PSP THE PROFESSIONAL SPRAYERS PEOPLE

Case Study

THE CHALLENGE

CONTROLLING PESTS IN THE FORESTRY INDUSTRY

THE PROBLEM

The Forestry Commission was coming under pressure from the Environment Agency (EA) to come up with a best-practice solution for the spraying of commercially grown pine trees against pine weevil. They needed to demonstrate a method the industry could use which would prevent the overuse of chemical pesticides by the application of an exact dose at the base of each pine sapling.

The existing practice was to spray each tree for a set time. However, this allowed for too much variation in doses: the time might not be precise, particularly if an operator was spraying for a considerable time period across a large area; and/or the flow rate would vary depending to the pressure in the backpack sprayer. The Forestry Commission had trialled the use of pressure regulators but this did not solve the timing issue. The technical department at the Forestry Commission had been seeking solutions for some time before approaching The Professional Sprayers People.

BACKGROUND

The pine weevil (see above right), is highly destructive to young conifers, particulary pine trees and particularly pine grown for the softwood timber trade.

The weevils lay their eggs in the stumps of newly felled trees and the resulting adult weevils then attack young restocked saplings, feeding on the bark, causing ring barking and eventual death of the trees. According to Forest Research, if left unmanaged pine weevils can destroy 50 per cent of young trees on a site and, in worst case scenarios, they can destroy all of them. Because adult weevils may also able to travel if conditions are right, trees on nearby sites may also be at risk.

This is a huge issue. Forest Research states that hundreds of millions of pounds worth of investment and thousands of jobs in the nursery, forestry, timber haulage and timber-processing industries depend on the UK's conifer forests and their good health.

www.prosprayers.co.uk
00 44 (0) 1273 400092
info@prosprayers.co.uk

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THE SOLUTION

The Professional Sprayers People recommended the use of the **Dosimeter Valve**.

This unique product can be fitted to any brand of backpack or compression sprayer. It is calibratable, using a very simple mechanism on the top of the unit, to deliver a precise dose of between 2 and 25ml per trigger press. Once the fluid is delivered the sprayer automatically stops spraying until the trigger valve is released and re-pressed. This means an accurate dose can be delivered each time.

Once calibrated correctly, the Dosimeter Valves allows for precise and rapid dosing, saving time and effort but also reducing chemical waste considerably.

There are also a range of lance extensions that can be used with the dosimeter to facilitate easy spraying at the base of plants and trees such as pine saplings.

TECHNICAL INFORMATION

Minimum Dosage per stroke (ml) 2.0
Maximum Dosage per stroke (ml) 25.0
Minimum working pressure (KPa/psi) 150/22
Maximum working pressure (KPa/psi) 600/87

Body, Cylinder and lid .....Poly-acetate
O-rings .....Fluoro-elastomer
Net weight (kg) 0,25
Lance extensions 600mm,900mm,1200mm

BENEFITS OF THE DOSIMETER

- Gives completely consistent dosing
- Can be calibrated to deliver between 2.5ml and 25ml of fluid per stroke
- The same fluid is delivered regardless of backpack pressure
- Improved safety for the operator as the spray is directed only at the plant
- Reduce chemical waste

RESULTS

The Forestry Commission trialled the Dosimeter Valve on their backpack sprayers and could immediately see the benefits and that it would demonstrate exactly what the Environment Agency had requested. As a result, they chose to recommend the product to the industry.

They also recommended the lance extensions, finding the 600mm and 900mm lances enabled operators of different heights to easily spray the roots of the samplings without having to over-reach or bend. The technical team confirmed that the Dosimter Valve was the product they had been waiting for!

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