

Optimum values of nutrients in the leaves of elderberry (*Sambucus nigra* L.)

Optimalværdier for næringsstoffer i blade af hylde (Sambucus nigra L.)

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Summary

Optimum values of nutrients in leaves of elderberry were determined by use of results from analyses of elderberry leaves sampled in September. The leaves were sampled from bushes in

a field experiment with different levels of nitrogen and plant distances.

The optimum ranges of nutrients were estimated to be 4.0–4.3% N; 2.0–3.0% K; 0.3–0.9% Mg and 0.25–0.30% P of leaf dry matter.

Key words: Elderberry, *Sambucus nigra* L., optimum values, nitrogen, potassium, magnesium, phosphorus.

Resumé

Optimalværdier for næringsstoffer i blade af hylde er blevet bestemt. Der er anvendt resultater fra bladanalyser udført på blade indsamlet i fem år fra et forsøg med varierende kvælstofniveauer og

planteafstande til hylde.

Optimalområder for næringsstoffer blev bestemt til at være 4,0–4,3 pct. N; 2,0–3,0 pct. K; 0,3–0,9 pct. Mg og 0,25–0,30 pct. P af bladtørstoffet.

Nøgleord: Hylde, *Sambucus nigra* L., optimalværdier, kvælstof, kalium, magnesium, fosfor.

Introduction

Optimum values of nutrients in leaves of common fruit and berry species are estimated and used for calculation of the annual amount of fertilizer to supply in the orchards (2).

One exception is elderberry for which experimental results concerning fertilizer application are rather scarce.

The aim has been to estimate optimum levels of nutrient concentration in leaves of elderberry.

Materials and methods

Leaves from bushes from each of the plots in a field experiment with the variety 'Sambu' de-

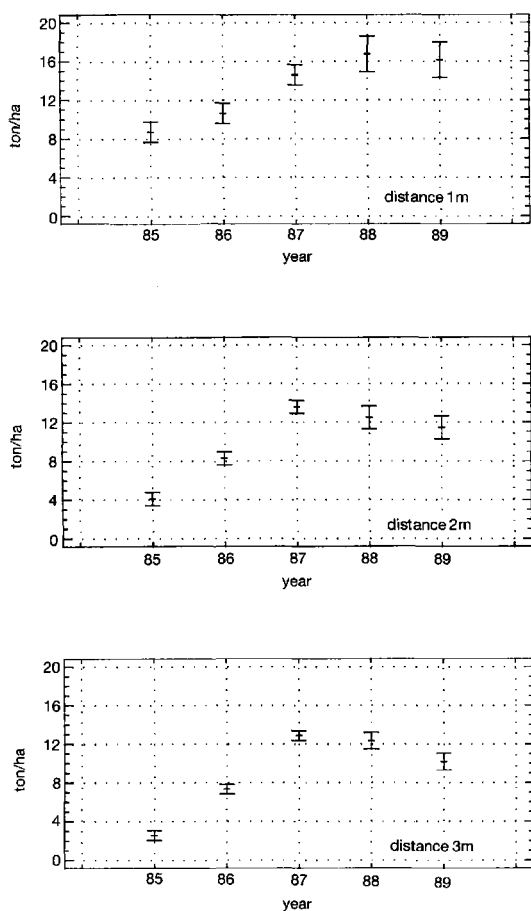


Fig 1. Fruit yield for five years.
Frugtudbytte i fem år.

scribed earlier (1) were sampled in September for five years (1985–89).

Forty to sixty top blades were picked in a height of 2 m on several shoots.

The samples were dried at 80°C and then analysed by use of standard methods.

Results

Fig. 1 shows the fruit yield for five years. Because the maximum yield was obtained the third year only values from 1987–89 were applied for estimation of optimum ranges of nutrients.

The results from determination of fruit yield and leaf analyses are shown in Fig. 2. Each point represents average values for all the bushes in each of the twelve experimental plots with four levels of nitrogen and three plant distances.

Boundary line analyses introduced by *Webb* (3) was used to determine the optimum levels of nutrients in the leaves.

Discussion

The optimum ranges of nutrients were estimated to be 4.0–4.3% N; 2.0–3.0% K; 0.3–0.9% Mg and 0.25–0.30% P of leaf dry matter.

By comparison with the optimum ranges for other fruit and berry species (2) it must be concluded that elderberry require a rather high level of nitrogen and potassium.

