Technical Information Folder – Salt Injury

Dear Clients,

ProfiGen do Brasil Ltda., with the aim of always supplying our clients with the best products and services, we hereby warn you about a potential risk in the production of seedlings, known as **Salt Injury.**

Adverse weather conditions like high temperatures, wind and low relative humidity, could cause some problems for the tobacco seedlings.

These climate-related factors increase the evaporation rate of water and trigger the salinization process. It consists in the accumulation of fertilizer salts on the surface of the growing media, thus affecting seed germination and/or development, and could also cause damage to the root system.

The risk is greatly increased with the use of low quality growing media, with salinity levels higher-than-recommended for the crop.

We also warn that improper management could result in **voided seed warranty,** especially in case of the use of highly fertilized growing media and/or application of non-recommended fertilizers for this stage of the seedbed, utilized at untimely moments or improper quantities.

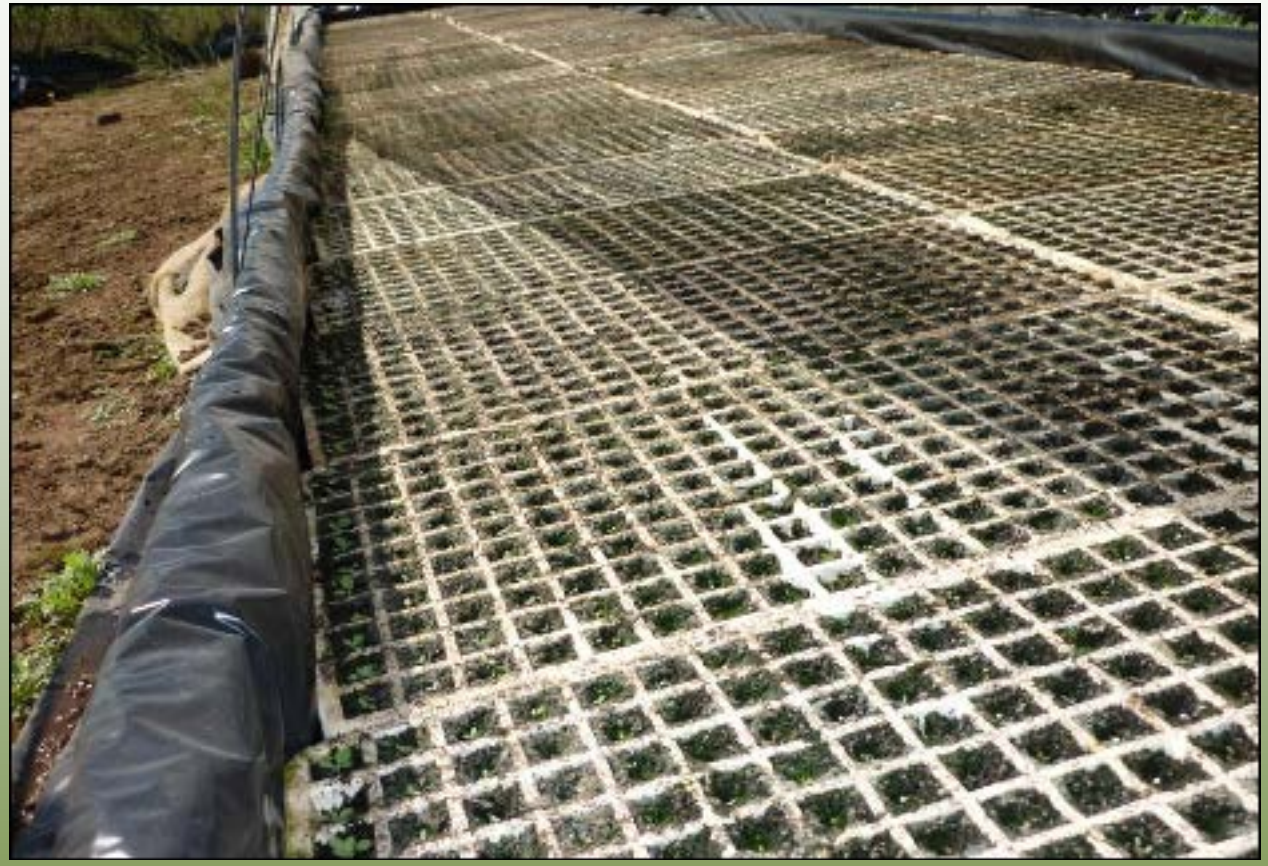
We reiterate that the majority of the growing media used in the production of tobacco seedlings already contain sufficient fertilization in their formulation for the germination of the seeds, therefore, **there is no need to apply any fertilizer at seeding.**

What follows is some information to identify Salt Injury symptoms in the initial stages of seedling production, as well as recommendations for minimizing the problem.

ProfiGen's technical team remain at your disposal for any further clarifications.

