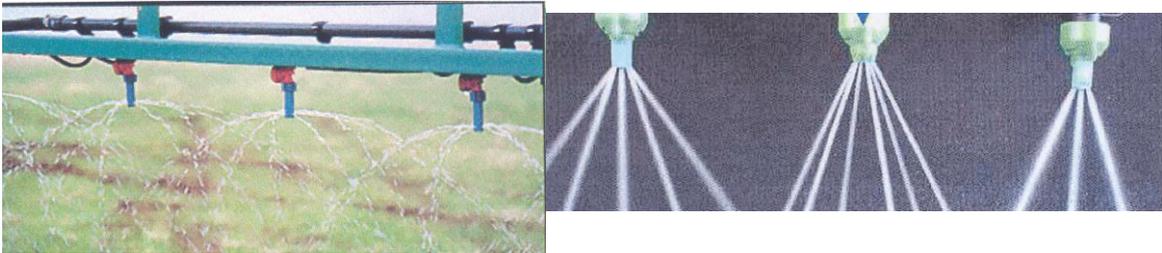
Specific Off Label Approval (SOLA) for the use of fluazinam for the control of powdery scab in the UK

- SAC has carried out many trials evaluating chemical control of powdery scab since 1979
- Fluazinam gave best control in trials (but was by no means perfect!)
- Growers were desperate for control measures as powdery scab was a problem with no easy solution, especially in Scotland
- Applying for a SOLA is method of approving existing agrochemical for a new use in UK without going through the full approval process
- Application for a SOLA must come from outside the agro-chemical company whose product is involved (e.g. from a farmer, institute etc)
- Growers were illegally using fluazinam already (who has responsibility when results of experiments are publicised?)
- An application for a SOLA doesn't have to prove efficacy but need must be established
- Pesticide Safety Directorate evaluate applications based largely on environmental, consumer and operator safety
- Fluazinam was already used as a late blight fungicide (up to 10 applications @ 0.3 l/ha product i.e. a total of 3 l/ha product)
- Seven trials were carried out over a number of years to evaluate soil application of fluazinam. The trials showed that soil incorporation was more effective than in-furrow application
- In the situation where inoculum was seed-borne only, control using soil application gave erratic results
- Where inoculum was soil-borne or seed + soil-borne inoculum, significant reductions in incidence and severity occurred compared to the untreated control in 6 out of 7 trials. Reductions in incidence ranged from 0 to 50% (reductions in incidence are hard to achieve with soil-borne pathogens) and reductions in severity ranged from 35 to 85%.
- In the 7th trial almost no control occurred, demonstrating that weather factors and variety susceptibility can overwhelm chemical control on occasions.
- Another trial in 2008 (after the SOLA was approved), confirmed the level of control achieved in the earlier trials.
- Where tested it was clear that the efficacy of fluazinam increases as dose increases
- In late 2004 SAC put in the bid for the SOLA for the use of Shirlan (the Syngenta fluazinam product) for the control of soil-borne powdery scab
- In the SOLA, application at 3 l/ha Shirlan (1.5 l/ha fluazinam) was requested as this was equivalent to total dose possible as a blight fungicide
- The application requested fluazinam be applied as a spray to the soil either in front of or within de-stoner (see photos)





- The Pesticide Safety Directorate (now called CRD) rejected this bid on 2 grounds
 - Too high a risk to contamination of water courses from a spray application
 - Too high a risk to operators as fluazinam can cause an allergic reaction and a high dose spray increases risk of such a reaction
- The solution was to apply the fluazinam to soil before incorporation using a downward directed drench. For example, dribble caps or umbrella nozzles
- This could be applied to the ploughed land, the deep ridge beds or in front of the de-stoner



- A revised bid was made in December 2005 and the SOLA approved on March 9th 2006

Summary of features of the SOLA

- Seed-only potato crops
- Shirlan (500 g/l fluazinam – Syngenta Crop Protection)
- Maximum individual dose – 3 l/ha product
- Maximum total dose – 3 l/ha product
- Applied as tractor mounted downward directed drench prior to de-stoning or bed-tilling
- Applied in a minimum water volume of 200 litres per hectare
- Applied on the ridged bed prior to de-stoning or bed-tilling
- When applied in accordance with the terms of the SOLA no further products containing fluazinam can be applied to the haulm for blight control

Since the SOLA was granted, many other fluazinam products have received approval. The use of fluazinam by seed growers has been high. The use of the SAC soil test to determine soil contamination level has proved invaluable in making objective decisions when to apply fluazinam.

Stuart Wale, SAC, Aberdeen

stuart.wale@sac.ac.uk

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