

CORN ESTABLISHMENT



TIMAC AGRO ADVICE KIT



HOW TO AVOID STRESS DURING CORN ESTABLISHMENT?

The **Establishment Stage**, is a very stressful period for corn. At this stage, the plant stops living from grain storages and uses photosynthesis and autotrophy to produce biomass. Root system and leaves begin to establish, and any stress can slow down or delay plant development. Particular attention has to be accorded to corn at this moment.

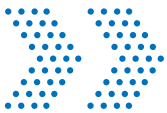
100%

It is the percentage of the crop that can be lost or damage due to stress during this stage.

1 TIMAC AGRO INSIGHT

This initial stage is essential because it will define the first component of the yield; the number of plants per m², and unlike other crops, corn does not have the same ability to compensate this loss.

- Establishing the desired number of plants begins with planting into a seed bed that is well prepared, has adequate moisture, and soil temperatures in the seed zone are near and holding around 10 °C.
- But besides all these parameters it is also vital to help the plant with fertilizers and biostimulants to achieve a quick emergency and a uniform stand of plants in the field.

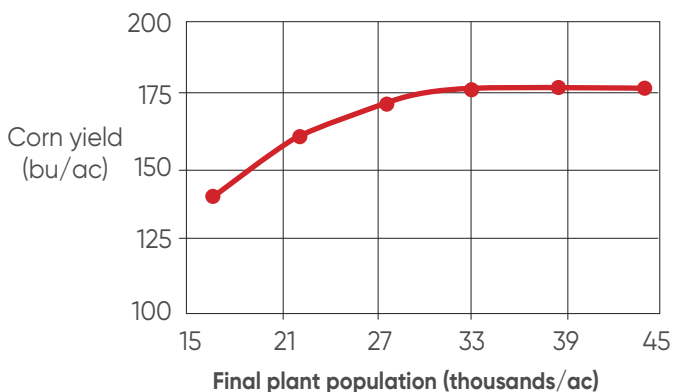


Importance of a good establishment through a good root system development to reach the stand of plant desired.

The seeds sowed vary respect to the final plant population, affecting the yield potential, and one of the most important reasons is stress during the establishment stage.

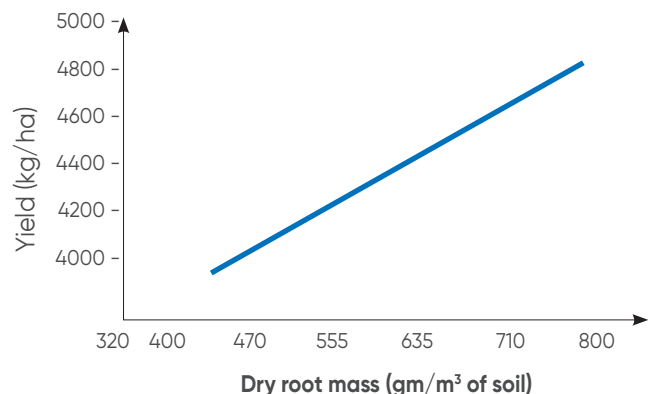
- The yield response to the final plant population in the field, which remarks the importance of avoiding stress during the establishment period, to reach the final stages of the crop with the proper number of plants.
- The yield is directly related to the size of the root system, and therefore, the more developed it is, the higher the yield.

Relationship between plant population and yield



Source University of Minnesota - Extension

Relationship between root mass and grain yield



Relationship between the mass of roots in the 0-40 cm layer and the grain yield of spring barley

(Source : E.A Czyz/ Soil&Tillage Research 79 (2004) 153-166)



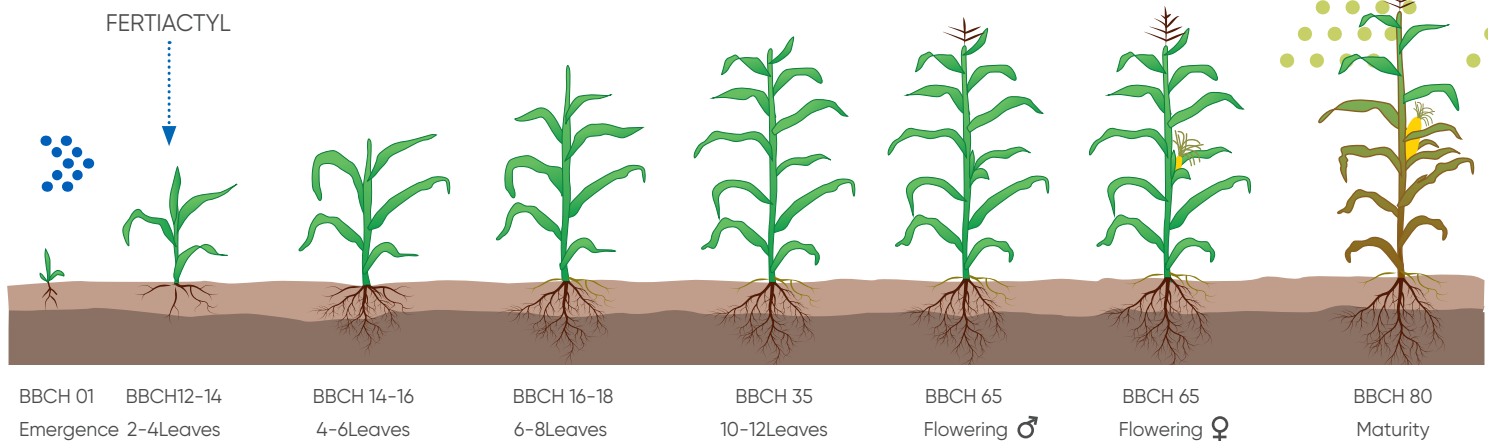
2 TIMAC AGRO SOLUTIONS

TIMAC AGRO technology recommended to avoid stress and ensure a good establishment in corn.



- Improves root development system
- Increases nutrient absorption
- Stimulates assimilation and remobilization of nutrients
- Increases tolerance to cold and dryness in early stages

RECOMMENDATIONS



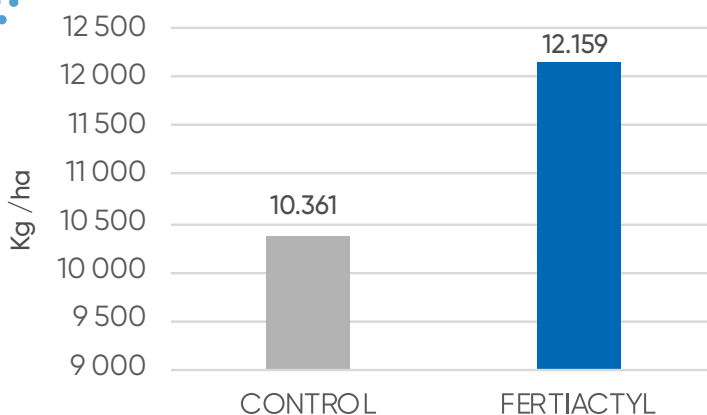
- Product application: FERTIACTYL
- Application stage: Planting or Early growth
- Application dose: 3 L/ha
- Application method: All Fertiactyl products can be applied in-furrow, banded or side-dressed

ZOOM ON TRIALS



- Type of crop: Corn
- Application: Fertiactyl GZ: 3 L/ha
- Application stage: Early growth

Synthesis of 8 demos carried out in Latin America, showing the effect of FERTIACTYL on Corn Yield.



RESULTS

Benefits of FERTIACTYL

CONTROL VS FERTIACTYL

- +30%** Increased corn N use efficiency
- +15%** Improved the yield with FERTIACTYL