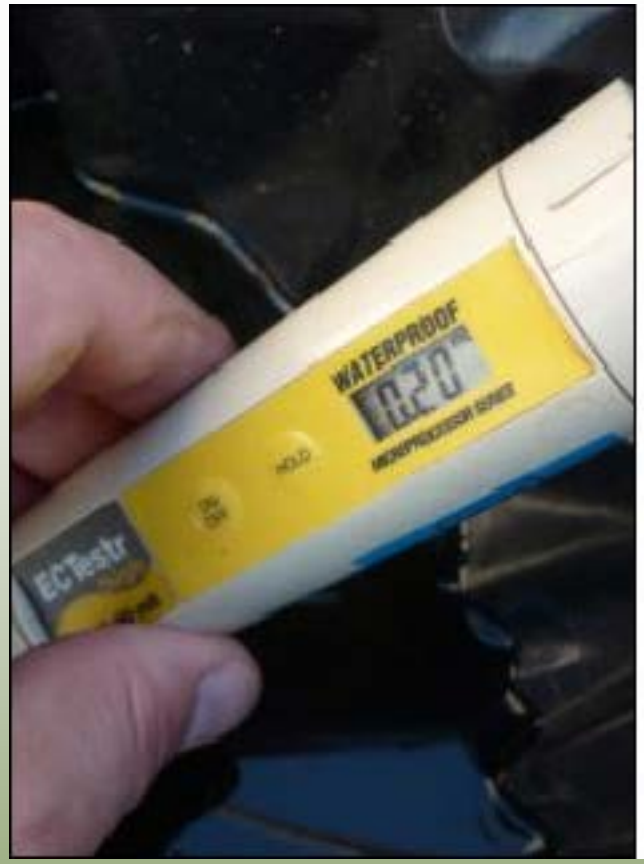
1 – This is a list of some situations we have detected in the production of seedlings

1.1 – Low level of water in the pool



Suggestion: fill in the pool, always keeping the maximum water level. This dilutes the fertilizer, avoiding high concentrations that end up dehydrating and damaging the seedlings.

1.2 – Salinity symptoms on the surface of the trays



This problem is caused by high evaporation and consequent accumulation of salts on the surface of the growing media. The above photos show that despite of low electrical conductivity (EC) in the pool water, the seedlings are damaged by the accumulation of salts on the surface of the growing media.

Suggestion: Irrigate smoothly with a watering can or sprinkler to leach the salts and avoid dislodging the seeds and young seedlings. Consider reducing the amount of fertilizers in the subsequent fertilizations.

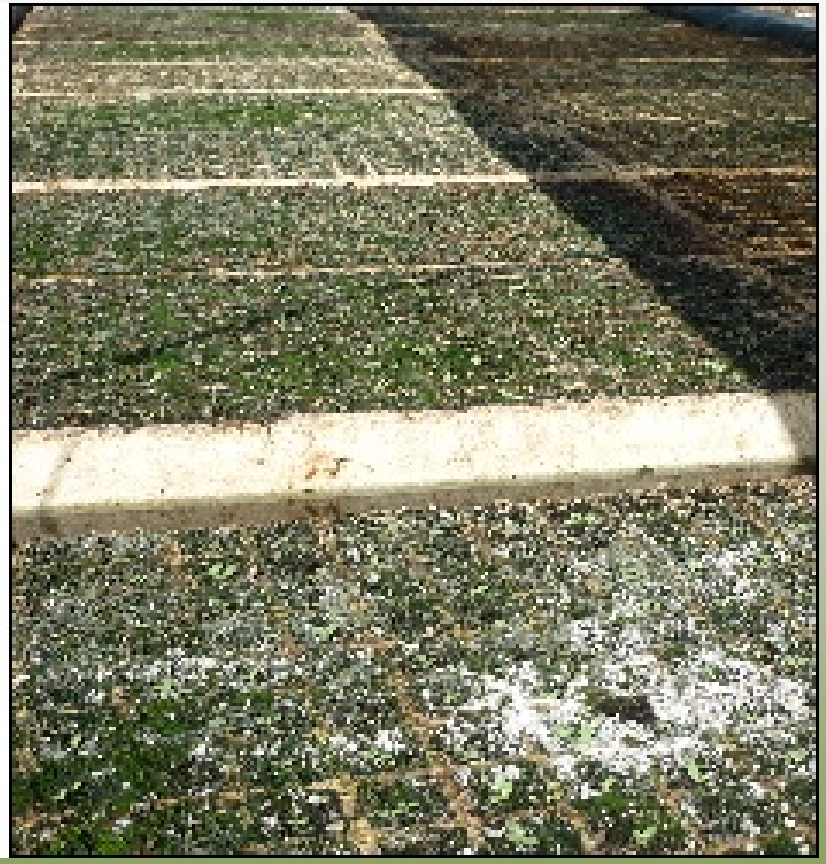
1.3 – Use of non-recommended fertilizers for the production of seedlings

Suggestion: increase water lamina to the maximum recommended level. If necessary, remove a part or replace the water of the pool.

