

Appendix B: Contacting and Selecting Farmworkers

a) A farm worker qualifies to participate in the NAWS (eligible), if he/she...

1. **WORKS IN** any type of crop agriculture in the United States. . This includes “crops” produced in nurseries.
2. **WORKS IN** the production of plants or flowers (including work done in nurseries like planting, cultivating, fertilizing, grafting and seeding).
3. **HAS WORKED IN** the last 15 days, at least one day for 4 hours, for the contacted employer, and meets any of the criteria mentioned above.

b) A worker cannot participate in the NAWS (ineligible) if he or she...

1. Was interviewed by NAWS within the last 12 months in the same location.
2. Is an “H-2A worker.” H-2A is a program similar to the “braceros”. . An H-2A worker is a foreigner who is in the United States on a temporary work visa to work for a specific agricultural employer or association of agricultural employers for a specific period of time (less than a year). . At the end of the period, the worker returns to his/her respective country.
3. Works exclusively with livestock (animals: such as bees, horses, fishes, pigs, cows, etc.).
4. Has not worked for the contacted grower at least one day for 4 hours or more in the last 15 days.
5. Does “non-farm work” for the employer (mechanic, sales, office, etc.).
6. Is a family member of the grower or employer and does not draw a salary like other farmworkers.
7. Is the grower or employer, or contractor.
8. Is a sharecropper that makes all operational decisions such as when, where and how to plant, harvest, etc.
9. Works for a packinghouse or cannery (packing or canning agricultural products) outside of the ranch. . **Note:** Workers who are packers or canners can be eligible for the NAWS study if they satisfy the following two requisites:
 - a) the canning or packing plant is adjacent or located on the farm, **AND**
 - b) at least 50 percent of the produce being packed or canned originated from the ranch of the contacted grower.
10. Works for a landscaping company that just sells, installs, maintains or preserves trees or plants; this includes the planting of ornamental plants and placement of sod.

Whenever a worker does not qualify to participate, be gracious, thank him/her for their time, and proceed to the next worker.

c) Number of interviews per grower

The Grower List indicates the total number of interviews allocated for your

assigned county. . **NEVER** can the *total county* allocation be completed by interviewing workers from *one single employer*. . If this appears likely to happen, call the office for instructions.

The table below shows the maximum number of interviews that can be completed at each grower based on the county’s allocation.

If the County/cluster allocation is...	Maximum number of interviews per grower
25 or fewer	5
26 to 40	8
41 to 75	10
More than 75	12

d) Locating the Workers

Once you get permission from the Grower/Employer (and you have documented the number of employed workers) ask the Grower/Employer where you can find the workers. . If they are in different locations, ask the Grower/Employer: “how many workers are in each location?” Also, ask the Grower/Employer (or supervisor assigned by employer) for the best time and location to meet with them.

Workers’ Locations

The best time to contact workers

Unless the Grower/Employer gives you permission to speak with his/her employees during working hours, do not make any contacts or appointments or try to interview the workers during their work hours.

Changing work locations

Once the Grower/Employer gives you permission to contact the workers, try to complete your contacts and interviews on the same day the grower gave you permission. . You should be aware that from day-to-day it is common to find that workers in the field change location, and new workers can be in the same field on a different day.

The location of the field is not in the assigned county

If the location of the field or operation of the farm is located outside of the designated county, you **cannot interview** those workers. The farmworkers must be physically working in the NAWS assigned county for the particular cycle. That is, it is not unusual that the same Grower/Employer may have farmland and workers in two different counties.

e) Worker Selection

Overview

Once you receive permission to interview the workers, the next step is to select the workers. The sampling rules for selecting workers vary depending on the following questions:

Question: Does the employer have more workers than the number of workers allowed to be interviewed per farm in this county?

Answer: **No.** Then, all workers are sampled. See Approach 1 below.

Answer: **Yes.** Then there will be a worker selection process and additional questions to answer.

Additional Question: (Only if the answer was “Yes” to the first question), Can the workers all be included in one lottery?

Answer: **Yes.** Then proceed with the lottery. See Approach 2 below.

Answer: **No.** Then you have a two-stage selection process. You will need to do crew/group selection (Approach 3 below) before conducting worker selection; or you may have a special situation (Approach 4 below).

It will turn out that based on the answers to the two questions above; your worker selection approach will be one of the following:

Approach 1. All workers sampled: If the grower is small enough that there are **the same or fewer workers than the maximum interviews allowed** (the grower size is less than or equal to the maximum allocation for that location) then the goal is to interview all workers or as many as possible at that grower. Since all workers are selected, the sampling process is one of accounting for all of the workers: Which ones were interviewed, did any refuse, who was unavailable and why? Since all workers are selected, you have considerable flexibility in terms of how to approach the workers, as a group, individually, over multiple sessions. The sampling rules are easy – take all and account for them. Thus, your challenges here may be logistic. Note that this type of approach may also be used as the second stage of sampling worker selection after a crew has been selected.

