

The effect of temperature range variation on the yield of various crops

| Crop Name | Temperature Range (°C) | Change in Yield | Study Reference |
|--------------|---|---|---|
| Rice | High temperatures during flowering and filling stages | Significant reductions in yield due to spikelet sterility and reduced kernel weights. Yield reductions linked to extreme heat events. | Heat stress may cause a significant reduction of rice yield in China under future climate scenarios |
| Coffee | Above 20-25°C | Moderate to significant reductions in productivity; excessive heat can lead to small leaves and shrunken fruits. | Impacts of drought and temperature stress on coffee physiology and production: a review |
| Black Pepper | 21–29 °C | The optimal temperature range of fruit formation and quality is between 21 and 29 °C. When temperature exceeds 32 °C, the hot pepper growth can be slow; blossom end rot (BER) can be observed on fruits; and fruit-set ceases may emerge, with lower yields. | Comparative heat stress responses of three hot pepper (<i>Capsicum annuum</i> L.) genotypes differing temperature sensitivity |
| Ginger | 20–28 °C | The optimal daily average temperature for ginger growth is between 20–28 °C [27]. | Influence of High-Temperature and Intense Light on the Enzymatic Antioxidant |

| | | | |
|--------|----------------------|---|--|
| | | Intense solar radiation can harm young plants, especially when combined with air temperatures exceeding 35 °C [28]. | System in Ginger (<i>Zingiber officinale</i> Roscoe) Plantlets |
| Banana | Above 1.5°C increase | Increased vulnerability to heat waves affecting productivity; potential for both positive and negative impacts on growth. | Banana Cultivation for Resilience to Climate Change |