2 – Typical symptoms that identify Salt Injury

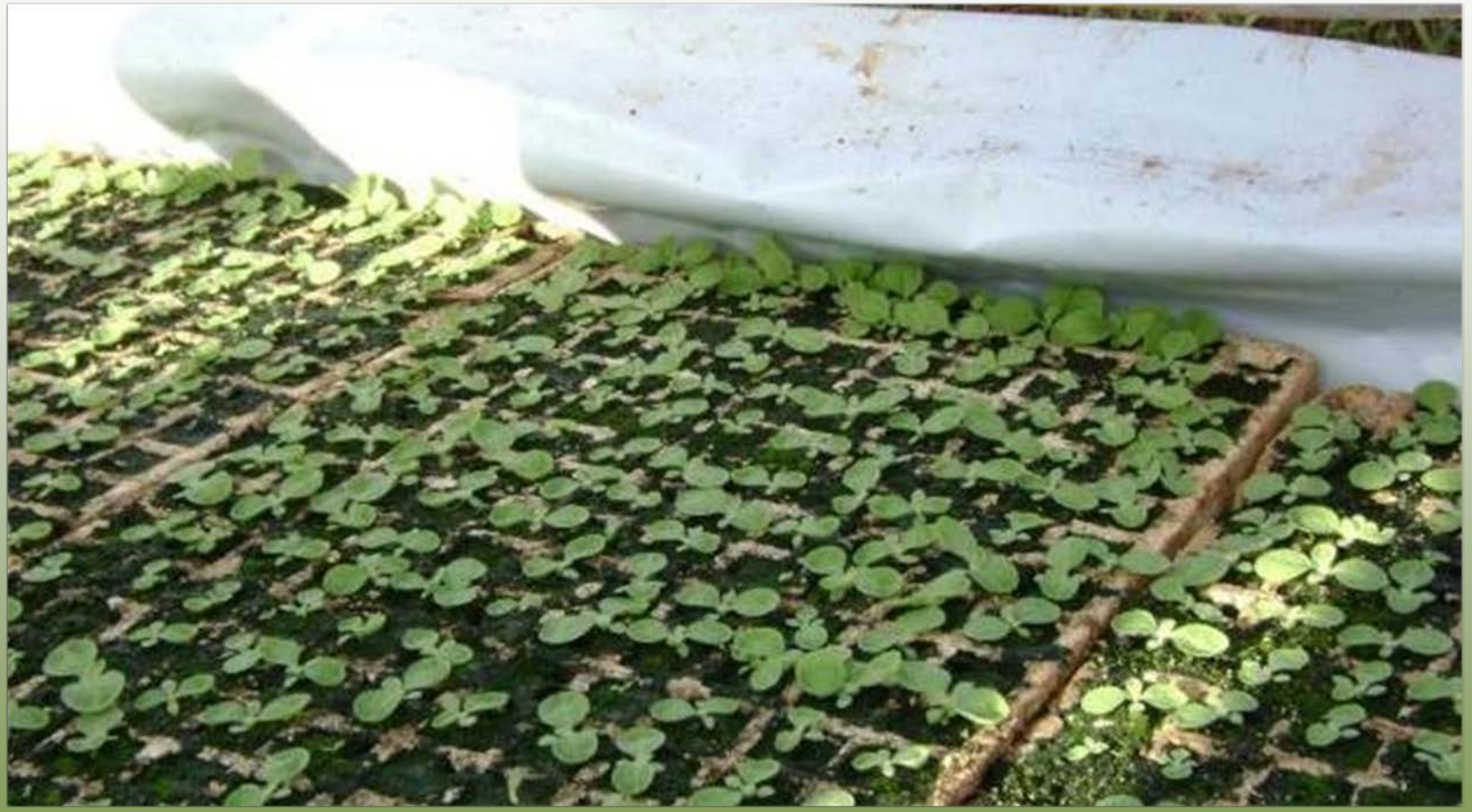
2.1 – Irregular germination and/or development, with better germination and/or development of the seedlings at the edges of the pool due to intense shading and protection against the wind.

2.2 – Surface bleaching of growing media



2.3 – Excessive accumulation of slime

2.4 – Grayish-green color in contrast to bright green



2.5 – Excessive growth of Trichomes (hairy coat) and leaf thickening

2.6 – Leaf apex and apical button necrotized and absence of roots on the upper side of the growing media

All the information contained in the Technical Information Folder is aimed at minimizing damages and seedling loss. In no way this information intends to alter or interfere with technical recommendations issued by the companies.

Please feel free to contact us for any further clarifications deemed necessary.

Flavio Hoff
Agronomist
CREA-RS 080.049

Nirlei Joacir Storch
Agronomist
CREA-RS 104.513

ProfiGen do Brasil Ltda.

www.profigen.com.br