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Characteristics of Dry Matter Production and Yield of Apios (Apios americana Medikus) Clones

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Abstract:
Two clones of apios, red vine and green vine clones, were grown in 1993 to clarify their dry matter production and yield capacity. There were differences in dry matter production and yield between the two clones. With regard to maturity, the red vine clone showed the characteristics of an early maturity, while the green vine clone showed those of a late one. Flower bud formation and tuber initiation occurred earlier in the red vine clone than in the green vine clone. The LAI and CGR of both clones increased continously with time during growth. The red vine clone showed higher LAI and CGR than the green vine clone after 63 DAP (days after planting). Progressive increase in the tuber growth rate (TGR) of the red vine clone took place after 98 DAP, while in the green vine clone it occurred about 2 months later i.e. after 168 DAP. NAR of the red vine clone was relatively higher than that of the green vine clone at 63 DAP, but after 98 DAP, decreased more sharply compared to the green vine clone, due to mutual shading as leaf area progressively increased in the red vine clone. The shoot of red vine clone deteriorated at 191 DAP, while that of the green vine clone occurred at 217 DAP. Concerning final yield, the red vine clone produced a relatively higher yield than the green vine clone.

Keywords:
Apios, Apios Americana Medikus, Dry matter production, Green vine clone, Growth analysis, Leaf area index, Red vine clone, Yield

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