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Effects of chemical seed treatments on common bean (*Phaseolus vulgaris*) and cowpe (*Vigna unguculata*) seed germination and seedling vigour

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Bean and cowpea are two important crops in Sri Lanka which supplement plant protein in the daily diet. Use of chemical seed treatments to control pathogens and insects is common in pulse crops. It has been found for other crops, that chemical (insecticides and fungicides) seed treatments used for germination and growth factors has an additional benefit for the crop. The objectives of this study were to investigate the effect of two chemical seed treatments on germination and seedling vigour.

Bean variety “Wade” and cowpea variety “Waruni” were tested using two seed treatments, thiram (fungicide, 2 g for 1 kg of seeds) and cruiser (insecticide, 0.25 g for 1 kg of seeds) and non-chemical control in lab and field experiments with RCBD. The results showed that seed treatments had no effect on germination of both crops. However, seedling vigour including fresh and dry weight, plant height, and root length has significantly increased by application of these chemical seed treatments in the field compared to the non-chemical control. It indicated that chemical seed treatments have a beneficial effect on both crops.