

# DROUGHT TOLERANCE

## Impact of Drought on Global Agriculture:

Droughts can be devastating to a grower's harvest as their plants are starved of essential water resources. As the impacts of climate change grow each year, increasingly volatile weather conditions and more frequent and severe droughts will threaten farmers' ability to provide a steady food supply.

## Growing Impacts of Drought:

The United Nations Intergovernmental Panel on Climate Change found that droughts have become longer and more intense in many regions, especially in Europe and Africa, over the past 60 years.<sup>1</sup>



Over the last 30 years, there were an estimated

**470 drought-related disasters**

around the world.<sup>2</sup>

By 2030, Latin America, Africa and Southwest Asia are expected to be significantly drier and at risk of regular, extreme droughts.<sup>3</sup>

Today, about **15% of potential maize yield is lost to drought each year.**<sup>4</sup>

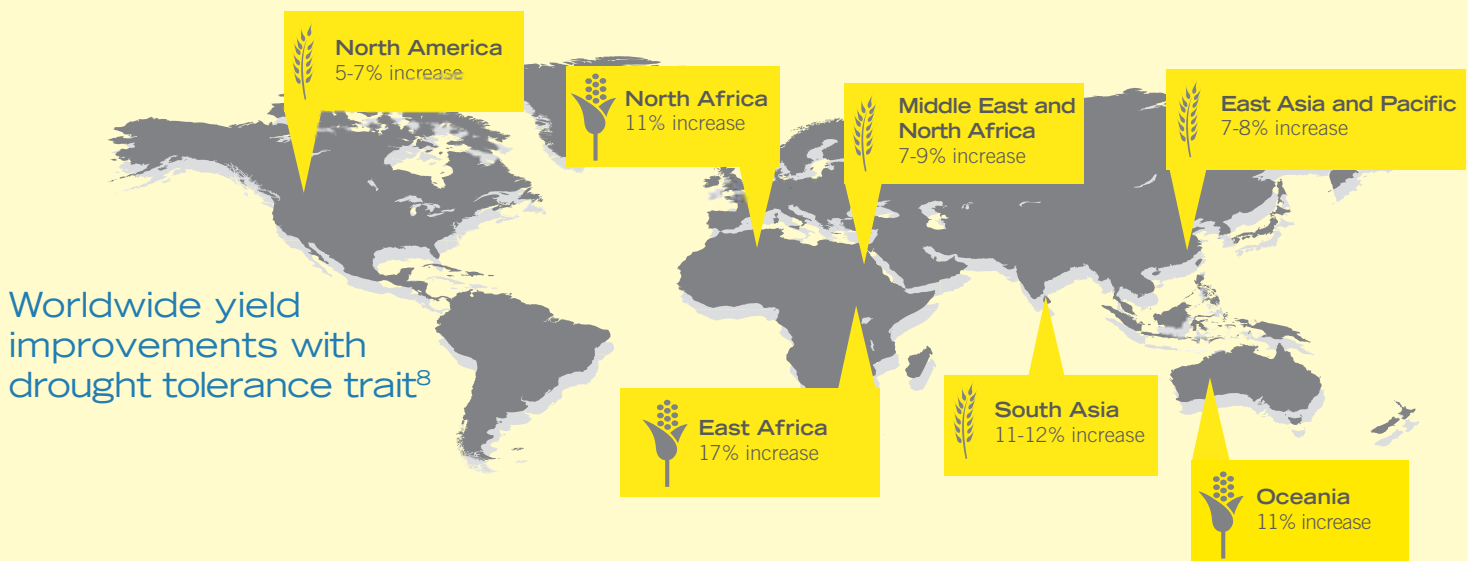


## Technology Profile:

- Drought-tolerant varieties developed through biotechnology enable farmers to **protect their harvest and minimize losses** in times of severe drought by using water more efficiently.
- In 2013, U.S. farmers planted the **first commercial biotech varieties of drought-tolerant maize** in the world. African researchers are preparing to release their continent's first drought-tolerant biotech varieties in 2017.<sup>5</sup>
- Drought-tolerant crops show exciting promise for **improving food security** in dry, vulnerable climates. In East Africa, drought-tolerant maize is estimated to increase yields 17% in severe droughts.<sup>6</sup>
- Drought-tolerant rice is in early stage development and demonstrating 12% to 17% **higher yields.**<sup>7</sup>

## Global Benefits:

By 2050, farmers will need to produce enough food to feed 9 billion people while battling increasingly severe and more frequent droughts that threaten to dry up soils, wither crops and deplete water supplies. Drought-tolerant varieties can enable farmers to adapt to these new conditions and can deliver greater yields around the world:



## References:

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