

Advances in Crop Science and Technology

2021-2023 (Temesgen B, 2024).

2025, 1.8 (Temesgen B, 2025). 65% (Temesgen B, 2013) 18 (Temesgen B, 2022). (Temesgen B, 2003). (Temesgen B, 2022). (Temesgen B, 2020).

(Temesgen B, 2017). (Temesgen B, 2021) 19 (Temesgen B, 2012). (Temesgen B, 2011).

80-95 (Temesgen B, 2022). (Temesgen B, 2021) 20 (Temesgen B, 2018). (Temesgen B, 2019). (Temesgen B), (Temesgen B).

142%, 72%, 84%, 88%, 80%, 70% (Temesgen B, 2018) 21.

2050 (Temesgen B, 2004). (Temesgen B, 2002) 22 (Temesgen B).

(Temesgen B, 2021-2023). (Temesgen B, 2014). (Temesgen B, 2019) 23 (Temesgen B, 2013). (Temesgen B, 2018).

20 (B... , 2020). t l... (A... , 2010) 25 .

... (t l... 2022) .

... () ... 26 .

... (2021) .

... (/ l) ... 27 (r t p . 2) .

... (r t p . 3) .

E/ ...

... 2 ... 400 l ... (... , 2019) .

G... / w/ ...

... 0.9 ... 1906 (B... , 2018) 29 .

... (... , 2014) .

D...

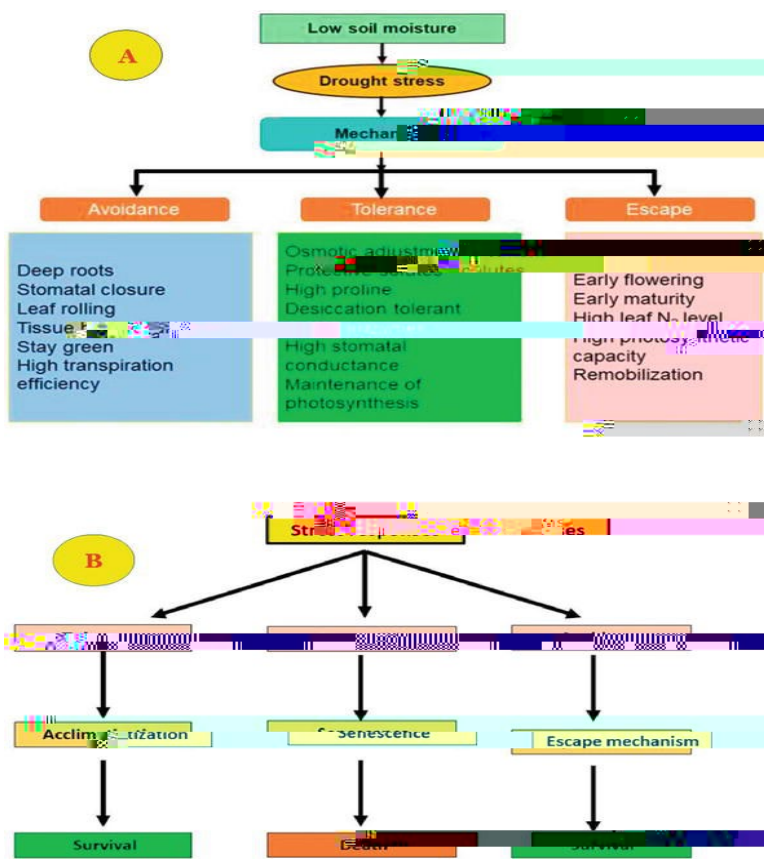


Figure 2: T... (A... , 2020) 25 .

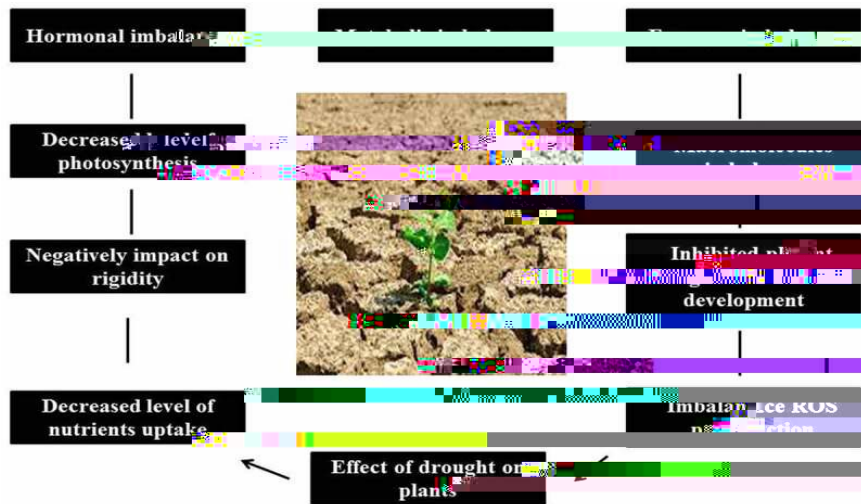


Figure 3: Effect of drought on plants

... (2019) 30.

E

... (2012).
 ... (2020).
 ... 31.

C

... 70%
 ... (2015) 32.
 ... (2015).
 ... (2020).
 ... 33.

D

...

... (2006).
 ... (2017).
 ... (2016).
 ... (2017).
 ... (2009).
 ... (2004).
 ... (2001).
 ... 34.

W

... (2020) 36.
 ... (2014).
 ... 35.

U

...

(Temesgen B, 2012). The harmful effects of drought on crop production and its mitigation strategies. Adv Crop Sci Tech 12: 681.

Waterlogging and Soil Salinity

Waterlogging and soil salinity are significant abiotic stresses that can severely impact crop production. Waterlogging occurs when the soil is saturated with water, leading to oxygen deficiency in the roots and subsequent root rot. Soil salinity, on the other hand, is caused by the accumulation of salts in the soil, which can be toxic to plants. Both stresses can lead to reduced crop yields and quality. Mitigation strategies for waterlogging include drainage systems and the use of salt-tolerant crop varieties. For soil salinity, strategies include the use of gypsum, leaching, and the application of organic matter to improve soil structure and reduce salt accumulation.

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The first paragraph discusses the impact of drought on crop production, highlighting the reduction in yield and the quality of the harvested crops. It mentions that prolonged dry periods lead to water stress, which affects the growth and development of plants. The second paragraph delves into the physiological effects of drought, such as the closure of stomata to conserve water, which in turn reduces photosynthesis and the overall energy available to the plant. The third paragraph explores the economic consequences of drought, including the loss of income for farmers and the increased costs of irrigation and other mitigation strategies. The fourth paragraph focuses on the environmental impact, noting that drought can lead to soil erosion, desertification, and the loss of biodiversity. The fifth paragraph discusses the social implications, such as food insecurity and the displacement of rural populations. The sixth paragraph introduces various mitigation strategies, including the use of drought-tolerant crop varieties, improved irrigation techniques, and soil conservation practices. The seventh paragraph emphasizes the importance of government support and international cooperation in addressing the challenges posed by drought. The eighth paragraph concludes by highlighting the need for continued research and innovation in drought management to ensure sustainable agricultural production in the future.

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