

# CLIENT GUIDELINES

## Field Sampling for Pesticide Analysis

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The information in this guideline is being provided to you as a resource to enable you to develop a sampling plan for your operation prior to sampling and sending your sample to PrimusLabs.com for analysis. This is not a complete procedure however, but it is based upon the requirements of FDA's Pesticide Analytical Manual and 40 CFR Part 180.

*The analytical results for these samples are representative only of the actual sample sent to PrimusLabs.com (please see the Disclaimer of Warranties provided with the final approved results or on our web site – [www.primuslabs.com](http://www.primuslabs.com)).*

### General Information:

1. A maximum of 50 acres can be included in one sample. If the field to be sampled is greater than 50 acres, it must be split as necessary such that no one sample includes more than 50 acres.
2. If a field is traversed by a road, whether paved or unpaved, greater than 8 feet wide, then the field shall be treated as two separate fields and two samples must be taken. Contact the laboratory, prior to sampling, if you discover this situation.
3. All samples shall consist of 20 sub-samples, taken randomly throughout the entire plot to obtain a representative sample of the entire plot.
4. The sampled commodities shall be trimmed as they would be found in a retail establish. All questions with regard to how a commodity should be sampled shall be checked to ensure compliance with the requirements of the 40 CFR Part 180.

### Sampling:

1. Enter the field within two to ten feet of the corner you have chosen as the start point.
2. Proceed in a zigzag pattern through the field ensuring that the sample is representative of the entire field.
3. The sample shall consist of 20 sub-samples. Each sub-sample shall be of sufficient quantity to ensure that the attached commodity list requirements (see Attachments A, B and C) have been met.
4. Place each sub-sample into a polyethylene sample bag (double bag if necessary) and seal the bag.
5. Ensure that each sample is specifically identified.
6. Place the sample in a cooler with ice packs for transportation to the laboratory.

## Attachment A

### Commodities Sampled Whole or By the Head

Commodity	Sub-Sample Instructions <sup>1</sup>	H or Q <sup>2</sup>
Avocado	Select 1 mature avocado	N
Bok Choy	Cut at ground level, remove first 3 outer layers of leaves	Y
Broccoli	Cut from stalk about 6" below the florets, remove any leaves	N
Cabbage (Green,Red,Savoy)	Cut at ground level, remove outer leaves as needed	Y
Cantaloupe	Cut from stem and brush off all soil (do not use any liquid)	Y
Cardoon	Cut at ground level, remove leaves from the bottom area and then trim off the top portion where it starts to leaf out	Y
Cauliflower	Cut as close to the head as possible, remove the leaves, if heads smaller than 4" in diameter, select 2-3 to ensure sufficient sample volume	Y
Celery	Cut at ground level, remove spreading outer ribs and trim off the top portion where it starts to leaf out	Y
Corn	Select an ear, leave husk in place, select from different stalk locations	N
Daikon	Select mature daikon, trim off the leafy part, brush off all soil, if less than 5" take entire daikon, if greater than 5" cut as needed to ensure a 5" – 8" section, alternate sections taken when cut	Y
Eggplant	Select 1 mature eggplant	N
Endive	Cut at ground level, remove roots and damaged or dirty leaves (usually grown and sampled with Escarole)	Y
Escarole	Cut at ground level, remove roots and damaged or dirty leaves (usually grown and sampled with Endive)	Y
Fennel (Anise)	Cut at ground level, remove spreading outer ribs and trim the top portion where it starts to leaf out	Y
Gailan (Choy Sum)	Cut at ground level, brush off all soil, leave whole plant intact	N
Honeydew Melon	Cut from stem and brush off all soil (do not use any liquid)	Y
Kale (Oriental)	Cut at ground level, remove roots & damaged or dirty leaves	Y
Kohlrabi	Cut at ground level, shake off all soil, leave whole plant intact	N
Leeks	Pull the leek, trim roots, shake off all soil, trim the tops to no more than 6" of leaves, remove outer 2 leaves to expose white portion of the leek	N
Lettuce (Butter,Boston,Bibb)	Cut at ground level, remove damaged or dirty leaves (2 layers maximum)	N
Lettuce (Head, Iceberg)	Cut at ground level, remove outer wrapper leaves, shake off all soil	Y
Lettuce (Red & Green Leaf)	Cut at ground level, remove 2 – 3 layers of outer leaves	N
Lettuce (Romaine)	Cut at ground level, remove damaged or dirty leaves (2 layers maximum)	Y
Mango	Select 1 mature mango	N
Napa Cabbage	Cut at ground level, remove first 3 layers of leaves	Y
Radicchio	Cut at ground level, trim roots, remove all but 2 layers of outer leaves	Y
Romanesco	Cut from stalk about 5" below the flowers, remove any leaves	N
Watermelon	Cut from stem and brush off all soil (do not use any liquid)	Y

<sup>1</sup> Sub-Sample Instructions – this apply to each of the 20 sub-samples taken in 1 sample.

