

## What is Dryland & Low Water Farming?

Dryland farming relies solely on natural rainfall and is typically practiced during the dry season or the whole year in arid climates. Dryland plus farming includes limited irrigation during the dry season. Rainfed farming exclusively depends on rainfall during the rainy season. Regardless of the method chosen, farmers can operate under SGMA with the opportunity to produce enough revenue to cover land cost and make a profit, while generating as much or more in net returns per acre-foot of water.

**Alternative emerging crops** suitable for the Tule Subbasin climate:

- Winter Wheat
- Rosemary
- Sage
- Native Plants & Seed
- Agave



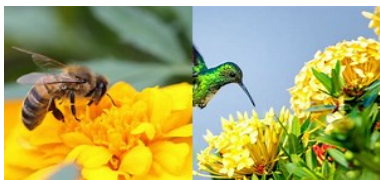
## Potential Water Benefit

Emerging crops are drought tolerant, can be sustained with precipitation or little to no supplemental irrigation requiring as little as 1.5 acre feet of water, therefore reducing demand for surface and groundwater use. Some emerging crops increase the soil's capacity to store water. Switching to lower water intensity crops can reduce consumption by up to 93%, but this requires adopting uncommon crop types.

## Benefits to the Grower/Landowner

Emerging crops are hardy, tolerate both high and low temperatures, help retain subsoil moisture, reduce the need for herbicide use, act as soil stabilizers, provide profitability and environmental stewardship. These crops are also in high and increasing demand in many specialty markets. Many emerging crops have relatively low production costs compared to other commercial crops, with some crops having the ability to be harvested two to three times a year once well established.

## Benefits to Other Stakeholders



Continued need for local labor, improved groundwater sustainability due to less demand for surface and/or groundwater, reduced air pollution due to reduced dust and herbicide use. Crops like rosemary, sage and native plants promote and support critical pollinators, supporting both crop and honey production.

## Examples of Low Water Crops in the Tule Subbasin

Winter Wheat has a successful history as a Dryland, Dryland-plus and Rainfed crop in the Tule Subbasin. Winter wheat grown via the Dryland-plus method aids in crop survival, provides more flexibility with timing of planting and can allow for a longer growing season likely to produce greater yields. Rainfed crops must be timed appropriately to ensure seasonal precipitation uptake but can still provide profitability. Winter wheat can be sold as forage, grain, or hay, while forage and hay offer the most profitability in the Tule Subbasin.

## Resources

### [Dryland Farming: What It Is and Why It's Important | Nature Safe Fertilizers](http://www.naturesafe.com/knowledge-center/blog/dryland-farming-what-it-means-and-why-its-important)

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### [Exploring the Potential for Water-Limited Agriculture in the San Joaquin Valley - Public Policy Institute of California \(ppic.org\)](http://ppic.org)

### [Low-Water Crops. Water covers nearly three-fourths the... | by QWerks | blog.getqwerks | Medium](https://blog.getqwerks.com/low-water-crops-water-covers-nearly-three-fourths-the-land-in-california/)

#### Rosemary

- [Rosemary Farming Business Guide For Beginners \(roysfarm.com\)](http://roysfarm.com)
- <https://www.asiafarming.com/rosemary-farming-business-plan-a-step-by-step-guide-to-growing-and-selling-profitable-herbs>

#### Sage

- [How to Grow Common Sage for Profit - Commercial Common Sage Production - Wikifarmer](http://www.wikifarmer.com/how-to-grow-common-sage-for-profit-commercial-common-sage-production)

#### Native Plants and Seed

- [Strengthening the Native Plant Supply for California's Central Valley — Great Valley Seed Company](http://www.greatvalleyseed.com/strengthening-the-native-plant-supply-for-california-s-central-valley)
- [California-Seed-Strategy-Draft-1.pdf \(cnps.org\)](http://www.cnps.org/california-seed-strategy-draft-1.pdf)