Approach 2. Lottery: If the grower has **more workers than you are allowed to interview** then you must select among the workers randomly. The focus of sampling will be on how you selected the workers that were interviewed. There is less flexibility because you must select the workers using a structured process that allows all workers to have a chance to be selected. Usually, this is a lottery. The focus of the sampling form is on describing this process so that workers can have the correct sampling probabilities. This means that the workers can fairly represent others in the final NAWS reports. (Yes,

we do use every piece of information you write on the sampling forms and there is a reason behind everything you fill out.) Note that this type of approach may also be used as the second stage of sampling after a crew has been selected.

Approach 3. Crew selection: When there are more workers at a farm than the interview allocation and the workers cannot all be part of a single lottery, you will generally have to select one group of workers. This often happens at very large farms where workers are organized into separate crews and the crews are spread out across fields or at different locations in the county. The need to select a group can also happen on a small farm when there are logistical hurdles to including all workers in a single lottery. In the crew/group selection, sampling is a two-stage process. Once you have selected a crew/group, the second stage will be worker selection within the chosen crew/group. You may have to do a lottery if the number of workers in the crew/group is larger than the number of interviews allowed at the grower. Alternatively, if the number in the crew/group is less than that, the goal will be to interview all workers in the group or crew. In other words, the selection of a crew or group will have to be followed by a process similar to Approach 1 (if all workers in the crew/group are selected) or Approach 2 (if there will be a lottery).

Approach 4. Special situations: Special situations may exist when there are more workers than you are allowed to interview. Note that there are no special situations if the goal is to interview all the workers. Special situations may include employers where you have hidden objects, a slow drip or other complicated logistics. When you encounter a special situation, you will need to follow the rules outlined in this manual so that you select workers in a structured way and record the information on the grower form so that we can calculate the correct sampling probabilities in NAWS reports.

The remainder of this section will explain how to conduct the four approaches above and how to fill out the sampling sheet.

Preparation for worker selection

Before you go to the site, make sure you have:

- A set of “Call for Health” tags with colored stickers on them (at least 12 for each site you expect to visit)
- A set of “Call for Health” tags with no stickers (at least 50 for each site you expect to visit).
- A paper bag (or some other dark container to use to hand out the tags, so that workers can pull the tags without seeing what they are getting.)
- Sufficient supplies to complete surveys with the workers that are selected
- A Sample Tracking Sheet for each site you expect to visit.

If for some reason, you find yourself without enough supplies, you can replace the tags with scraps of paper. If you do not have stickers, you can put X's on the papers to represent colored stickers.

You need to know the maximum number of workers you can interview at each grower in your assigned county.

Table B.1 Maximum number of interviews per grower

If the County/cluster allocation is...	Maximum number of interviews per grower
25 or fewer	5
26 to 40	8
41 to 75	10
More than 75	12

Selecting Workers

A correct sampling process and correct sampling information sheet are as important as getting the workers' answers to the survey. The information on the grower and worker sampling forms is how we know what percent of farmworkers gave each answer.

The worker sampling process and sampling form are to ensure two things:

- We get an unbiased sample of workers for the NAWS. This includes using lotteries and other techniques for ensuring unbiased results where required. Call the office when the techniques you learned do not seem to apply.
- All workers that are interviewed have a sampling probability that correctly identifies the number of farmworkers they represent. When you take 12 out of 500, five out of twelve or all the workers at the grower, the probability of being selected is different. What you write on the sampling sheets is used to calculate those probabilities and correctly represent farmworkers for NAWS reports.

Principles of a good worker selection:

A good selection is:	How to do this:
Unbiased.	Follow the rules and treat workers equally. Do not attempt to include or exclude specific workers based on criteria outside the worker selection process (e.g., grower wants "only the Mexicans" interviewed).
All workers have a known chance of being included.	Fill out the form completely. Write down anything unusual or extra in the comment boxes.
The process appears fair to those involved.	Be transparent and explain the process to the grower and worker. Accommodate fairness

	but document who and why (e.g., note on questionnaire and sampling form that interviewed a sixth worker at grower request when lottery selected five out of six workers.)
If not all workers are selected then the process of sampling workers is random.	Follow procedures outlined in this document. They include practices that randomize the chance of being included (e.g., lottery, every other row, and slow drip).

Starting the process: Determining the number of workers at the grower

At the top of the sampling form, fill out the information that identifies the worker selection:

- County name
- Date
- Grower Name and ID
- List Number
- Cycle number

At the end of the process, you will enter the number of interviews completed here as well.

Number of Employees

Getting information on the number of employees can be easy or complicated depending on the grower’s situation. The NAWS sampling definition is the number of employees in the selected COUNTY for the farm on the SPECIFIC DAY you are there. The NAWS sample does not include workers who are on H2A visas. Workers must be involved in crop production or onsite packing. For example, do not include individuals who are solely mechanics or secretaries.

Often the number of employees is straightforward. The employer has no H2A workers and the employer gives you a count of the workers there at that time. However, the number can be complicated owing to two words in the definition:

Workers in the selected COUNTY means that the employee count does not include employees working in locations outside that county. Therefore, the number is not the employers’ total workforce from all locations, but just those that work in locations in the selected county. For workers with multiple worksites in the selected county, the number of employees includes workers at other farms/locations that are in the selected county. A grower can only have his or her workers interviewed once per cycle. Any other listing of the same grower at alternate locations will be ignored for this cycle. This information is noted as such on the grower list the duplicate listings are marked “inactive” at the end of the cycle.

