THE EFFECT OF FRACTIONING OF FOREST BIOMASS ON ASH AND EXTRACTIVE

In the fermentation process of biomass into ethanol and similar processes some compounds in the raw material are considered to be process disturbing. This is especially so in the case of ash and extractives. Ash is both mechanically and chemically disturbing for the process while extractives mostly lower the outcome of the process. By sieving and gravimetric fractioning the contents of these compounds can be lowered.

CONTENTS

In the experiments carried out in this Forest Refine project it has been shown that the ash content of the samples decreases. The effect is most clear on stumps (fig 1.) but fractioning also seems to have an effect on small trees from thinning (fig 2.). It is shown that the standard deviation, STDAV is much lager for stumps compared to small trees.

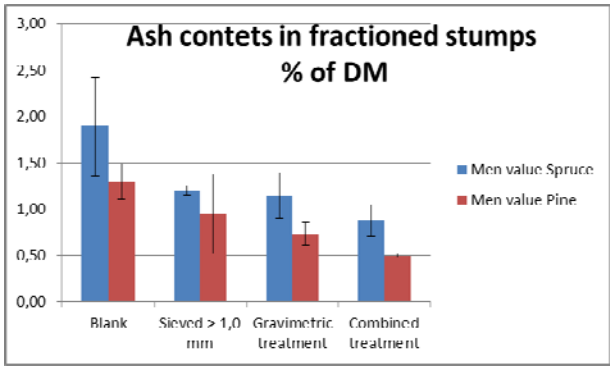

Fig 1. Effect on ash contents by fractioning of stump assortments.

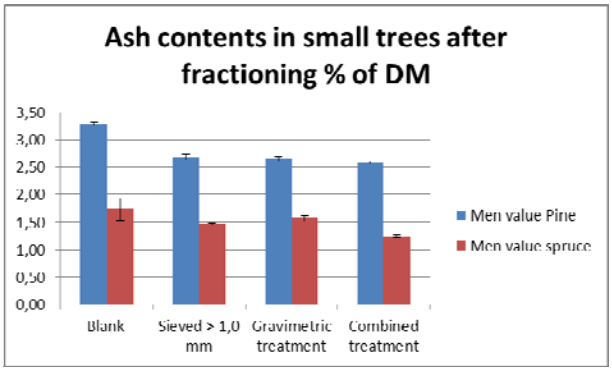

Fig 2. Effect on extractive contents by fractioning of stump assortments.

Table 1. Data from manufacturer:

Method	Modell	Capacity Ton DM/h	Power consumption (electric) Kwh/ton DM	Investment SEK
Screener	Mogensen SEL 24	12-15	1,0 ±1	700.000
Gravimetric screener	Fransson Recycling	12-15	5-8	800.000

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