KUSAGA™

## TOBACCO FLOAT SEEDLING PRODUCTION SYSTEM:
## SALT INJURY ALERT!!!

**Introduction**

During hot and windy weather, such as in August, the tobacco float seedling production system exposes seedlings to salt injury. At this time of the year, environmental conditions promote excessive evaporation from the growing media surface, leading to the deposition of fertilizer salts on the surface of the growing media. Salt injury is a common problem in late sown (late July to August) seedbeds when there is a lot of wind and hot temperatures prevail. Fertilizer salts that accumulate on the media surface cause physiological damage, and at times seedling mortality, especially soon after germination and during early growth.

Salt injury symptoms first appear as browning of the heart of seedlings and burn of the foliage tips that are in contact with the growing media, and progresses to a necrosis of leaf tips and margins, and finally the heart (growing point) is killed.

Roots may also be severely affected by the salts, predisposing them to a range of root diseases such as *Pythium* root rot and *Rhizoctonia* stem rot.

Irrigation water, fertilizers and growing media all contribute to soluble salts. However, fertilizers contribute more to salt injury, but this varies in extent depending on the composition of fertilizer ingredients. Some fertilizer components have more salt injury potential than others.

The electrical conductivity (EC) is a good measure of soluble salts and the potential for salt injury, and it should kept below 1 500 µS/cm. Extreme salt injury may also interfere with water uptake and lead to wilting and seedling death.

Severe salt injury

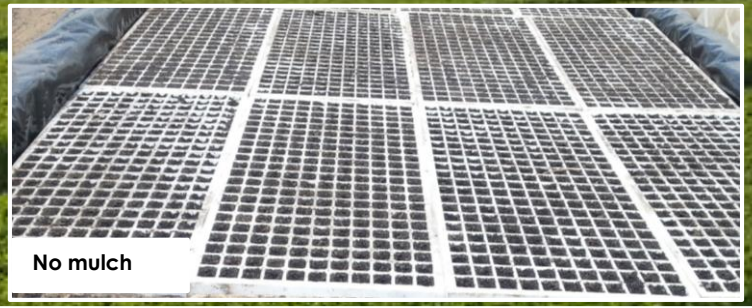
# Research at Kutsaga to mitigate salt injury using different mulch types

Vlei grass

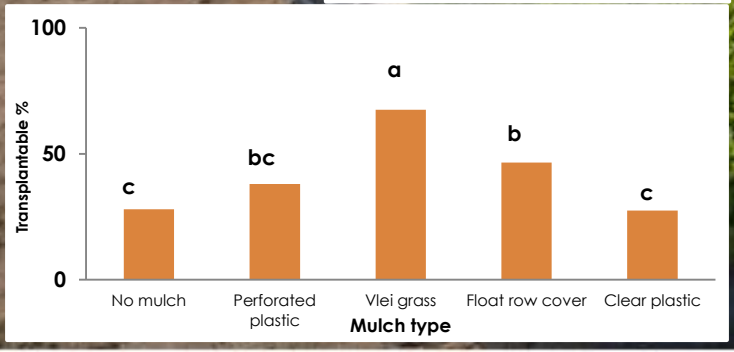
Perforated Plastic mulch

Floating row cover

Clear plastic tunnel



No mulch




**Recommendations**

Vlei grass mulch was found to be the best material for reducing salt injury mortalities in float beds.

Additionally, research done when splitting and/or delaying Floatfert application to 14 and 35 DAS showed that salt injury could be minimized in late sown seedbeds.

A holistic approach that includes appropriate fertilizer application rates and timing, careful selection of fertilizers and, the use of a suitable mulching material should be implemented.

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