<sup>2</sup> H or Q – an Y indicates that the commodity may be cut into halves or quarters based upon the size of the commodity. An N indicates that the commodity must be left whole. When cutting products such as lettuces and cabbages, the core or butt shall be left whole.

## Attachment B Commodities Sampled By Count

Commodity	Sub-Sample Instructions <sup>1</sup>	Count per Sub-Sample
Bell Peppers	Select mature peppers from different areas on each plant	1 – 2
Brussels Sprouts	Select mature, fresh sprouts from different areas on each plant	4
Chives	Cut at ground level, shake off all soil, remove all dead or dirty leaves	1 Bunch
Cilantro	Cut at ground level, shake off all soil, remove all dead or dirty leaves (do not use any liquid)	1 Bunch
Cucumber	Select mature cucumbers, shake off all soil, remove all leaves	2
Grapes	Select ripe grapes, select from different areas on each vine	1 Bunch
Onions (Bulb)	Select mature onions, shake off all soil, trim the roots and stem	1 - 3
Radishes	Select mature radishes, shake off all soil, keep leaves intact	Bunch of 10
Strawberries	Select mature, ripe, undamaged strawberries	5 (min.)
Summer Squash (Yellow, Zucchini)	Select mature squash, cut stem close to the squash, remove the flower, shake off all soil	1 - 2
Tree Fruit	Select 1 mature fruit from the top, center and lower sections of each tree.	3

<sup>1</sup> Sub-Sample Instructions – these instructions apply to each of the 20 sub-samples taken in 1 sample.

### Attachment C Commodities Sampled by Weight

Commodity	Sub-Sample Instructions <sup>1</sup>	Total Weight <sup>2</sup>
Artichokes	Cut mature artichokes at their base, do not include leaves, select several artichokes to ensure total sample weight	10 lbs.
Beets (Table)	Pull beets, gently brush off all soil (do not use any liquid), keep leaves intact, select 1 – 3 beets to ensure total sample weight	10 lbs.
Carrots	Pull carrots, shake off all soil, trim off the green tops, select 2 – 3 carrots to ensure total sample weight	10 lbs.
Collard Greens	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.
Dandelion Greens	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.
Fava Beans	Sample bean pods from various areas of the plant, select a minimum of 5 pods to ensure total sample weight	10 lbs.
Green Beans	Sample mature beans from various areas of the plant, select a sufficient number of beans to ensure total sample weight	10 lbs.
Green Onions	Pull bunch, shake off all soil, remove dead and damaged leaves, select a large enough bundle to ensure total sample weight	5 lbs.
Kale (Garnish)	Sample leaves from various areas of the plant, sample only fresh, undamaged leaves, select a minimum of 4 leaves per plant to ensure total sample weight	5 lbs.
Mint	Cut stalks from various areas of the plant, sample only fresh, clean leaves, select a sufficient number of stalks to ensure total sample weight	5 lbs.
Mustard Greens	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.
Parsley	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.
Peas	Sample mature bean pods from various areas of the plant, select a sufficient number of pods to ensure total sample weight	5 lbs.
Peppers (Non-Bell)	Sample mature peppers from various areas of the plant, cut stem close to the pepper, select a sufficient number of peppers to ensure total sample weight	5 lbs.
Snap Beans	Sample mature beans from various areas of the plant, select a sufficient number of beans to ensure total sample weight	10 lbs.
Snow Peas	Sample mature bean pods from various areas of the plant, select a sufficient number of pods to ensure total sample weight	5 lbs.
Spinach	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.
Swiss Chard	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.

