

# Establishment of organic coating material and seedling management

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## Abstract

In Taiwan, about 83% of the certified organic farms save the seeds by themselves. But in total crop production, less than 30 % of the seeds/seedlings were grown in their own organic farm. In field crop production, those farmers purchased seeds from outside only 30-40% of organic seeds/seedlings. But there were no organic seedling applied in vegetable production. In rice, other field crops and vegetables respectively, there were 33%, 44% and 16% of chemical treatment seeds/seedlings. Half of the organic farmers agreed to update the organic regulation of the sources on seed/seedling. None of any seed producers produced organic seeds now. About 24% of the seed industry showed interests in organic seed production in Taiwan, and 17% interested in overseas. Up to 65% of seed/seedling suppliers were interested in joining the organic seeds database.

By using 20 kinds of organic materials as matrix coated on the rape seeds, the germination rate had no significant differences with control coated by bentonite, kaolinite, talc, diatomaceous, perlite and maifan stone. Treatment C were suitable for Brassica seeds such as “越秀” broccoli, “雪玉 60 天” cauliflower, “瑞星七號” Chinese cabbage, “初秋” cabbage. The fresh weight, dry

weight, stem length and stem diameter were increased in Chinese cabbage seedling that coated with Treatment C which added with trichoderma, *Bacillus thuringiensis*, chitosan. The cabbage seeds after coated treatment were higher than without coated. The fresh weight were increased significant by added *Bacillus thuringiensis* and tea seed pomace on cauliflower, and the stem diameters were higher than the control on coated seeds.

**Key words :** Organic, rape, broccoli, cauliflower, Chinese cabbage, cabbage, coating