

# *Salmonella* sampling for **single or multi-level deep litter sheds with no pens or partitions using boot swabs**

**Purpose/Scope:** This SOP provides a method for conducting *Salmonella* sampling in a fully deep litter single or multi-level shed with no pens or partitions

**FREQUENCY**  
Every 12 to 15 weeks



## MATERIALS NEEDED

- Boot Swab Kit (pre-moistened cotton-poly blend fabric sock style boot)\* (Figure 1)
- Plastic Boot Cover\* (Figure 1)
- Disposable latex gloves
- Original Twirl-tie bag (originally contain the boot swab kit)
- Permanent marker
- Laboratory sample submission form
- Plastic container for swabbed samples

\* both boot swab kit and plastic boot cover can be purchased from [www.solarbiologicals.com](http://www.solarbiologicals.com) or may be supplied by the diagnostic laboratory

Figure 1. Boot swab (Solar Biological Inc)



## PROCEDURE

### Step 1 Get prepared

- 1 Notify the laboratory 24 hours in advance of sending the swab samples.
- 2 Obtain a sample submission form from the laboratory.
- 3 Obtain the number of boot swabs required (see Table 1).

Table 1. Number of swabs required for different sheds

Type of shed	Number pairs of boot swabs
Single level shed without pens or partitions	2
Multi-level shed without pens or partitions	1 for each level

### Step 2 Swab the shed

- 1 Wash your hands.
- 2 Put on a pair of disposable latex gloves.
- 3 Slip on one disposable plastic boot cover per shoe or boot (Figure 2).
- 4 Slip on the other disposable plastic boot cover over the other shoe or boot (Figure 2).

Figure 2. Slip on a plastic boot cover (Romer Labs)



#### IMPORTANT

Don't use foot bath or any disinfectant/sanitizer prior to sample collection as it might kill the *Salmonella* in the sample if there any.

## PROCEDURE

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- 5 Carefully remove the pre-moistened boot swab from the bag (Twirl-tie bag) and place it securely over the plastic boot covers (Figure 3).

Figure 3. Put boot swabs over plastic boot cover (Romer Labs)



- 6 Walk the full length of the shed twice, in the pattern described in Figure 5 or Figure 6.

Figure 4. Walk through the shed with boot swabs



PROCEDURE (CONT)

Figure 5. Swabbing procedure for single level deep litter shed without pens or partitions

