**Questions asked of almond producers to support an economic analysis of the orchards.**

1. What year was the orchard/block under study put in?
2. What is the name of the farm and if applicable the name of the block studied?
3. What is the texture of the soil on the orchard/block?
   1. Clay
   2. Silty clay
   3. Silty clay loam
   4. Clay loam
   5. Sandy clay
   6. Sandy clay loam
   7. Silt loam
   8. Silt
   9. Loam
   10. Sandy loam
   11. Loamy sand
   12. Sand
4. How many acres is the orchard/block?
5. What are the almond varieties in the orchard/block being studied?
6. Is your orchard certified organic?
7. If your orchard is certified organic, by which organization is the certification?
8. If your orchard is certified organic, for how many years has the orchard been certified organic?
9. What were the results from your huller/processor grade sheet for the orchard/block studied during the study year?
10. What was your total yield (pounds) from the orchard/block under study?
11. What was you average yield over the last 5 years from the orchard/block under study?
12. How do you sell your crop?
    1. Wholesale
    2. Direct sale
    3. Make into value added products (such as almond butter)
    4. Other
13. What was your total revenue from selling just the almonds from the orchard/block during the study year?
14. What was your total revenue from selling value added products made from almonds during the study year?

**Ground cover**

1. How do you manage the ground cover in your orchard?
   1. Mowing
   2. Grazers
   3. Herbicides
   4. Tillage
   5. Floating
   6. Other
2. Do you allow ground cover in your orchard?
3. If you allow ground cover, is it naturally occurring or do you plant a specific mix?
4. If you plant a specific cover crop mix, what do you usually plant (Species)?
5. If you planted a specific cover crop mix, what was the seeding rate?
6. How did you plant it?
7. How much (excluding labor) did you spend on cover crops for the study year in the studied orchard/block?
8. How many people hours did you spend on planting cover crops for the study year in the focal orchard/block? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.
9. Are there ever times when the ground between the tree rows is left bare (no cover crops, no resident vegetation, no mulch, no crop residue)?
10. If there are times when your soil is left bare, how long is this period?

**Hedgerows**

1. On your orchard/block, do you have
   1. Hedgerows
   2. Groupings of flowering plants for beneficials
   3. Do NOT have hedgerows or groupings of beneficials
2. If you have hedge rows or groupings of pollinator plants on your orchard/block what is the approximate percentage of space they take up?
   1. Not applicable
   2. Less than 10%
   3. 10-20%
   4. 20-30%
   5. 30-40%
   6. 40-50%
   7. >50%

**Fertilizer**

1. Do you use synthetic fertilizers?
2. If you use synthetic fertilizers, what is your application rate and name of the products?
3. How much (excluding labor) did you spend on synthetic fertilizers for the focal orchard/block during the study year?
4. How many people hours did you spend on applying synthetic fertilizers for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.
5. Do you use organic certified fertilizers?
6. If you used certified organic fertilizers, what is the application rate and name of the products?
7. How much (excluding labor) did you spend on organic fertilizers for the focal orchard/block during the study year?
8. How many people hours did you spend on applying organic certified fertilizers for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Herbicides**

1. Do you spray synthetic herbicides?
2. If you sprayed synthetic herbicides, what is your application rate and name of the product?
3. How much (excluding labor) did you spend on synthetic herbicides for the focal orchard/block during the study year?
4. How many people hours did you spend on applying synthetic herbicides for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.
5. Do you spray organic herbicides?
6. If you sprayed organic herbicides, what is your application rate and name of the product?
7. How much (excluding labor) did you spend on organic herbicides for the focal orchard/block during the study year?
8. How many people hours did you spend on applying organic certified herbicides for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Insecticides**

1. Do you spray synthetic insecticides?
2. If you sprayed synthetic insecticides, what is your application rate and name of the product?
3. How much (excluding labor) did you spend on synthetic insecticides for the focal orchard/block during the study year?
4. How many people hours did you spend on applying synthetic insecticides for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.
5. Did you spray organic certified insecticides?
6. If you sprayed organic insecticides, what is your application rate and name of the product?
7. How much (excluding labor) did you spend on organic insecticides for the focal orchard/block during the study year?
8. How many people hours did you spend on apply organic certified insecticides for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Fungicides**

1. Do you spray synthetic fungicides?
2. If you sprayed synthetic fungicides, what is your application rate and name of the product?
3. How much (excluding labor) did you spend on synthetic fungicides for the focal orchard/block during the study year?
4. How many people hours did you spend on applying synthetic fungicides for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.
5. Did you spray organic certified fungicides?
6. If you sprayed organic certified fungicides, what is your application rate and name of the product?
7. How much (excluding labor) did you spend on organic certified fungicides for the focal orchard/block during the study year?
8. How many people hours did you spend on applying organic certified fungicides for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Boron**

1. Do you use boron?
2. If you applied boron, what is your application rate and name of the product?
3. How much (excluding labor) did you spend on boron for the focal orchard/block during the study year?
4. How many people hours did you spend on applying boron for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Compost**

1. Do you use compost?
2. If you applied compost, what is your application rate and name of the product?
3. How many years have you applied compost?
4. How much (excluding labor) did you spend on compost for the focal orchard/block during the study year?
5. How many people hours did you spend on applying compost for the focal orchard/block in the study? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Manure**