Workers TODAY means workers that are present on the day you are there. Sometimes, the grower may want to tell you the usual number of workers or the total number of hired workers. The number you should write down is the actual number at work on that day. We do not want the number of workers that are there when it is not raining, or who will be there in a few days when peak season starts.

On the sampling sheet, record the actual number of employees that potentially qualify for the NAWS in that the employees work on approved NAWS crops and are non-H2A, the number of H2A employees, and the sum of those two. The number of employees should equal the number of workers who potentially qualify plus H2A workers. If there are any other adjustments, include these in the comments. If there is anything else to say about the total number of workers, write that in the comments field.

Here are some examples of complications:

Situation	What to do
It has been raining and not all the workers are there. They are at home.	Write down the number of workers on site at the time you are there.
Some workers have already left for the day.	Make a note of the number of workers there that day and the number that were there when you arrived.
Some workers are on vacation.	Do not include them in the total
Some workers are in the labor camp.	This depends on whether you will be interviewing in the labor camp. See more instructions below. You may need to call the office.
The grower is uncertain about the actual number of workers.	Write down the best estimate you can get. If need be, ask the supervisor or contractor.
The grower is uncertain about the number of workers and the actual number turns out to be different.	Write down the number that is provided by the most knowledgeable person. That may be the supervisor or the contractor. We want the most accurate information
The grower gives you a number that is a rounded number – 200, 500, or 2,000.	Make sure the number is for the workers in the county and not some larger total and then write it down. It is the best estimate you have.
The grower has a contractor.	Ask the contractor for the number of workers working that day. Add to that any workers hired by the grower. You may have to get separate estimates (e.g., contractor supplies 20 field workers; grower hires five workers in the shed).

When in doubt, call the office. Write down all the information the grower gives you to the extent that you think it clarifies the situation. For example, it was raining, six shed workers were there, another five field workers were not called in today. The correct number of workers in this situation is six.

Asking the grower about how workers are organized – crews/groups

The next thing you will need to ask the grower is how the workers are organized. Ask the following questions:

- Are there multiples crews or groups of workers?
- Is it possible to access all the workers?

Workers can be organized many ways. In many cases, having crews and/or groups will mean that you cannot access all the workers for worker selection purposes. In these situations, you will have to select one crew or group. However, at small growers, where all workers are being interviewed, it may be that you can access a group of workers in the shed or greenhouse and another group in the field.

An alternative is possible. The grower may say he has one large crew spread across several fields. In that case, you would likely have to divide the workers into groups if there was a lottery situation.

Write down on the sampling sheet under the information on crews/groups, what you learned about how the grower's workers are organized. Under "Number", enter the number of crews/groups. If there is only one, then enter "1". If there is more than one, then describe how the workers are broken up into crews or groups. Crew selection will be talked about below and instructions on how to fill in those sections of the sampling form are found there as well.

Determining what approach to use

Once you know how many workers are at the grower, and how they are organized, you can select a sampling approach. You will most likely find yourself in one of four main workers selection situations. There are of course exceptions and complications; and in those cases, you should call the office.

Approach 1. Interview all workers. If the number of workers is less than the maximum interviews per grower (determined in Table B.1 above), then all workers are selected for interviewing. The exception is if the workers are organized in such a way that you can only access a portion of them and you must do a crew selection. This is likely a rare event.

Approach 2: Conduct a lottery/raffle. There are more workers than the maximum number of interviews allowed so only some workers can be selected. In this case, you

will conduct a lottery. If a lottery is not feasible, see special situations below for other techniques such as selecting workers from random rows.

Approach 3: Crew selection. If the employer has multiple crews that cannot be accessed all together, select one of the crews using an unbiased method such as flipping a coin if there are two crews, or using slips of papers in the bag if there are more than two crews. Once a crew is selected, compare the number of workers in the selected crew with the maximum interviews per grower to determine which of the following applies:

Approach 3a: Interview all members of the selected crew. If there are fewer workers than the maximum number of workers, interview all members of the selected crew.

Approach 3b: Conduct a lottery with the selected crew. If there are more workers in the selected crew, conduct a lottery to see which crew members to interview. If a lottery is not feasible, see special situations below for other techniques such as selecting workers from random rows.

Approach 4: Special situations. If there are more workers than the maximum number of interviews and none of the other approaches seems to fit, you may need to use one of the special situation techniques that may include, for example, hidden objects or slow drip as further described below.

The snapshot: deciding on who is participating in worker selection

For each of these sampling approaches, you will need to make a decision about which workers should be included in the selection process. We know that workers are fluid and dynamic, they are arriving, departing, moving to different work sites, and/or taking lunch, bathroom, water and shade breaks. To select workers, you need to freeze the moment in time at which you decide who is included in the worker selection. We call that the snapshot. To calculate the correct worker sampling probabilities, it is important to keep track of both of these things.

The characteristics of the snapshot are that it is a **point in time**. At that moment, you decide what workers are **visible in the viewfinder**. Some workers may be outside your field of view and will be excluded. They may be working too far away, or have gone on an errand for the supervisor while you were conducting the lottery. The snapshot also indicates that a **decision** has been made and recorded and that this decision can **only be made once**. For the remainder of time at that grower, you have to stick to that decision.

