

COVER CROPS

Cover crops (also called green manures) are plants that are grown to improve the soil, but don't produce a marketable crop.

Benefits of cover crops:

- Reduce water runoff
- Legumes (for example beans) add nitrogen to the soil, so less fertilizer is needed
- Improve soil structure, making soil easier to work with
- May suppress weeds if dense enough (such as barley)
- May help reduce soil-borne diseases

When and how to plant cover crops:

- Plant in the fall, preferably in October before it rains, or irrigate after planting seeds. Plant no later than mid-November.
- Broadcast seeds and then incorporate them into the soil using a harrow or by lightly disking the soil.
- Disk cover crop into the soil before seeds mature, preferably at flowering (March to early April). Consider using a mower, chopper, or weed trimmer with a blade to make disking easier.
- Wait 2-3 weeks before planting strawberries or vegetables.

Suitable cover crops for strawberries:

Oats

- Winter grass
- Flowers April to May
- Does well on heavy clay soils
- More tolerant than barley of wet soil, or soil with a high salt content
- Outcompetes weeds for sunlight and water, so fewer weeds
- Seeding rate: 100-120 lbs/acre



Bell beans

- Adds up to 120 pounds of nitrogen per acre
- Can mix with barley or oats
- Seeding rate: 80-125 lbs./acre
- Legume inoculants: Bell bean needs Type "Q" inoculants



Barley

- Winter grass
- Flowers in April
- Does well on light, dry soils, and on salty (or saline) soils
- Outcompetes weeds
- Seeding rate: 60-90 lbs./acre
- Watering: can tolerate drought, but grows better if irrigated



Common Vetch

- Adds more nitrogen than bell beans
- Different type of vetch than the weed
- Cut before goes to seed (in April)
- Seeding rate: 60 lbs./acre



Bell Beans/Oats/Vetch Mix

- A mixture of three cover crops
- Common vetch helps reduce weeds
- Seeding rate: 80-100 lbs./acre
- Legume inoculants: Bell bean needs Type "Q" inoculants



CROP ROTATIONS

Crop rotation means growing different crops each year on the same field.

Growing the same crop year-after-year increases root diseases, insects, and weeds, and reduces yields.

Benefits of crop rotations:

- Reduces soil borne diseases. (Soil borne diseases are plant pathogens that live in the soil)
- Reduces weeds
- Breaks pest cycles (insects, weeds, disease)
- Can improve soil structure

Do not grow strawberries for more than 5 years on the same field.

Ideally, you should rotate out of strawberries for a minimum of 3years to see the full benefits.

You can rotate strawberries with another marketable crop or with a cover crop.

How to Rotate Crops



Rotation design depends on how much land you have.

Good crops to rotate with strawberries:

- Bell bean/pea/vetch or bell bean/oats/vetch mix- reduces weeds and adds nitrogen to the soil.
- Vegetable crops- marketable crops, breaks pest cycle

Do not rotate with tomatoes, peppers, eggplant, and potatoes- they are attacked by the same soil borne diseases as strawberries.

Possible rotation sequences/suggestions:

1. Summer or fall - remove old strawberry plants
2. Fall - plant winter crop of broccoli or cauliflower
3. Spring - cut and disk into the soil
4. Summer/Fall - plant strawberries

OR

1. Late summer- remove old strawberry plants
2. Winter- plant cover crop
3. Spring - cut and disk into soil
4. Summer/Fall- plant strawberries

Resources

Where to purchase cover crop seed and inoculants:

TSL Seed Co.

37331 State Highway 16
Woodland, CA 95695-9353
(530) 666-1239

Ag Service Seeds

35410 Jefferson Blvd.
Clarksburg, CA
(916) 744-1191

Harvey Lyman Ag Services

14301 Railroad Ave
Walnut Grove, CA, 95690
916-776-1744

Lockhart Seed Inc.

3 Wilson Way
Stockton CA 95205
209-466-4401