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NOTES ON FIELD EVALUATION OF INSECTICIDES AGAINST PESTS OF PADDY

The useful and significant results of statistically laid out field experiments on the control of pests of paddy conducted in the Entomology Division of the College of Agriculture, Vellayani, during 1969-73 are presented in this note. The experiments were repeated 6 to 7 times covering different seasons using the variety 'Annapoorna'.

Use of granular insecticides in soil.

The insecticides used were phorate (Thimet 10G), phorate 5% + gamma BHC 2.5% (Paddigard) both of Cyanamid, thiodemeton (Solvirex 5G) and quinalphos (Ekalux 5G) both of Sandoz, carbaryl 4% + gamma BHC 4% (Sevidol G) of Union Carbide, carbofuran (Furadan 5G) of Rallis, trichlorphon (Dipterex 5G) of Bayer and parathion 3% + endrin 1% (Agronule) of Agronule Industries. The granules were applied thrice each time at the rate of 2 kg a. i. per hectare, except for carbofuran applied at 0.5kg a. i. per hectare, first in the nursery, then fifteen days after transplanting and finally at the boot-leaf stage. The granules were mixed with adequate quantities of soil to enable uniform distribution in the plots. Results were assessed by counting from 4 square metres in each plot, the number of dead hearts or white earheads caused by the stem borer, the number of leaf roller larvae and number of leaves damaged by them and number of silver shoots and by the number of leaf feeding caterpillars collected in twenty sweeps in each plot with a standard net.

Carbofuran was found to be the most effective insecticide against the stem borer followed by sevidol and quinalphos. Phorate and carbofuran were the most effective insecticides against gall fly attack. In controlling the leaf roller of paddy, carbofuran was found to be the most effective insecticide followed by sevidol and quinalphos. Sevidol and phorate were effective in controlling the leaf feeding caterpillars. The highest yield was obtained in the plots treated with carbofuran. Thus carbofuran appears to be the most effective granular insecticide useful for controlling the different pests of paddy; sevidol is the next best.

Use of newer contact insecticides

The insecticides used were trichlorphon (Dipterex) 0.1 per cent (0.56 kg a. i./ha) and fenthion (Lebaycid) 0.05 per cent (0.28 kg a. i./ha) of Bayer, fenitrothion (Sumithion) 0.05 per cent (0.28 kg a. i./ha) of Tata-Fison, DDVP (Nuvan) 0.05 per cent (0.28 kg a. i./ha) and monocrotophos (Nuvacron) 0.04 per cent

(0.22 kg a. i./ha) of Ciba, malathion 0.1 per cent (0.56kg a. i./ha) and a 1 : 1 mixture of malathion and fenitrothion (Ambithion) 0.05 per cent (0.28kg a. i./ha) of Cyanamid, endrin 0.03 per cent (0.10kg a. i./ha), parathion 0.05 per cent (0.28 kg a. i./ha), elsan 0.05 per cent (0.28 kg a. i./ha) of Bharath Pulverising Mills, quinalphos (Ekalux) 0.05 per cent (0.28kg a. i./ha) and thiometon 7 per cent + endrin 20 per cent (Ekadrin) 0.15 per cent (0.84kg a i./ha) of Sandoz, pirimiphos - ethyl (Pirimicid) 0.05 per cent (0.28kg a. i./ha) and pirimiphose .methyl (Actellic) 0.05 per cent (0.28kg a. i./ha) of Alkali and Chemical Corporation.

The sprays were applied 20 days after transplantation and at boot leaf stage at the rate of 560 litres of spray fluid per hectare.

Malathion and fenthion were found to be effective in controlling the stem borer. Fenitrothion, endrin, ekadrin and monocrotophos were effective in controlling the gall fly attack. Leaf feeding caterpillars were controlled effectively with parathion, endrin and fenitrothion.

സംഗ്രഹം

നെല്ലിനെ ആക്രമിക്കുന്ന വിവിധ കീടങ്ങളുടെ നിവാരണത്തിന് വിവിധ തരിശുപ കീടനാശിനികൾ പരീക്ഷിച്ചതിൽ, കാർബോഫ്യൂറാൻ (ഫ്യൂറഡാൻ) തണ്ടുതുരപ്പൻ, ഗാലത്തുച്ച, ഇട ചുരുട്ടിപ്പഴ, മുതലായ കീടങ്ങളുടെ നിവാരണത്തിന് ഏറ്റവും ഫലപ്രദമാണെന്ന് തെളിഞ്ഞു. സെവിയോളിനും ഇക്കാര്യത്തിൽ ഗണ്യമായ സ്ഥാനമുണ്ട്.

വല പുതിയ സ്പർശന കീടനാശിനികൾ പ്രയോഗിച്ച നോക്കിയതിൽ, മാലാത്ത് യോൺ, ലെബാസിഡ് എന്നിവ തണ്ടുതുരപ്പൻ പുഴുവിന്റെയും, സുമിത്തയോൺ, എൻ ഡ്രിൻ, എക്കാഡ്രിൻ, നവാക്രോൺ എന്നിവ ഗാലത്തുച്ചയുടെയും, പാരാത്ത് യോൺ, എൻഡ്രിൻ, സുമിത്തയോൺ, എന്നിവ ഇലപ്പുഴുക്കളുടെയും നിവാരണത്തിന് ഉത്തമമാണെന്ന് തെളിഞ്ഞു.

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