

## **Poster**

**Temperature sensitivity of nitrogen productivity**

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### **Abstract**

Environmental conditions control physiological processes in plants and thus their growth. The predicted global warming is expected to accelerate tree growth. However, the growth response is a complex function of several processes. To circumvent this problem we have used the nitrogen productivity (dry matter production per unit of nitrogen in the plant), which is an aggregate parameter. Data on needle dry matter, production, and nitrogen content in needles of Scots pine (*Pinus sylvestris*) from a wide range of climatic conditions were collected from which needle nitrogen productivities were calculated. Our results show that nitrogen productivity is rather insensitive to temperature. As a consequence, the effects of temperature change on tree growth and ecosystem carbon storage should mainly be derived from effects on nitrogen availability through changes in nitrogen mineralisation.

*Keywords:* plant growth, nitrogen productivity, parameter sensitivity