Harvest strategy for aerial parts affects the content of alkamides in roots of Echinacea purpurea

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Harvest strategies for roots of *Echinacea purpurea*

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**Aim**

To investigate whether the content of alkamides in roots of *E. purpurea* can be influenced by either harvest of aerial parts or the harvest time of the roots during autumn.

**Method**

Field experiment with two seed sources of *E. purpurea* (L) Moench (A and B). Aerial parts of the two sources of *E. purpurea* were harvested before and after flowering. The roots were subsequently harvested one week, three weeks and three months after aerial harvest. Alkamides were extracted from grinded freeze dried roots with ethanol-water (70:30) and extractions were performed in three replicates and analysed by HPLC-PDA (Bauer et al., 1989).

**Results and Conclusions**

Harvest of aerial parts had no influence on the content of alkamides in roots of *E. purpurea* harvested 1 week, 3 weeks and 3 months after aerial harvest (Results not shown). However later harvest had a positive influence on alkamides in one of the two seed sources. Harvest of roots 3 month after aerial harvest resulted in a significantly higher content of alkamide 2,3 and 5 (Undeca-2Z.4E-diene-8,10-diynoic, dodeca-2E.4Z-diene-8,10-diynoic and dodeca-2E.4E.10E-trien-8-ynoic acid - isobutylamide). There were no significant effect on the other seed source (A).

Harvest of aerial parts had no influence on the content of alkamides in later harvested roots.

**Reference**