

# Cover Crops and Soil Health

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## Benefits of cover crops?



Photo credit: Moses Mike, Cal Poly

Intensive crop production can lead to soil degradation, including compaction and loss of soil fertility. Cover crops help restore soil health in many ways:

- Cover crops add organic matter to your soil. This, in turn, helps your soil to hold on to water and nutrients
- Cover crop roots create soil pores and improve soil aggregation, essential for good water infiltration, drainage, and soil aeration
- Cover crops prevent erosion, especially on hillsides
- Legume cover crops add nitrogen to your soil
- Cereal cover crops catch excess nitrogen and prevent nitrogen leaching to the groundwater

## Additional resources

- NRCS California [eVegGuide](#) provides recommended cover crop species and seeding rate by geographic location and purpose of use
- NRCS [cover crop chart for California](#)
- Lockeford [Plant Material Center](#)
- Incentives for growing cover crops:
  - [CDFA Healthy Soils Program](#)
  - [NRCS EQIP](#)

## Cover crops and avocado orchards

### Which cover crop to grow?

- Choose your cover crop based on your management priorities.
  - To add nitrogen, choose a legume.
  - To capture excess nitrogen, consider a cereal
  - To prevent erosion, consider a species with large root system that establishes quickly.
  - To break a compacted layer, use species with robust and deep root systems
- Select a low stature crop to reduce the need for frequent mowing and minimize fire hazards. Examples:

#### [Blando brome](#)



#### [Zorro fescue](#)



#### [burclover](#)



Photo source: NRCS

### How to establish and manage your cover crop?

- Ideal to plant in Fall before rains, usually October-November
- Good seed-soil contact is essential.
- Calibrate seeding equipment prior to planting, following recommended seeding rate
- Drilling seeds is recommended on hillslopes and where disking to prepare a seedbed is not possible
- Broadcasting requires a well-prepared seed bed and higher seeding rate compared to drilling
- Use planting depth recommended for the smallest seed in your mix
- Mow cover crop to 2-4 inches when frost is forecasted or when biomass reaches the tree canopies
- Cover crops can be rotated to break weed and pest cycles

### Terminating your cover crop

- Annual cover crops can be terminated by mowing in April-May
- If your cover crop goes into seed, it may reseed and not require cover crop seeding in the following year, saving seed and labor costs.



Left: Seed drill used for cover crop planting at Cal Poly. Right: Cover crop roots. Photo credit: Charlotte Decock

