REACCH
Regional Approaches
to Climate Change –
PACIFIC NORTHWEST AGRICULTURE

2014 Annual Meeting
Speed Science

http://reacchpna.org

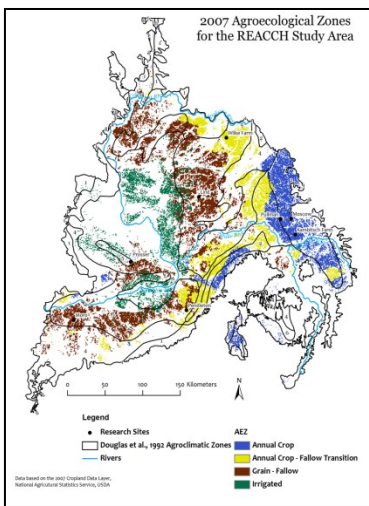# Dynamic agroecological classes: charting cropping system shifts and changes. David Huggins, USDA-ARS

Fig. 1. Geographic distribution of four major PNW AECs for 2007.

We established a land use baseline where agro-ecological classes (AECs) are geospatially delineated (annually) based on the regional cropland datalayer (Fig. 1). Spatial-temporal shifts in AECs were assessed by identifying areas which stayed within the same AEC for 3, 4 or 5 out of 5 years (2007 through 2011) (Fig. 2). This analysis displayed areas where transition between AECs occurred. In addition, changes in the spatial distribution and quantities of different crops that occur red within an AEC were assessed. For example, from 2007 to 2012, the grain legume area increased by 40% while the oilseed area increased by 243% (Table 1). Additional goals are to: continue developing a geospatial land use context for research, education and extension activities that will enable regional assessment of agricultural mitigation and adaptation strategies.
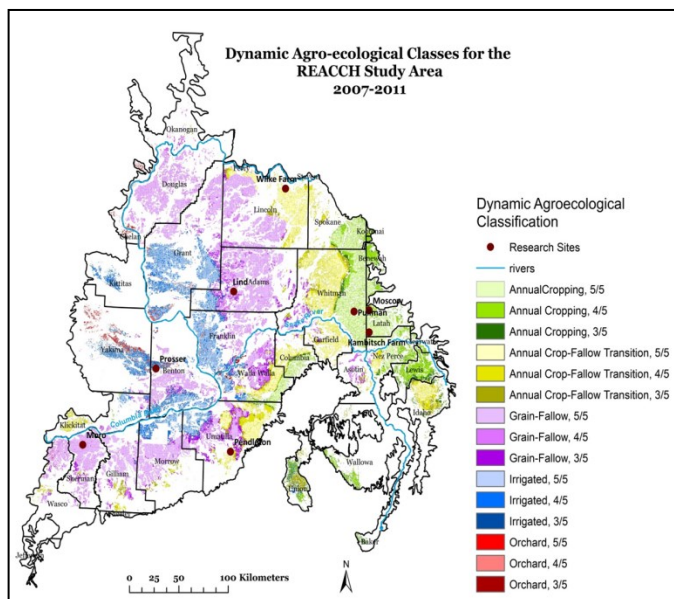
Legumes	Year	
	2007	2012
Chickpeas	41152	81859
Lentils	37763	36272
Peas	46198	56567
Total area (Ha)	125113	174698

Oilseeds	**2007**	**2012**
Sunflowers	67	2104
Canola	6511	18427
Safflower	17	273
Rape Seed	135	376
Camelina	0	342
Mustard	0	1589
Total area	**6730**	**23111**

Table 1. Area under grain legumes and oilseeds in REACCH study region in 2007 and 2012.

Fig. 2. Changes in AECs from year 2007 through 2011.

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