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Estimation of leaf area for Norway spruce shoot

STANOVENÍ LISTOVÉ PLOCHY U SMRKU ZTEPILÉHO



evropský
sociální
fond v ČR



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

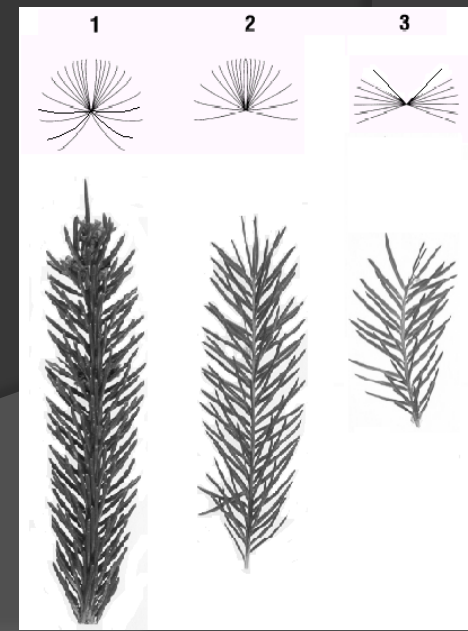
Where the samples come from:



☉ Sun shoot

☉ Intermediate shoot

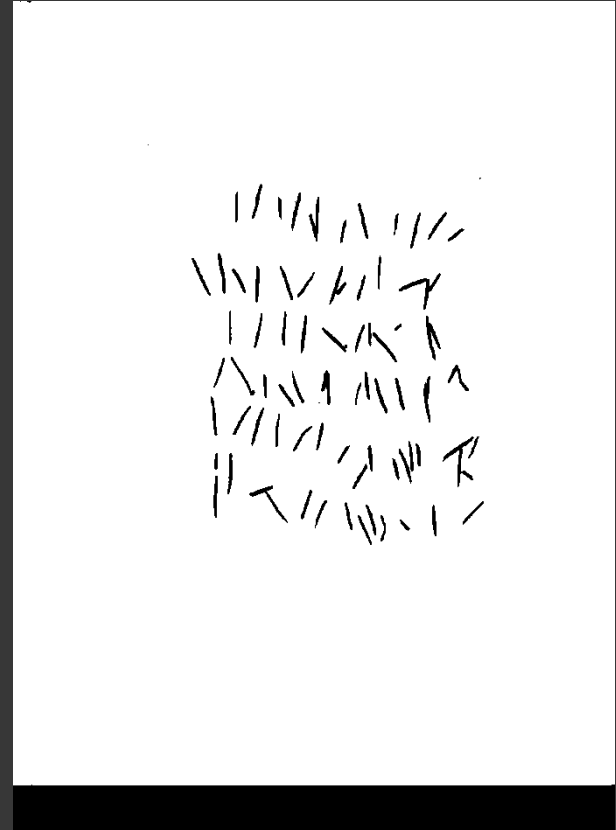
☉ Shade shoot



Leaf area meter or Scanner



Scanner Canon CanoScan LiDE 110
resolution: 200 dpi



Ratio of white and black
pixels (Cernota software)

Conclusions

- ⦿ sun shoots are/have
 - longer than shade shoots
 - higher SPAR (total leaf area to shoot silhouette area ratio) than shade shoots
 - higher LMA (leaf mass to unit dry mass ratio) than shade shoots

Questions

- ① photosynthesis recalculated per shoot silhouette area and total leaf area – what is better?
- ① photosynthesis recalculated per needle area or per needle mass - what is better?