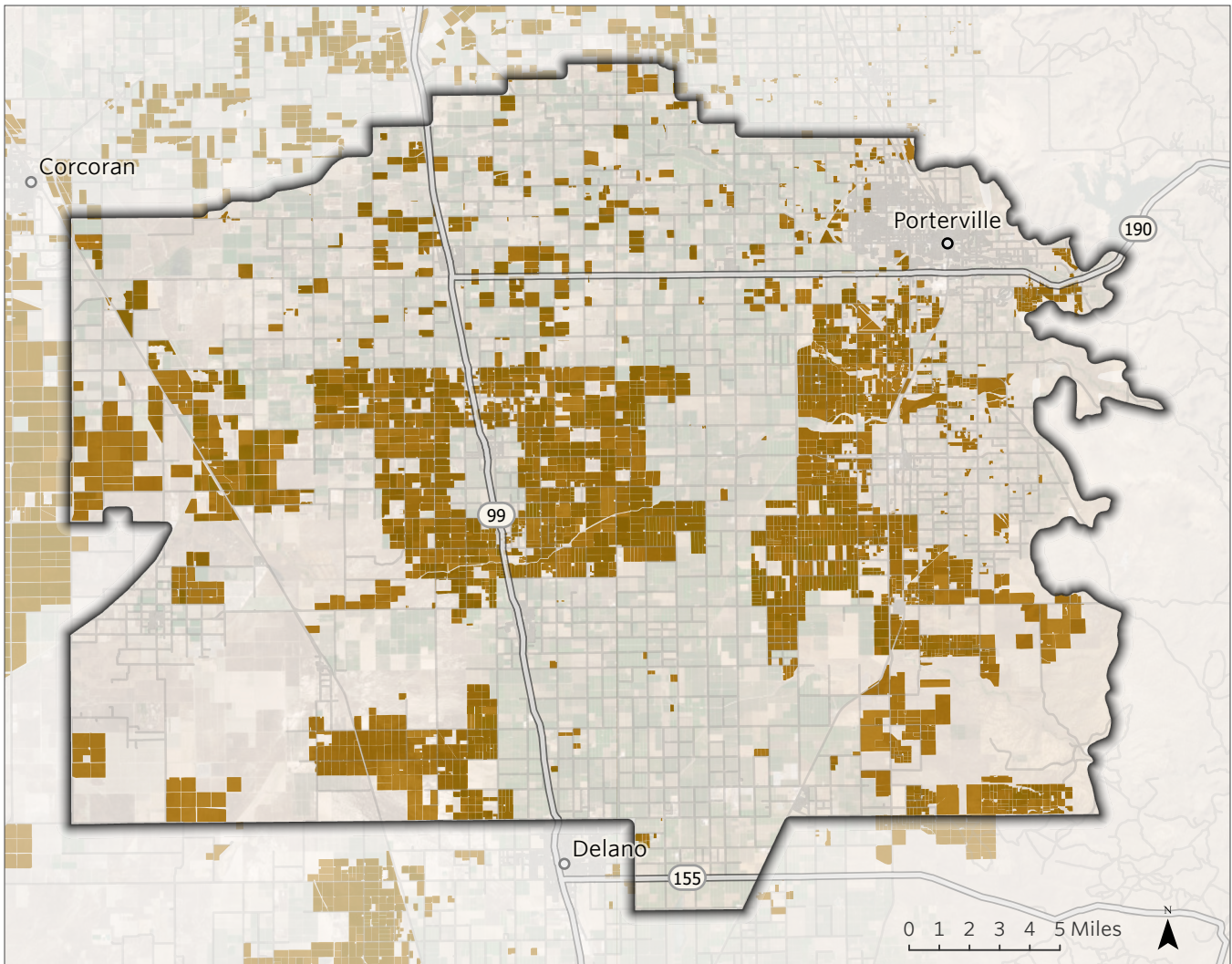
#### Agave

- <https://daily.seventy.com/agave-spirits-by-the-numbers/#agave-infographic>
- <https://www.ucdavis.edu/food/news/agave-drought-tolerant-california-crop>
- [Frontiers | Editorial: The role of agave as feedstock within ...](https://www.frontiersin.org/articles/10.3389/fpls.2018.01411/full)



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# Dryland Farming



Current irrigated cropland that is suitable for water-limited forages with 4 or 8 inches of supplemental irrigation and at high or very high risk for fallowing under SGMA (>25%) under no trading, basin trading, or valley trading (see Escriva-Bou et al. 2023)

High Suitability for Dryland Farming