1. Do you use manure?
2. What kind of manure do you use?
   1. Chicken
   2. Cow
   3. Horse
   4. Sheep
   5. Goat
   6. Other
3. If you applied manure, what is your application rate?
4. How many years have you applied manure?
5. How much (excluding labor) did you spend on manure for the focal orchard/block during the study year?
6. How many people hours did you commit to spreading manure on the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Gypsum**

1. Do you use gypsum?
2. If you applied gypsum, what is your application rate and name of the product?
3. How many years have you applied gypsum?
4. How much (excluding labor) did you spend on gypsum for the focal orchard/block during the study year?
5. How many people hours did you spend on applying gypsum for the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Green sand**

1. Do you use green sand?
2. If you applied green sand, what is your application rate and name of the product?
3. How many years have you applied green sand?
4. How much (excluding labor) did you spend on green sand for the focal orchard/block during the study year?
5. How many people hours did you spend on applying green sand for the focal orchard/block during the growing year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Mulch**

1. Do you use mulch (This includes chipping the tree pruning’s from your orchard and leaving the chippings as mulch on your orchard floor?
2. If you applied mulch, what is your application rate and name of the product?
3. How many years have you applied mulch?
4. How much(excluding labor) did you spend on mulch for the focal orchard/block during the study year?
5. How many people hours did you spend on applying mulch to the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Irrigation**

1. What type of irrigation system do you use?
2. Who is your water supplier?
3. How much water did you use for the focal orchard/block during the study year?
4. How much did you spend on water for the focal orchard/block during the study year?

**Mowing**

1. Do you mow the orchard/block during the study?
2. If you mow your orchard/block in the study, how often did you mow?
3. To what height did you mow the ground cover?
4. When you mow, do you leave the residue on the orchard floor?
5. What type of mower did you use?
6. How many people hours did you spend on mowing the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Tillage**

1. Do you till between your tree rows?
2. If you till your planting bed, to what depth do you till it?
   1. 0-2”
   2. 2-4”
   3. 4-6”
   4. 6-8”
   5. 8-10”
   6. 10-12”
   7. 12-14”
   8. 14-16”
   9. 16-18”
3. If you till, how often do you till?
4. If you till, what type of machine did you use?
5. How many people hours did you spend on tilling the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Floating**

1. Do you float between your tree rows?
2. About how many people hours did you spend on floating for the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Grazing and Other Potential Sources of Income**

1. Did you graze the chickens, or plant a cash crop between the rows early in the season?
2. How much income?
3. If you made other income on your almond acreage, on much acreage did this occur?
4. What form did this additional income take? For example, did you make money from harvesting chickens, eggs, or a cash crop?
5. Do you use grazers between the tree rows in the focal orchard/block that was studied?
6. If you use grazers, which species?
   1. Chickens
   2. Goats
   3. Sheep
   4. Cows
   5. Rabbits
   6. Other
7. How many head of livestock?
8. How long was the focal area grazed?
9. How often did you move the animals?
10. How long did the grazed area rested between grazing events?
11. Were the animals treated with any pesticides?
12. How much (excluding labor) did you spend on grazers for the focal orchard/block during the study year?
13. How many people hours did you spend on managing grazers in your orchard? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Compost tea**

1. Do you use compost tea?
2. How often did you apply the tea?
3. Did you use compost tea as a:
   1. Foliar application
   2. Soil
   3. Fertigation
4. How much (excluding labor) did you spend on compost tea for the focal orchard/block during the study year?
5. How many people hours did you spend on making and applying compost tea in your orchard? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Burning**

1. Did you use fire to burn weeds from the tree rows?
2. If you burned, how often did you burn the focal orchard/block during the study year?
3. How much (excluding labor) did you spend on propane for burning during the study years.
4. How many people hours did you spend on burning in your orchard? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Biocontrol**

1. Did you use any forms of biocontrol
2. What were these forms of biocontrol?
3. How much (excluding labor) did you spend on biocontrol agents for your focal orchard/block during the study year?
4. How many people hours did you spend on using biocontrol agents in your orchard? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Winter Sanitization**

1. Did you winter sanitize the orchard/block during the study year?
2. About how many people hours did you spend on winter sanitization for your focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Harvest**

1. At harvest do you shake your almonds directly onto the orchard floor?
2. If you do not shake your almonds onto the orchard floor, what do you shake them on to? For example, a tarp or a modified pistachio harvest.
3. About how many people hours did you spend on harvesting almonds for your focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.

**Other Practices and Testing**

1. Did you utilize any management practices in your orchard/block not mentioned in the survey? If so, please list along with how much you spent on those practices (materials wise) and the people hours it took to complete those practices.
2. Did you do any soil, leaf, or pest presence testing in the orchard/block that was studied.
3. Please list the type of testing you did and the frequency.
4. How much (excluding labor) did you spend on testing the focal orchard/ block in question (lab fees, shipping, etc.)?
5. How many people hours did you spend on testing the focal orchard/block during the study year? This will be broken into a per acre rate, using a constant wage rate for all the farms in the study.