When does VPD drive or reduce ET?

Adam Massmann

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- **Hydrometeorologists** would say that an increase in VPD (increase in **atmospheric demand**) would drive an **increase in ET**.
- However, **plant physioligists** know that plants have evolved to use stomata to conserve and regulate water use. So **stomata closure** in response to increases in VPD may **decrease ET**.

The question is, which effect dominates with an increase in VPD: plant response (decrease in ET) or atmospheric demand (increase in ET)?

- We hypothesize it will be a function of plant type and the environment:
  - Plants that are evolved to conserve water will tend to reduce ET with increases in VPD.
  - However the environment can overwhelm plant response: at very high VPD the atmospheric demand will dominate and plants will not be able to consernve water, no matter how much they have evolved to do so.

References