

# CONTROLLED RELEASE FERTILIZERS (CRF)

CRF is considered the fertilizer with the highest nutrient use efficiency.

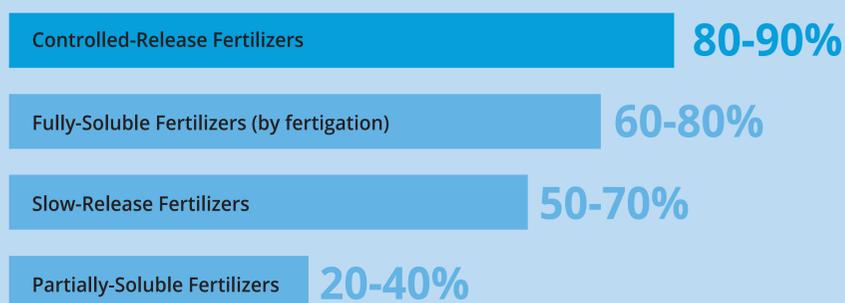
50%

Mineral fertilizers are responsible for over half of the world's food production.

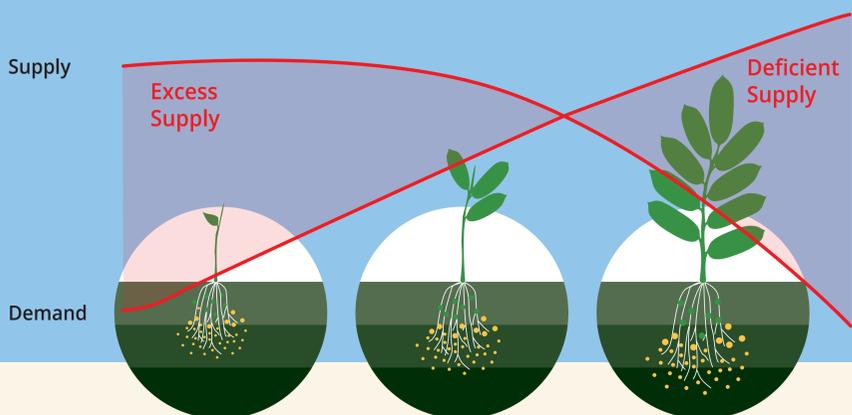


140 mln mt  
of mineral fertilizer is used every year.

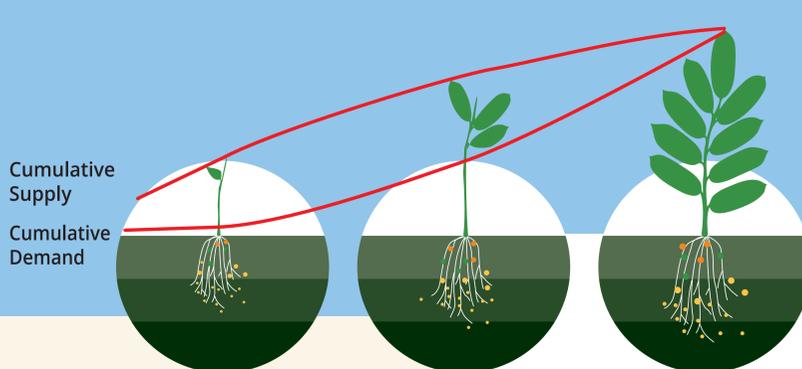
## USE EFFICIENCY BY FERTILIZER CATEGORY



## CONVENTIONAL FERTILIZERS



## COATED FERTILIZERS



Coated fertilizers supply nutrients which match the demand of the plant to give optimal growth, efficiency and a reduction in leaching.

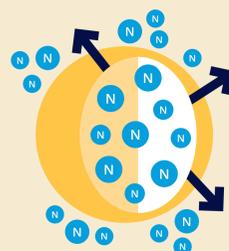
## CONTROLLED RELEASE FERTILIZER MODE OF ACTION



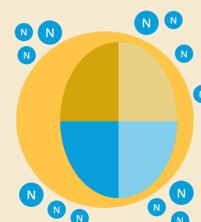
Influenced by soil temperature moisture penetrates the semi permeable E-Max coating and dissolves the nutrient core.



The moisture uptake and dissolution of the nutrient core results in buildup of osmotic pressure inside the E-Max coated granule.



The osmotic pressure causes the nutrient solution to release through microscopic pores in the E-Max coating.



The nutrients are fully released and the E-Max coating desintegrates into the soil.

## ICL SF APPROACH TO SUSTAINABILITY

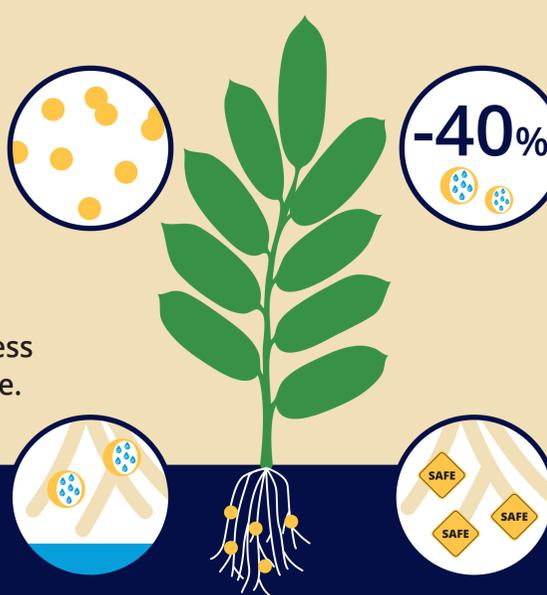


EFFICIENCY • ECONOMY • ECOLOGY

## BENEFITS

Due to continuous nutrient release, stress periods of deficiencies are avoided.

Due to the controlled release of nutrients, less leaching will take place.



Reductions of 40% of nutrients can be reached vs applications with conventional fertilizers.

Due to the gradual release of nutrients, the EC of the soil solution is not affected.