Impact of different phytohormones on morphology, flower yield and cannabinoid content in *Cannabis sativa* L.

Status
Completed

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Description
The aim of this master thesis was to investigate the impact of different phytohormones (auxin, cytokinin and a mixture of both) on the morphology of three phytocannabinoid-rich (PCR) Cannabis sativa L. genotypes (KANADA, 0.2x and FED). The plants were pruned before hormonal treatment and sprayed with synthetic plant growth regulators (PGR) called 1-naphthalene acetic acid (NAA), 6-benzylaminopurine (BAP) and a 1:1 mixture of both. Impact on plant height, length of axillary side branches and their average number of internodes per side branch were observed. All PGR treatments resulted in a reduction in total plant height, reduced side branch length and a reduced number of internodes per side branch, compared to the non-treated control plants. Furthermore, the impact on flower and leaf yield was measured and the content of cannabinoids by HPLC analysis. The use of PGR offers the possibility to modulate the plant architecture of C. sativa to compact plants with a short habitus in order to improve space utilization for indoor cultivation while maintaining the same flower and leaf yield. The cannabinoid content was not negatively affected by the PGR treatments.

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