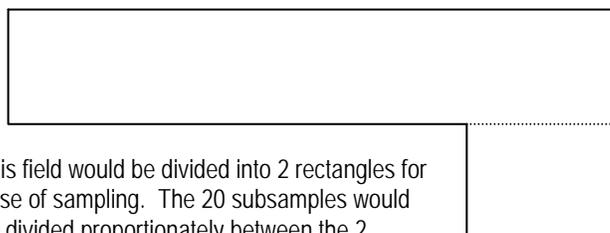
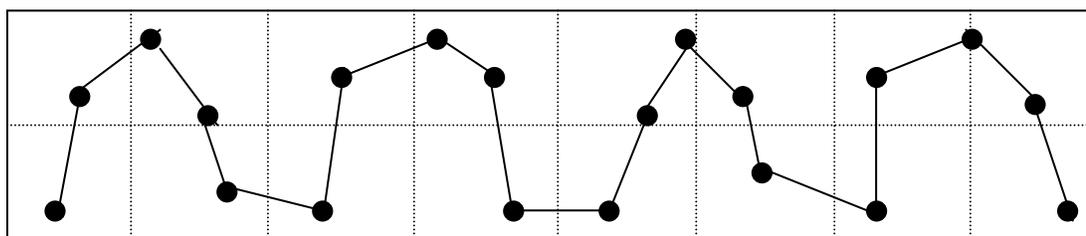
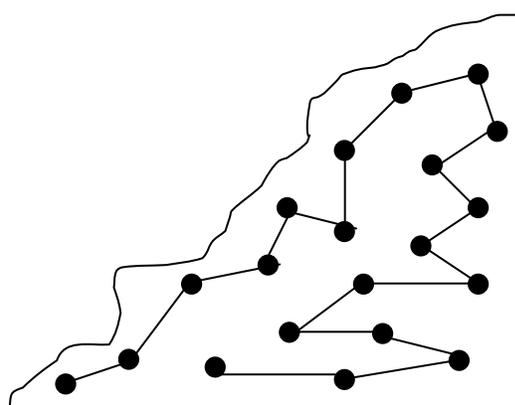
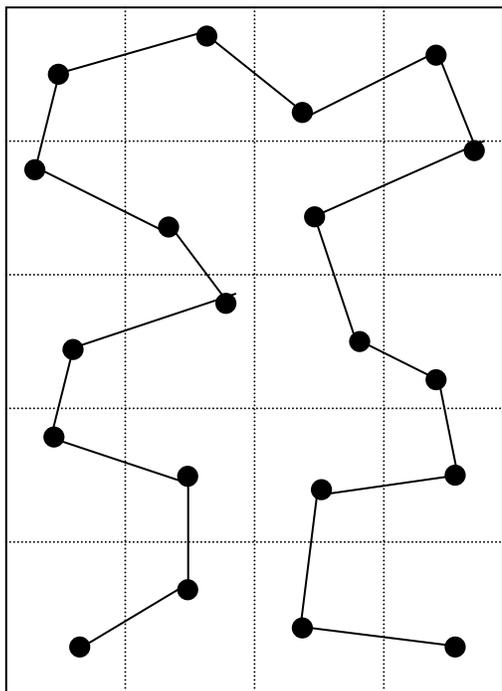
**Attachment C (cont.)  
Commodities Sampled by Weight**

<b>Commodity</b>	<b>Sub-Sample Instructions<sup>1</sup></b>	<b>Total Weight<sup>2</sup></b>
Tomatillos	Sample mature tomatillos from various areas of the vine, select a minimum of 3 to ensure total sample weight	5 lbs.
Tomatoes (Cherry, Grape)	Sample ripe, undamaged tomatoes from various areas of the vine, select a minimum of 5 to ensure total sample weight	5 lbs.
Tomatoes (Other than Cherry or Grape)	Sample ripe, undamaged tomatoes from various areas of the vine, select a sufficient number to ensure total sample weight	10 lbs.
Turnip Greens	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.
Watercress	Cut bundle at ground level, shake off all soil, remove dead or dirty leaves, select large enough bundle to ensure total sample weight	5 lbs.

<sup>1</sup> Sub-Sample Instructions – these instructions apply to each of the 20 sub-samples taken in 1 sample.

<sup>2</sup> Total Weight – this is the minimum weight needed for analysis, each of the 20 sub-samples shall consist of a sufficient quantity of the commodity to obtain the total sample weight necessary.

### ATTACHMENT D EXAMPLES OF SAMPLING PATHS THROUGH VARIOUS FIELD CONFIGURATIONS



This field would be divided into 2 rectangles for ease of sampling. The 20 subsamples would be divided proportionately between the 2 sections.