On the sampling form, you will have to record three things 1) the number of workers you will select from 2) the number of workers you were not able to include in the selection and 3) what was the reason some workers had are excluded from the selection.

Depending on the sampling approach, the timing of the snapshot and who is in the snapshot will vary. The next sections describe each sampling approach in detail and provide instructions for filling out the sampling information sheet. All of the workers at the grower should be accounted for on the Sample Tracking Sheet, either as part of a crew selection or as part of the snapshot.

Approach 1. Interview all workers.

Whenever the number of workers is the same or fewer than the maximum number of interviews per grower, then interview all workers at the grower. This is a common situation as the NAWS grower list includes many small growers.

In this approach, the selection process is fluid because the goal is to get all the workers. The things that are permitted under this approach:

- Since you are interviewing all workers, workers who arrive after interviewing has started can be included. Workers who are already gone for the day and cannot be found should have been excluded from the total.
- Workers who are not visible to you when you start interviewing can be included. If you reasonably can encounter them before you leave the work site, you may include them in the count and interview them. This might include workers in the shed and at a greenhouse or easily accessible field or other work site, workers at the nearby labor camp or a worker off on an errand.

Ideally, the number of workers who are in the snapshot should be the same as the number of workers at the grower. A worker you did not encounter is considered not in the snapshot. An example of a worker you could not encounter might include a tractor operator or irrigator driver who is working far away and will not return in time to be interviewed or is going straight home from that site. (If even a small group of workers is at another worksite, and will not be accessible, you may need to consider crew sampling).

For Approach 1, the key characteristics of the snapshot are as follows.

Decision: The worker selection decision is to interview all the workers present since the number of workers is the same or fewer than the maximum number of interviews per grower,

Point in time: The snapshot starts when the interviewer begins approaching and interviewing workers. This snapshot uses a time-lapse technique, as the timeframe to add workers remains open until all workers present are interviewed.

Visible in the viewfinder: Some workers may be outside your initial field of view and still be included so long as you eventually can lay eyes on them. Think of this as a panoramic snapshot. Workers can be included even if they are at a nearby worksite or

labor camp, or unseen but reported to be in a greenhouse or similar circumstance. This is possible under this Approach because the number of workers for the grower is the same or fewer than the maximum number of interviews allowed for the grower.

Only be made once. While workers can be added under this approach, Workers cannot be subtracted. As in time-lapse photography, anything present during the time the picture was taken, no matter how briefly, shows up in the finished photo. Moreover, any worker you encountered and who walks away or does not want to be interviewed is a refusal.

In the snapshot section of the Sample Tracking Sheet, you should write down the number of workers in the sampling snapshot. If this number does not equal the number of workers recorded under “Total workers today in this County” then the difference should be recorded as the number of workers that “were not in the snapshot”. Include an explanation of why these numbers differ, focusing on the situation of the worker. For example, “One worker was driving a tractor in a field far away”.

After the interviews are completed, record the number of interviews at the top of the Sample Tracking Sheet and on the line above the lottery grid. Record any ineligible workers encountered. Record any refusals and provide an explanation of the refusals and ineligibles at the bottom of the page.

Approach 2: Conduct a lottery/raffle

This approach is used when there are more workers at the grower than the maximum number of interviews per grower and all the workers can be pitched in a single lottery. (If not, see Approach 3 for crew selection). Workers participate in a lottery or raffle to select who is eligible to be interviewed. The lottery meets the sampling criteria of being unbiased as all workers have an equal chance of selection. In addition, it is fair and is easily understood by workers.

A key factor in this selection is the point of time. The work situation may be very fluid. It is important to determine the timing and location of the snapshot. If many workers have not yet arrived for the day, it may be important to wait a bit for more workers to arrive. Similarly, if you are interviewing workers at lunch, try to figure out when most of the workers are present.

Timing is critical since once you have taken a count of workers and decided on the number of tags to use for the lottery, you cannot change this number. If workers arrive or leave, you cannot change the number of tags in the bag. . **IF YOU HAVE SEEN THE WORKER, THEY MUST HAVE A TAG IN THE BAG**, even if they leave before you “do” the lottery. Once you have put tags in the bag: **NEVER TAKE TAGS OUT OF THE BAG**. It is always better to leave the tags in the bag and write comments.

The key characteristics of the snapshot for a lottery are as follows:

Decision: The worker selection decision is to conduct a lottery with the workers in the snapshot.

Point in time. The snapshot freezes a single moment in time. This should be when you first identify and can count the workers that will be in the lottery.

Visible in the viewfinder. At the moment of the snapshot, what you see is what you get for worker selection. You should put a tag in the bag for all the workers that are in the snapshot. In general, to be included, the worker must be able to be seen and counted. Ideally, this includes all workers at the employer. Any workers that are excluded because they are inaccessible need an explanation. These will generally be workers you did not physically see. If you see a worker, they must get a tag (even if they later walk away or do not participate).

Only be made once. No workers can be added or subtracted after the snapshot is taken. Workers who arrive afterwards should receive an explanation so that they feel it was fair. Workers who refuse to participate in the lottery or who depart after they were counted for the snapshot should have (already had) a tag in the bag and will be included in the accounting of the tags.

