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Studies Regarding the Bolting of Chinese Cabbage (*Brassica campestris* var. *pekinensis* Lour., Olson) in Early Cultures in Transylvanian Area

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SUMMARY

Heading Chinese cabbage (*Brassica campestris* var. *pekinensis* Lour., Olson syn. *Brassica rapa* var. *pekinensis* Lour., Olson) is traditionally a crop of the temperate zones where it grows well under cool, dry climate (Opeňa *et al*., 1988). It is an annual or biennial plant, but is grown as an annual one. It looks rather like a well-fed cos lettuce, and not like typical flat or rounded Western cabbage. Under certain conditions Chinese cabbage has a high tendency to bolt – to produce flowers and run to seed rather than form a good leafy head. The causes of this process are complex and interrelated. The following factors all play a part in bolting: low temperatures in the early stages of growth, day length, genetic factors and various kind of "stress" (lack of water, overwatering, sudden temperature changes) (Larcom, 2008). In the spring of 2010 two experiences were conducted to establish the optimum planting period for this species in Transylvanian specific conditions, and to obtain a high production of best quality. Another purpose was to determinate the optimum cultivation period for this species so that the bolting percentage to be as low as possible. The Chinese cabbage cultures were effectuated in polyethylene tunnel in the experimental field belonging to Vegetable Growing Department from the University of Agricultural Sciences and Veterinary Medicine from Cluj-Napoca. The experiences were bifactorial, involving the following factors: planting period, with four graduations and seedlings age, with two graduations. It was used a single variety, Granat from Agrosel Company. The results showed that the average flowering percentage was 37.95% in polyethylene tunnel and 76.25% in open field. In protected culture the lowest number of bolted plants was recorded in case of the variant where the 38 days old seedlings were planted in the first decade of April, while amongst the 48 days old seedlings planted in the first decade of March more than 50% of plants have bolted. In open field all the plants planted in the second decade of April bolted, while the lowest bolting percentage was obtained at variant where younger seedlings were planted in the first decade of March; in this variant only 20% of plants emitted flower stalks before head formation.

Keywords: bolting, Chinese cabbage, planting period, seedling age

REFERENCES

1. Larcom, J. (2008). Oriental vegetables. Kodansha International Ltd. Tokyo : 17-30.
2. Opeňa, R. T., C. G. Kuo and J. Y. Yoon (1988). Breeding and seed production of Chinese cabbage in the tropics and subtropics. Asian Vegetable Research and Developement Center. Taiwan: 1-17.