

Capacity estimate of kiwi production in northern California

A site suitability analysis for Butte County

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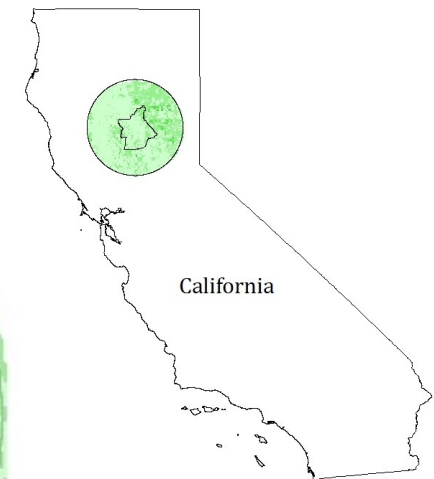
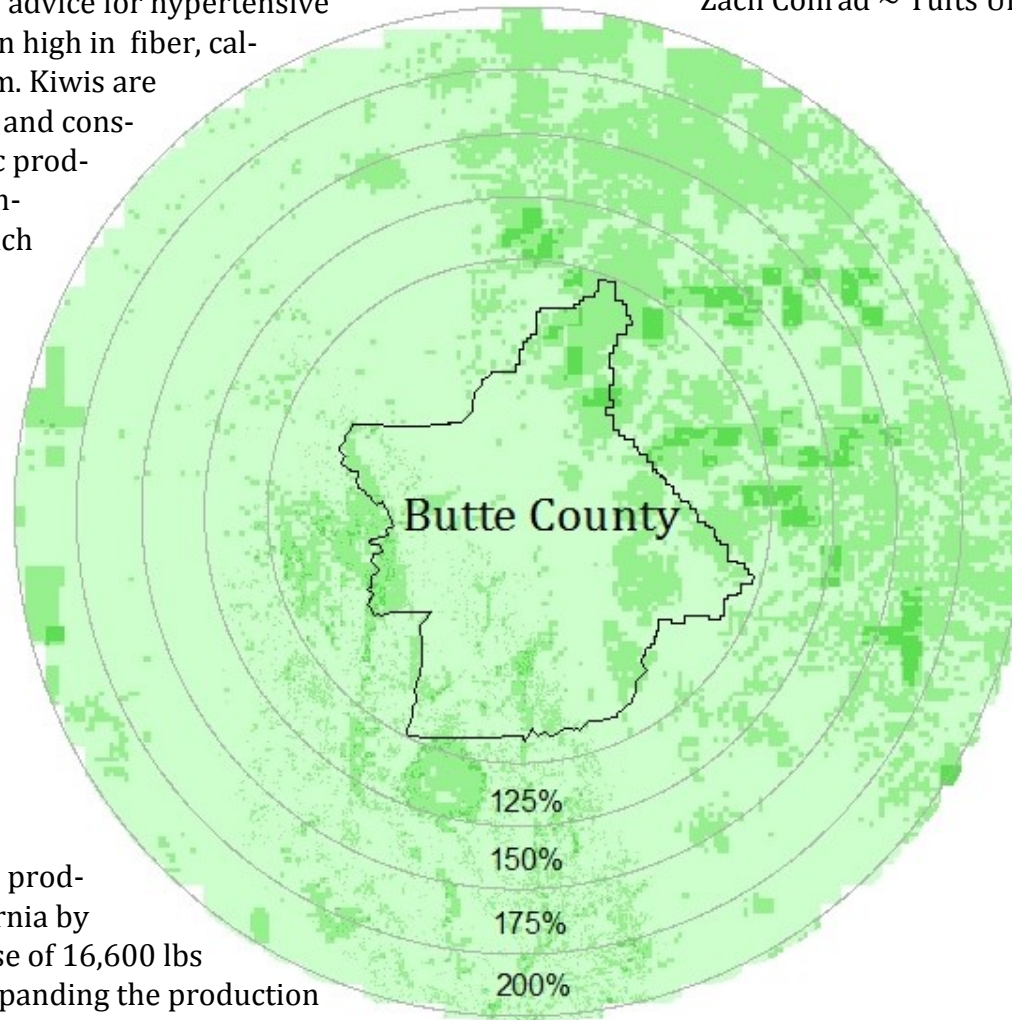
Introduction: Standard clinical advice for hypertensive patients is to adopt a diet pattern high in fiber, calcium, magnesium, and potassium. Kiwis are good sources of these nutrients, and consumption is increasing. Domestic production is also increasing, predominantly in Butte Co. But how much land is available for expansion?

Methods:* Site suitability analysis was conducted using raster data on land use, soil texture, and temperature.

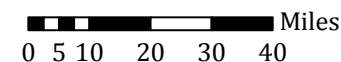
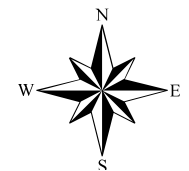
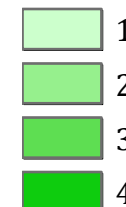
Results (cumulative):

- 125% expansion = 0 acres
- 150% expansion = 0.22 acres
- 175% expansion = 1.11 acres
- 200% expansion = 1.11 acres

Discussion: Expanding the kiwi production center in northern California by 175% would result in an increase of 16,600 lbs of kiwi production. However, expanding the production center by 200% would not result in any further increase in production.



Number of overlapping layers



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*Cropland Data Layer, 30m, 2013 (land use); Gridded Soil Survey Geographic Database, 10m, (soil texture); PRISM Climate Group, 4km, 1981-2010 (mean maximum and minimum monthly temperature); Census of Agriculture, 2002-2012 (crop yield). Projected coordinate system: NAD 1983 State Plane California II FIPS 0402. ArcGIS 10.1.