

Water, Drought & Irrigation

Definitions

- Drought
 - ❖ Meteorological e.g.

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This omits consideration of effects on plants

- ❖ Biological
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- ❖ Sociological
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Often as a basis for determining government aid

- Drought resistance
Drought resistance is a misnomer since plants have no ability to resist drought

- Drought tolerance
Drought tolerance is the
- Drought avoidance is the

examples
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Drought adaptation is the

Scales of Responses

- Community
e.g.

- Morphological Responses
 - ♣
 - ♣
 - ♣
 - ♣
 - ♣

- Physiological Responses

- ♣
- ♣
- ♣
- ♣
- ♣
- ♣

- Molecular Responses

- ♣ Altered enzyme activity (α -amylase) is the result of molecular control
- ♣ Heat shock proteins
- ♣ Multiple genes
- ♣ Water soluble carbohydrates

Significance to Forages

- Pasture perenniality

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- Defoliation (cutting or grazing)

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- Dry/severe environments

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- Endophyte

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- Quality

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Irrigation

- Limited use since forages are usually lower value

- Options

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- Strategic use can have benefits in extending the season

- Timing and frequency