Biochar application to agriculture soil:

- carbon sequestration
- reducing greenhouse gas
- improving soil quality, soil structure, nutrient availability

biochar + climate change = ?

Extreme Hydrological Processes:

- long term drought
- higher frequency of wet-dry cycle
- flooding

How do drought and wet-dry cycles with biochar amendments impact on agriculture soils:

- Nutrient leaching (e.g. NO_3^-)
- Soil pH
- Soil water extractable organic matter (WEOM)
- Soil microbial activities

North American Drought 2011-2014