In the snapshot section of the Sample Tracking Sheet, you should write down the number of workers in the sampling snapshot. If this number does not equal the number of workers recorded under “Total workers today in this County” then the difference should be recorded as the number of workers that “were not in the snapshot”. Include an explanation of why these numbers differ focusing on the situation of the worker. For example, “One worker was absent performing a task for the contractor at the time of the snapshot”.

Conducting the lottery

Once you have taken the snapshot, conduct the lottery. All workers from the snapshot are gathered together (in one or more groups) to listen to your pitch.

Record the number of workers in the snapshot on line 1 of the lottery grid. Then, use the chart below to determine the correct number of stickered “Call for Health” tags to put into the paper bag:

If the County/cluster allocation is... The maximum number of interviewers per grower and number of stickered tags into the bag per grower

If the County/cluster allocation is...	Maximum number of interviews and put (#) stickered tags into the bag per grower
25 or fewer	5
26 to 40	8

41 to 75	10
More than 75	12

Note: Sample the allocated number of workers at the grower (interviewing those that agree to participate) and if the county allocation is not complete, continue on to the next grower. At the last employer, complete the number of interviews allocated to that grower on the chart – EVEN IF YOU EXCEED THE COUNTY ALLOCATION.

Record the number of stickered tags you put in the bag on Line 2 on the Sample Tracking Sheet.

Next put enough “Call for Health” tags without stickers into the bag so that the total number of tags in the bag equals the number of workers in the snapshot (For example, if there are 20 workers in the snapshot, and you put 5 stickered tags in the bag, then add another 15 tags). Record the number of unstickered tags you put in the bag on Line 3 on the Sample Tracking Sheet.

One interviewer will go around to each worker and have him or her pull a “Call for Health” tag out of a paper bag, while the other speaks to the group.

At the end of the introduction, the speaker will ask everyone to look at their “Call for Health” tags, and ask those who have stickers to come up. Record the number of these workers that you interview on line 7, the number that refuse to be interviewed on line 5b, and the number that are ineligible on line 6 of the Sample Tracking Sheet.

Continue, using the same bag, until you have talked to all groups for that grower.

When you have time, count the number of tags left in the bag (if any) and record this number on Line 4 in the Sample Tracking Sheet. Count the number of stickered tags left in the bag (if any) and record this number in Line 5a in the Sample Tracking Sheet.

Check your arithmetic. The total of lines 5a, 5b, 6 and 7 should match the total number of stickered tags entered on line 2. Lines 2 + 3 should equal line 1.

Approach 3: Crew selection

Crew selection is not that common in the NAWS outside of a few states, however it is important to be prepared. When crew selection is needed, the worker selection process is done in two steps. First, select the crew, and then select the workers within the crew. This will follow the same process outlined above. If there are more workers in the crew than the maximum number of interviews per grower, conduct a lottery. If there are fewer than the maximum number of interviews per grower, interview all the crew members.

Crew selection is usually done when any of these situations occurs:

- Workers are not all in one group and there are more workers than the maximum interviews per grower,
- There is a single group of workers that is too large for a lottery,
- A logistical constraint limits you to selecting a portion of the grower's employees.

One way to think about it is that if all the workers to be interviewed cannot be accounted for in a single snapshot, then you will most likely need a crew or group selection process. If there are more than a small number of workers outside the snapshot, then you likely need a crew selection approach. The Sample Tracking Sheet has to account for all the workers, including those outside the snapshot.

The usual reason for crew selection is that the numbers of workers is more than the maximum number of interviews per grower and all of the workers cannot be accounted for or counted at the same time, so a single lottery is not feasible. An easy way to assess this is whether you can get all the workers in a single snapshot for a lottery. Large employers often already have their workers divided into crews or groups assigned to different fields, greenhouses, barns, etc. Alternatively, you may be interviewing workers housed at different labor camps.

Another situation that happens occasionally is that the workers are organized in a way that does not accommodate a single lottery. In this case, you may have to divide the workers into crews and select one for the lottery. For example, there are 200 workers in a field and it would not be possible to include them all in a lottery.

Crew selection can also take place at small growers. This could happen when there was a logistical reason for not being able to access all the workers and it is feasible to interview only one group. For example, the grower has a couple of workers in a shed and a small group of workers in a field, both locations are far from the office and the grower will allow access to only one work site due to time.

There are two steps to follow when selecting a crew: Identifying the crews and selecting a crew. At each step, it is important to record the process on the Sample Tracking Sheet.

Selecting a crew:

Identifying crews. Previously, you obtained information from the grower on the number of workers and how they were organized. When selecting a crew, you must ask the grower to describe each crew and its size and record that information in the Sample Tracking Sheet. If the grower has a small number of crews, there may be information on each crew. You might record something like "The grower has two crews of eight and one crew of nine workers". Alternatively, there are six workers in the shed and two crews in

the field, one with 15, the other with 10 workers. If the grower has many workers, they may give you some generalized situation such as there are 10 crews of 25 workers each.

At this point, you must accept the grower's word for how many workers are in each crew and write it down. It is likely that the actual number that you find in the field will differ from this number. You can address any discrepancies when you get to the work site and do the snapshot.

