



Proposed Trial Protocol for Maxyield in Eucalyptus Seedlings

1. Introduction

Brown Plantations has requested a nursery trial protocol to evaluate the effect of Maxyield on Eucalyptus seedlings during the nursery production phase before field transplanting.

Eucalyptus seeds are very small and delicate. In normal nursery practice, fine seeds such as Eucalyptus are often first sown in germination beds or trays and later pricked out into containers once the seedlings are large enough to handle. This is done carefully, often using tweezers or a small dibber, to avoid damaging the young roots and stems. Sources on nursery practice confirm that fine seeds such as Eucalyptus are commonly sown first and later pricked out into containers, and that seedlings should be handled gently by the leaves rather than the stem.

For this trial, the nursery period is expected to take approximately four months from sowing to field-ready seedlings. The trial will follow the normal Brown Plantations nursery process:

1. Sowing of Eucalyptus seeds in germination trays or seedbeds.
2. First pricking out/transplanting after germination, when seedlings are strong enough to handle.
3. Further nursery growth and hardening in containers or bags.
4. Final transplanting to the field after approximately four months.

Humic acid and humic substances have been shown in scientific studies to improve Eucalyptus seedling growth, nutrient uptake, root development and overall plant nutrition. Research on Eucalyptus seedlings reports that humic acid can increase growth due to its biostimulant effect and improved nutrient uptake, although the response depends on the source, concentration and method of application.

The purpose of this trial is therefore to evaluate whether Maxyield, as a humic-acid-based soil conditioner, can improve the early development of Eucalyptus seedlings under Brown Plantations' normal nursery conditions.

2. Objective

The objective of the trial is to compare standard nursery practice with standard nursery practice plus Maxyield, measuring the effect on:

- Germination and early seedling establishment
- Seedling survival after pricking out
- Root development
- Seedling height and stem strength
- Plant uniformity
- Readiness for field transplanting after four months
- Field survival after transplanting, if included in the follow-up phase



3. Proposed Maxyield Application Principle

Maxyield should be incorporated into the nursery growing media before pricking out/transplanting into bags or containers.

Recommended nursery mixing rate:

10 kg Maxyield mixed with 400 kg nursery soil or growing media

This equals:

25 kg Maxyield per 1,000 kg growing media

or

2.5% Maxyield by weight

The final product requirement will depend on the number of seedlings, container size and total soil/media used in the experimental design.

4. Product Requirement Calculation

Formula:

Total Maxyield required = total growing media weight × 2.5%

Examples:

- 400 kg growing media requires 10 kg Maxyield
- 800 kg growing media requires 20 kg Maxyield
- 1,000 kg growing media requires 25 kg Maxyield
- 2,000 kg growing media requires 50 kg Maxyield

Once the final experimental design is confirmed, including number of seedlings per treatment and soil quantity per seedling/container, the exact Maxyield requirement can be calculated.

5. Trial Focus

This introduction covers the nursery production phase only. The detailed experimental design, treatment structure, number of seedlings, replications and measurement schedule will be added in the next section.