Custodian Trading – Soil Treatments UK – Alan Dew, J. Thurman Dew

CHLOROPICRIN AND PCN IN UK SOILS –

This trial was the culmination of the last 4 year's drive to find out if CP could have viable and significant control of the endemic problem of the Potato Cyst Nematode (PCN). Noticing the absence of worldwide trials into this, and in recognition that the principal remedy for Potato Cyst Nematode (PCN - *Globodera rostochiensis and G. pallida*) for Potato Growers, 1,3-Dichloropropene (1,3-D normally seen in the UK as Telone II – a registered trademark of Dow Agrosciences) is currently withdrawn completely in the UK and under regulatory scrutiny and emergency use in Europe, we created a small private pilot study. ADAS Boxworth (Dr P. Gladders and Dr T. O'Neill) were commissioned to assist us. We hoped to establish that Chloropicrin (CP- a generic otherwise known as Trichloronitromethane and of 99.5% purity or better) could:

- aid the Grower in controlling PCN and *Verticillium Dahliae* (VWilt),
- improve skin finish through the control of scab etc,
- reduce the crop rotation cycle for potatoes which is moving away from every 4 to 5 years towards every 6 to 7 years.

The trial breaks new ground here in the UK but has relied on research and to a lesser degree, practice pioneered in Florida USA. The trial was in two parts.

- Field tests
- Coffin tests

Primarily the trial took place within land planted with a crop of Salad Potatoes where three different rates of CP, and a Control were applied. They were covered with 25.4 micron LDPE (Low Density Polyethylene) tarp. The lowest rate was also tarped with TIF (an LDPE and Ethyl Vinyl Alcohol multi laminate film (EVOH)) to see if this could aid in boosting the efficacy of low dose.

The second part of the test was in the form of 'coffin tests' where field samples were prepared in LDPE or TIF lined wooden boxes to mimic the fumigation path of a single tine and dosed by pipette with various doses of PIC. Each soil sample was seeded with a meshed bag each of live PCN and VWilt. The objective of these second tests was to establish, contrary to much established opinion, that CP could kill PCN if the dose was high enough. CP has always been recognized as extremely effective against VWilt - the premier treatment - but perhaps not in the context of potato growing.

We also hoped to confirm CP's efficacy at low temperatures.

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goodwill of the Trical/Trinity group and KurarayAmerica. The Dew family have been importing and applying Chloropicrin in the UK since 1964.

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