Selecting crews with the grower. Once you know the number of crews, you should select one crew. If the grower permits you to select the crew, use a random method: Flip a coin if there are two crews; use slips of paper in the bag if there are more than two crews. You can have the grower select the slip when using slips of paper in the bag.

If, after explaining the need to select crews at random, the grower insists on selecting the crew, using his or her own method, then it is your job to determine whether the grower has made an unbiased selection. If the grower appears to be making a biased selection, try to redirect him to an unbiased selection. For example, if the grower says "Oh you want all the migrants", remind the grower that you want all the workers.

To be unbiased, the grower's selection must be based on something that is arbitrary and not related to the workers characteristics. Often these criteria have an element of convenience for the grower. The grower might select:

- The crew working nearest the office,
- The first crew off work in the afternoon, or
- The crew that takes the next lunch break.

We are assuming that your arrival is a relatively random event and the crew selection criterion is arbitrary resulting in an unbiased crew selection. A good way to test whether the grower's criterion is unbiased is to think about whether the crews are interchangeable. Would you have gotten a different crew had you come at another time? If you had come later in the day, is it likely that a different crew would have been in the lunchroom.

If you think that the grower is trying to steer you to a particular crew and under all circumstances would have directed you to that crew then the decision is biased and you need to move onto the next grower.

Note that even arbitrary and unbiased criterion can result in workers appearing to have selected characteristics. For example, a crew of workers from Jalisco may be in the lunchroom. In this example, you would want to think about whether, on another day, you could have encountered the grower's crew from Michoacán or Oaxaca in the lunchroom. Bias exists if you were directed to this crew specifically because of their characteristics

(they were from Jalisco). That would mean the grower wanted you to interview workers from Jalisco. Bias does not exist if the selection was arbitrary or for the grower's convenience – the grower wanted you to be done quickly and the crew from Jalisco was the next one going to lunch.

Selecting a group from within a large crew

Sometimes the grower's crew is too big to do a single lottery. When this happens, you need to assess how the workers are organized and randomly select a group within the large crew. Begin by dividing the larger group into smaller groups. For example, you could divide a large field with 100 workers into four groups of 25 or three groups of 33 or so. You may not be able to count all the workers in the larger group as they may be moving around. Visually approximating one-fourth or one-third is fine.

Once you have identified the group, select one group using a random or arbitrary method. If you are using an arbitrary method, you need to use it constantly and not adjust it based on the characteristics of the workers. Do not pick the friendliest looking group; rather have a rule based on geography. For example, you always pick the group nearest the upper right corner of the field, or the rows nearest you. Stick to this rule. So long as you are consistently using the rule, the selection will be unbiased. For example, it is hard to imagine that across all the farms you visit, the workers nearest you will more often have certain characteristics (e.g., be healthy, female, or from Texas).

Recording crew selection on the Sample Tracking Sheet.

Once you have completed the crew selection, enter the information on the crew selection on the Sample Tracking Sheet. The following information is needed to understand your decisions and correctly assign the sampling weights:

- Number of crews/groups.
- Number of workers in each crew/group. This should add up to the total eligible workers. If not, add a comment explaining why.
- How was this crew/group selected? Include whether you or the grower selected the crew and explain the method and if necessary, how it was unbiased.
- How were other crews/groups excluded? This is important to get a full picture of whether there might have been bias. Examples might include that other crews were too far away or two crews already left for the day.

Selecting workers within crews/groups

Once a crew is selected, then the workers within the crew are selected. The method to select the number of workers within the crew depends on whether the number of workers in the crew is more than the maximum number of interviews per grower. If there are

fewer workers than the maximum number of interviews per grower, then interview all members of the selected crew, and follow the procedures outlined in Approach 1. On the other hand, if there are more workers than the maximum number of interviews per grower in the selected crew then conduct a lottery to see which crew members to interview. If a lottery is not feasible, see special situations below for other techniques.

Approach 4: Worker Selection-Special situations

If there are more workers than the maximum number of interviews allowed per grower and none of the approaches above seems to fit, you may need to use one of the special situation techniques described below.

- a) **Hidden Objects** is a worker selection method designed for sampling workers in greenhouses, farm labor camps and similar situations where lotteries are not possible because workers' exact locations and number of workers are unknown. A special application of this technique may be appropriate when some workers assemble for lunch and others take lunch in their cars.
- b) A **Slow Drip** is where workers are encountered at irregular intervals over time and cannot be assembled in a group. The classic case is tractor drivers arriving back at the shed in a slow stream.
- c) **Alternative lottery** is a method for selecting workers using a lottery when the grower will not allow the workers to stop work and be assembled for the pitch.
- d) **Systematic sampling** uses intervals and is an alternate to conducting a lottery when workers are hidden among rows (e.g. sample every fourth row).
- e) **Other Situations** may not fit into one of the preceding techniques. In these cases, consult with the office and decide whether you can select an unbiased sample at this grower or whether you should move onto another grower.

a) Hidden Objects.

