

THE EFFECT OF THE EXPERIMENTAL APPLICATION OF HERBICIDE, INSECTICIDE AND SLUG PELLETS IN VARIOUS COMBINATIONS ON THE SURVIVAL RATE OF CANOLA SEEDLINGS AT PLANTING IN THE SOUTHERN CAPE

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INTRODUCTION: The positive benefits of conservation farming are well recognized by farmers, but conservation farming has also brought problems which had not been experienced in the past. One such problem is the loss of a substantial percentage of canola seedlings during the establishment phase. Seedlings vanish as, or soon after, they appear on the soil surface. These losses may be so immediate and widespread that replanting of the field becomes necessary, or else bare patches form within a canola field which enlarge steadily over several weeks until they remain a constant size once the canola plants are about 20cm high.

Various diseases and organisms such as slugs and isopods have been observed to be responsible for damage and destruction of canola seedlings but no direct cause and effect has been shown to explain the large losses suffered. Conflicting data have also added to the complexity of the problem. For example, the numbers of isopods remain almost the same both when a field is planted and destroyed, or replanted with no or minimal losses of seedlings. In 2004 the loss of seedlings was ascribed to the huge numbers of slugs present throughout the southern Cape, but similar losses were experienced in the two successive years when slug pellets had been widely applied and the slug population was at a relatively low level. Similarly, in some fields where the stubble (in which the isopods were regularly found) had been burnt, the incidence of damage was negligible, but in the following year burning did not prevent the loss of seedlings.

A trial was therefore carried out to determine the best practices to be applied to canola at establishment to prevent or reduce the losses experienced each year. The trial was a combined effort of the many role players mentioned in the acknowledgements.