References

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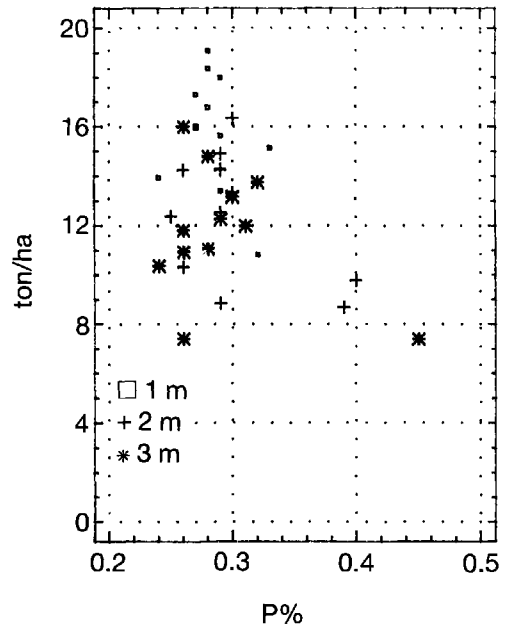
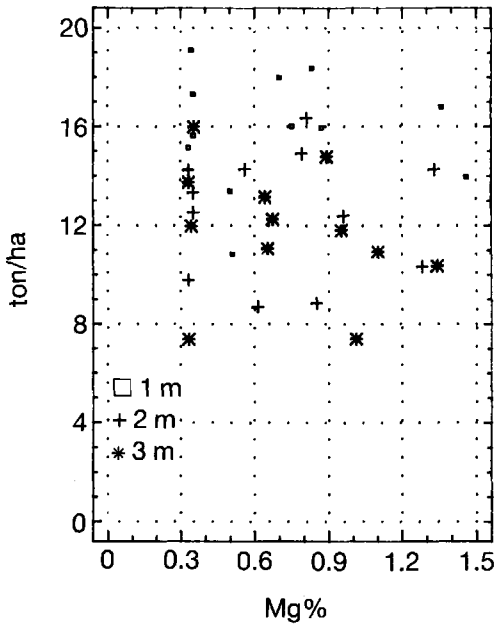
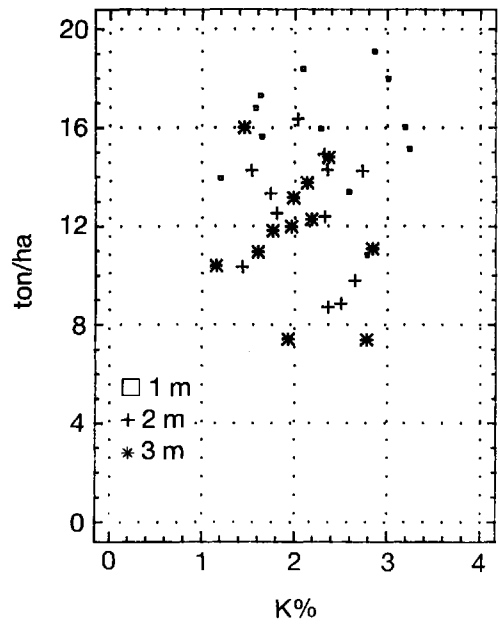
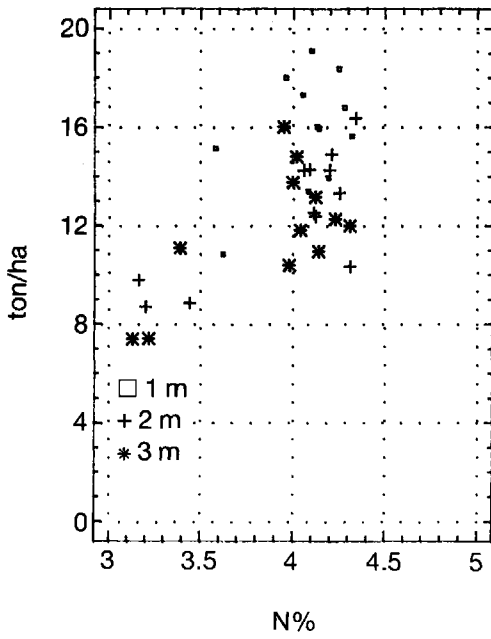


Fig 2. Fruit yield and nutrient content in the dry matter of elderberry leaves sampled 1987–89.
Frugtudbytte og næringsstofindhold i tørstof fra blade af hyld udtaget 1987–89.