Before using the Hidden Objects technique, make sure that the situation qualifies. A hidden object situation exists when you cannot see and count the workers to determine how to sample them because:

- The workers are hidden from view by a physical barrier. They may be in cars, vans, greenhouses, barns, or houses in a labor camp.
- The number of workers in the hidden objects cannot be known or even estimated and the number likely varies across objects.

Both these two things must be true. It is often the case that there is uncertainty about whether some objects may be empty (e.g., there are no qualifying workers in a house; there are no workers in some of the greenhouses).

The rules for hidden objects are to randomly select a starting object and then move sequentially among the objects (e.g., from greenhouse to greenhouse). At the first location, count the number of workers. If there are fewer workers than the maximum of interviews per grower allocation, interview all of them. If not, conduct a raffle. If you did not conduct a raffle, move onto the next object and repeat the process until you have either completed the maximum number of interviews per grower. This may be made clearer in the examples below.

Example 1: The grower tells you workers are located in one of three processing rooms in the packing shed. The maximum interview per grower is eight. If possible, randomly select one room to be your starting point. At the first room, there are 14 workers. You do a raffle to get your eight interviews.

Example 2: The grower tells you workers are located in one of eight greenhouses. The maximum number of interviews per grower is 10. You get to the first greenhouse and see there are five workers. You interview the five but you need five more. Then, you flip a coin to decide whether to go to the greenhouse to the right or left. You go to the one on the left (and you will continue in that direction as long as you need to). There are 14 workers in the next greenhouse and you still need five interviews. You do a raffle to get the remaining five.

Example 3: The grower says you have to interview at the labor camp after hours. Your maximum number of interviews per grower is 12. There are five houses and you randomly pick one. At the first house, all the residents work for a different grower. You move on to the next house. At that house, there are 11 residents and one of them is not a worker. You interview the 10 who are eligible and you need two more interviews. You go to the next house and there are six workers, all are eligible. You do a raffle to get the two interviews you need.

A variation on hidden objects occurs when interviewing workers during lunch break when some workers assemble in the lunchroom and others eat in their cars. In this case, there are two types of hidden objects, the lunchroom and the cars. There are two stages of selection. First, select either the lunchroom or the cars. If the maximum number of interviews per grower is not reached at the first type of object (lunchroom or cars), you should move onto the other object. This is done to address concerns about bias, since the survey asks about vehicle ownership and workers eating lunch in the cars may be more likely to own cars than those in the lunchroom.

Lunchroom example: Grower tells you to interview at lunchtime. You need 10 interviews. Some workers are in the lunchroom and others are in their cars. First, decide whether to start with the cars or the lunchroom. You flip a coin and get the lunchroom. There are eight workers in the lunchroom and you interview all eight. You need two more

so you go to the cars. Randomly pick the first car to start with. If there are two in the car and you interview both, you are finished. If there are five workers in the car, do a raffle to select the two you need, or continue in the same direction until you have your maximum interviews per grower.

b) Slow Drip

A slow drip occurs when there are more workers than the maximum number of interviews per grower and the workers are encountered at irregular intervals over time. For this reason, they cannot be assembled in a group. This can happen when workers on a packing line rotate out for breaks one by one or when solo workers, such as tractor drivers, return for a break or for quitting time.

Pick a convenient interviewing location where you will encounter the workers as they arrive. Pitch the survey to workers in the order in which they arrive (first come, first served) until the number of workers you have encountered equals the maximum number of interviews per grower. Refusals cannot be replaced. If you are allowed to interview 12 workers and among the first twelve you encounter you are able to interview 11 and one refuses or evades you, you are done. You cannot select a 13th worker.

Presuming the order in which workers arrive is arbitrary, then this technique results in an unbiased selection. Your arrival is treated as a random starting point and then you take workers in the order they arrive. For example, if two workers already had their break when you arrive, your random starting point will be the third worker. If the break has not started, then the starting point is the first worker.

c) Alternative Lottery: Workers are spread out in field and cannot be assembled for a lottery

Sometimes, even when workers cannot be assembled together for the lottery, it is possible to use a raffle to select workers. This can happen when workers are spread out in a field and the supervisor does not want them to stop work to listen to you as a group. The supervisor will allow you to approach workers individually.

In order to do this type of raffle, you must be able to see and count the workers so that you can place the correct number of tags in the bag. Begin by using the chart below to determine the correct number of stickered “Call for Health” tags to put into the paper bag:

If the County/cluster allocation is...	Maximum number of interviews and put (#) Stickered tags into the bag per grower
25 or fewer	5
26 to 40	8
41 to 75	10
More than 75	12

Record the number of stickered tags you put in the bag on **Line 2** on the Sample Tracking Sheet.

Next put enough “Call for Health” tags without stickers into the bag so that the total number of tags in the bag equals the number of workers at the site. (For example, if there are 20 workers at the site, and you put five stickered tags in the bag, then add another 15 tags). Record the number of unstickered tags you put in the bag on **Line 3** on the Sample Tracking Sheet.

Approach each worker individually, (give your usual introduction) and ask them to pull a tag from the bag. If they have an unstickered tag, go on to the next worker. If they pull a stickered tag then either schedule the interview at a time convenient for the worker, or conduct the interview now. (Note: if one person is conducting an interview, the other can proceed with handing out tags until they get to the next person who draws a stickered tag and is willing to be interviewed). When the first interview wraps up, the first interviewer can collect the bag and proceed with handing out tags to the remaining workers.

