ABSTRACT

Pulse crops are a major and cheapest source of dietary proteins and calories in food and food products through out the world. Tropical regions are more drought susceptible areas and pulses form a major component in tropical cropping system. In SriLanka 65% of the area is not suitable for crop production due to ill distribution of rainfall. A review was done on the important aspects of pulses growing under drought condition.

Development and measurement of plant water stress, effect of drought stress on physiological and morphological processes, drought resistance and adaptations to water deficit and the ways to overcome drought hazard, mainly in tropical pulses such as cowpea, soyabean and bean are being reported in this review.

Drought stress which results from the withholding of water supply, leads directly to changes in the physical environment of the crops and these changes may subsequently affect crop physiology. As the soil is dried, the soil water potential decreases and it is more difficult for plants to extract water and as a consequence the plant water potential tend to decrease. This decrease may directly and indirectly affect the physiological and morphological processes;;and these processes ultimately affect productivity.

The chances of crop failure could be reduced by developing cultivars to resist drought, improving soil management and achieving a basic understanding of the effect of drought stress on plants. The emphasis must be on increasing the stability of cropping systems under conditions of drought.

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DROUGHT STRESS ON TROPICAL PULSES

by

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