UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Recommendation Domains

"Recommendations domains" are areas where research and a single recommendation has broad application due to similarities in both socio-economic and environmental conditions. Different terminology is used (e.g., mega environments, etc.), but the goal is to identify uniform areas and thus improve the probability of success (reduce the risk) associated with recommendations.

Domains – How developed?

Use maps and local input to define uniform areas based on major bio-physical and socio-economic characteristics that will affect a recommendation (See Table).

Characteristic	Example and why important
Soils	Are there soil characteristics that will affect crop potential and response (e.g., Heavy versus light soils; Fertile areas vs problem soil areas (e.g., Low pH, Salinity, etc.))
Water	What is the access to reliable good quality water as this greatly influences yield potential and associated farming risk. Map rainfall patterns (levels and distribution) and irrigated vs rainfed areas.
Topography	Slope and altitude affect erosion risk, water retention, and temperature. Differences in temperature affect evapotranspiration and growth rates.
Wealth and credit	Access to finances affects the ability to test and adopt practices
Labor availability	Labor shortages at critical times (e.g., weeding or harvest) can limit options
Farm size	Farm size can influence practice suitability. Are farms Small or large
Cropping system	Crop rotation and cropping patterns can influence viable cropping options (e.g., planting date, harvest date, soil planting conditions)
Other problems	Disease or other problems (e.g., weeds) may affect some areas and change the suitability of a practice
Input and market access	Are inputs available? Will produce have a profitable easily available outlet or will increased production saturate markets or be unsaleable.

Useful Resources

Access Soil and topographic maps, rainfall and temperature data and any socio-economic studies or data.

Example Outcome

On line maps (e.g., Google Earth) offer powerful new ways to look at variation across areas. Superimpose on these maps socio-economic and other factors. For example, three domains are readily identifiable in the example at right.

1. The lower rainfall area (North west),
2. "Normal" – (Central area) "regular" rainfall with ready access to markets
3. Higher altitude (South - lower temperature with implications for evapotranspiration and diseases).

The output can then be a recommendation with conditions – e.g., "For farmers on heavy clay soils, planting maize after wheat ....."