Record the completed number of interviews on **Line 7** of the Sample Tracking Sheet.

Before proceeding to the next grower, count the number of tags left in the bag (if any) and record this number on **Line 4** in the Sample Tracking Sheet. Count the number of stickered tags left in the bag (if any) and record this number in **Line 5a** on the Sample Tracking Sheet.

d) Systematic sampling using intervals

There are some occasions where a lottery will not work, but you can use systematic sampling. This technique is unbiased because you are using a rule which is based on intervals (pick every third one, or pick the odd rows).

Begin by counting the number of workers and record that number in **Line 1** of the Sample Tracking Sheet. Then, use the chart below to determine the correct number of interviews to be conducted for that grower:

If the County/cluster allocation is...	Maximum number of interviews and you will need (#) interviews per grower
25 or fewer	5
26 to 40	8
41 to 75	10
More than 75	12

Divide the number of workers by the number of interviews you need. This will give you the “interval” to use in sampling workers. For example, if there are 30 workers and you need five interviews, you will need to sample every sixth worker ($30/5=6$). (If the

numbers do not divide evenly, then round down- for example if there are 34 workers and you need five interviews, you would still have an interval of six.)

In order to ensure that worker selection is completely random, you will also need to start counting from a different number each time you select workers. This is called a “random seed” or random starting point. For the NAWS, the following starting points have been selected, based on days of the week:

If the day is ...	Then start counting for your interval with the... person
Monday	1 st
Tuesday	2 nd
Wednesday	3 rd
Thursday	4 th
Friday	5 th
Saturday	6 th

Once you have determined the “interval” and the “random seed”, start counting workers, beginning with the worker closest to you. (If two workers seem to be equally close to you, count the one on the left first, then the one on the right.) When you reach the “random seed” number, pick that worker to ask for an interview, and continue counting towards your interval number. For example, if today is Wednesday (for which the random seed is 3), and you have determined that you need every sixth worker, you would approach the workers who are 3rd, 9th, 15th, 21st, and 27th closest to you. Sometimes this gets complicated. An alternative is to count off the workers in groups. In this example, you would start at the third workers and begin counting in groups of six. The worker who is counted as the sixth person in each group is included in the sample.

Count and sample workers in one location first, then approach for an interview to avoid workers changing places during the counting process.

Record the number of workers who completed the interview on **Line 7** of the Sample Tracking Sheet. Leave **Lines 2-5** blank.

e) Other Situations

Farming operations vary a lot and there may be situations where the techniques described above will not work. In these cases, you will want to consult with the office and document the situation. If it is possible to select an unbiased sample, then you can proceed. However, if the sample you select would be biased, it is better to move onto the next grower. For example, selecting workers at quitting time may entail selecting workers from a fast moving stampede from the worksite to the parking lot. In this case, try to get the grower to allow you access to workers at another time or location. Having workers streaming in at the start of work is preferable to the stampede at the end of the day.

¶

Sample Tracking Sheet Cycle # _____ ¶

County Name _____ → Date: _____ → Total Completed: _____ ¶

Grower Name _____ · Grower ID _____ · List # _____ ¶

Total workers Today in this County _____ = Qualifying & not H2A: _____ + H2A: _____ ¶

Additional information on number of workers _____ ¶

CREWS/GROUP: Number: _____ → [if only one crew/group then {go to **SNAPSHOT**}] ¶

Number of workers in each crew/group: _____ ¶

How was this crew/group selected? _____ ¶

How were other crews/groups excluded? _____ ¶

SNAPSHOT ¶

How many workers **were in** the sampling snapshot? + _____ ¶

How many workers **were not in** the sampling snapshot? _____ ¶

Explain why some workers **were not in** the snapshot: _____ ¶

Note: Workers in the snapshot plus workers not in the snapshot should equal employer total or crew/group total ¶

Max. Int. per grower (circle): -5 → 8 → 10 → 12 → → ¶

If snapshot is less than or equal to "Max. Int. per grower", Refused _____ · Ineligible _____ · Int. _____ · If snapshot is more than "Max. Int. per grower", continue below. ¶

+

Line ^α	Number of: ^α	α	α
1) ^α	Workers in the "snapshot" (equals tags in the bag) ^α	α	α
2) ^α	Stickered tags put in bag ^α	α	α
3) ^α	Unstickered tags put in bag (lines 2+3 should equal line 1) ^α	α	α
4) ^α	Tags left in bag(s) at end ^α	α	α
5) ^α	Refusals ^α	α	α
5a ^α	Stickered tags left in bag → ^α	α	α
5b ^α	Workers selecting a stickered tag but refused ^α	α	α
6) ^α	Workers selecting stickered tags but ineligible ^α	α	α
7) ^α	Workers selecting stickered tags and interviewed ^α	α	α
8) ^α	Total tags accounted for = 5a+5b+6+7 should match 2 ^α	α	α

Refusal/Ineligible notes: _____ ¶
 · Are all steps followed? Were there any problems with sampling? Unusual circumstances? Any other notes? Narrative? Please detail your sampling approach on the back of this page. ¶