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Can certain light spectra give herbs more taste?

Researchers from Aarhus University are investigating if different types of new, advanced LED lamps in greenhouses can improve the taste of herbs.

2018.08.15 | JANNE HANSEN



Researchers are investigating if different light spectra can affect the taste of herbs.

Photo: Carl-Otto Ottosen

The greenhouses of the future may start to look like colourful light shows if the results from a research project at Aarhus University pan out and show that different light colours both can affect the taste and size of herbs.

The aim of the project is to investigate the possibilities for using specific light spectra from LED lamps to give herbs more taste. This could be particularly relevant during the winter when there is not so much sunlight and the taste needs to be improved.

Light consists of a whole spectrum of colours. The colour of light can affect plant growth in many different ways. For example, red light results in elongation growth, which means the plants grow taller, while blue light results in more compact growth.

- Just think of a forest where the plants stretch towards the sunlight, says Professor Carl-Otto Ottosen from the Department of Food Science at Aarhus University. He is the leader of a new research project that has received funding from Energi Fyns Udviklingsfond (Funen Energy Development Fund), and that is why light will be shed on herbs from the island of Funen in particular – and literally speaking.

Light's colour affects plant growth

Blue and red light both affect the stomata in plant leaves, which in turn help regulate photosynthesis – the process by which plants produce sugar.

- We know from earlier studies in potted plants and lettuce that an increasing proportion of blue light compared to red light increases the content of secondary compounds, e.g. anthocyanins, phenolic acids and

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