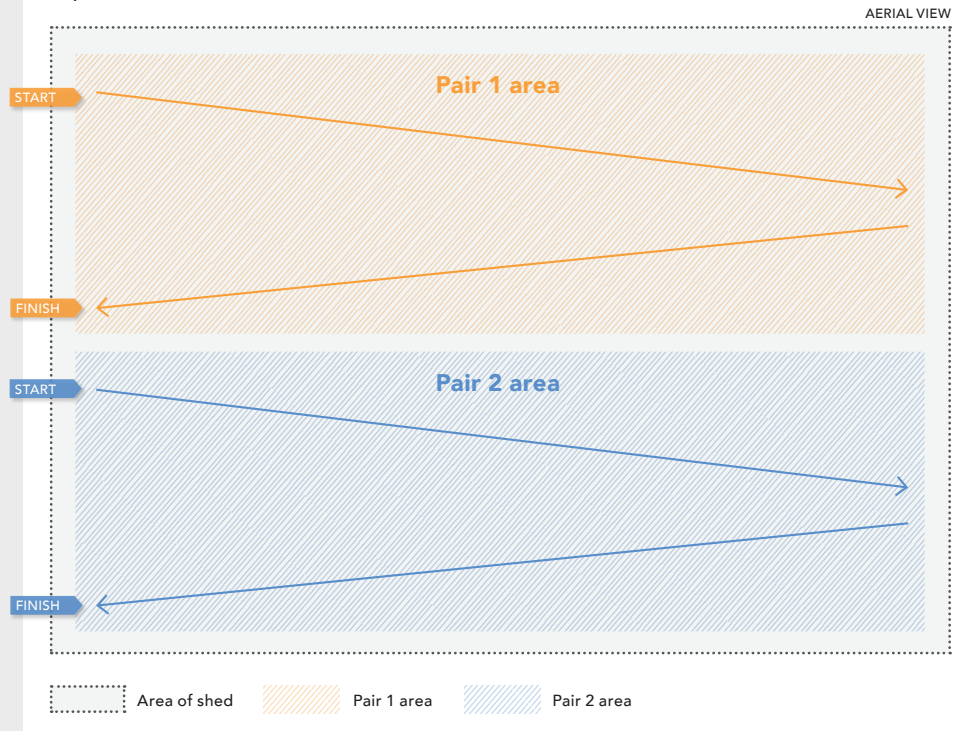
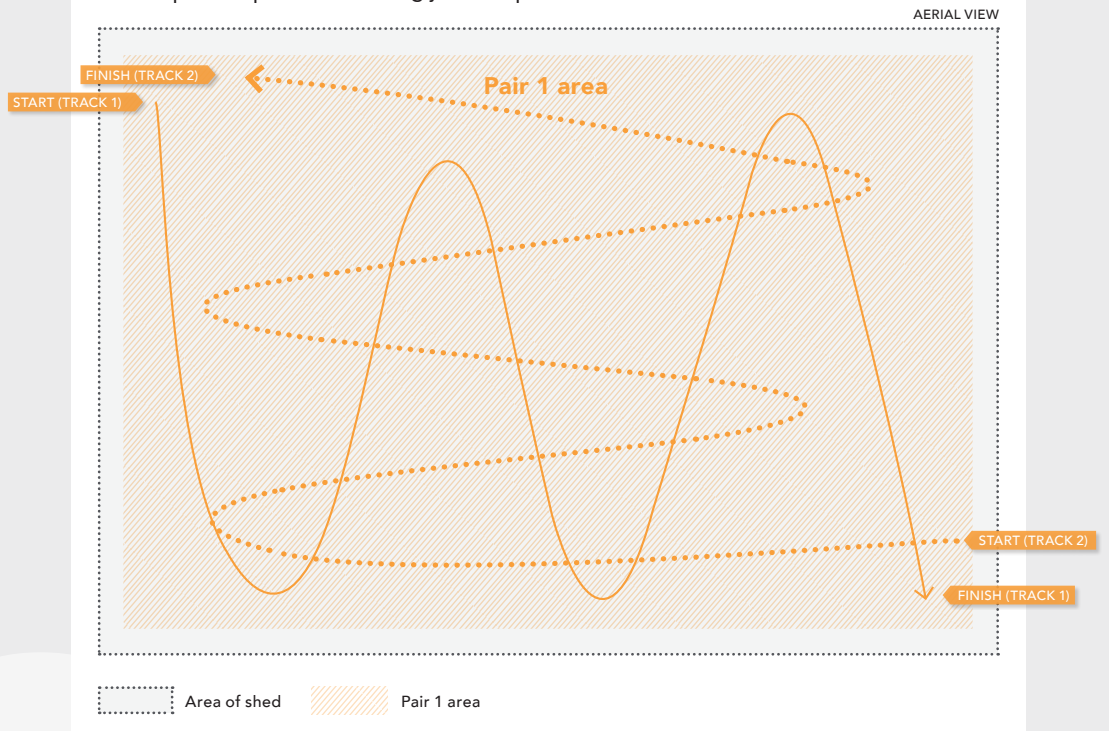


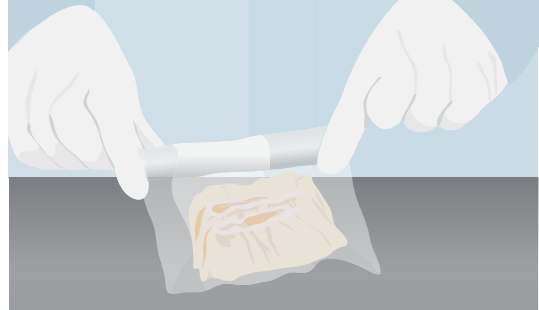
Figure 6. Alternative swabbing procedure for single level deep litter shed with no pens or partitions – using just one pair of boot swabs



## PROCEDURE

- 7 **If safe to do so**, access underneath the feeders and drinkers.
- 8 Immediately after the sample collection carefully remove the boot swabs and return it to its original Twirl-tie bag (Figure 7).

Figure 7. Remove boot swabs and put it into the original bag



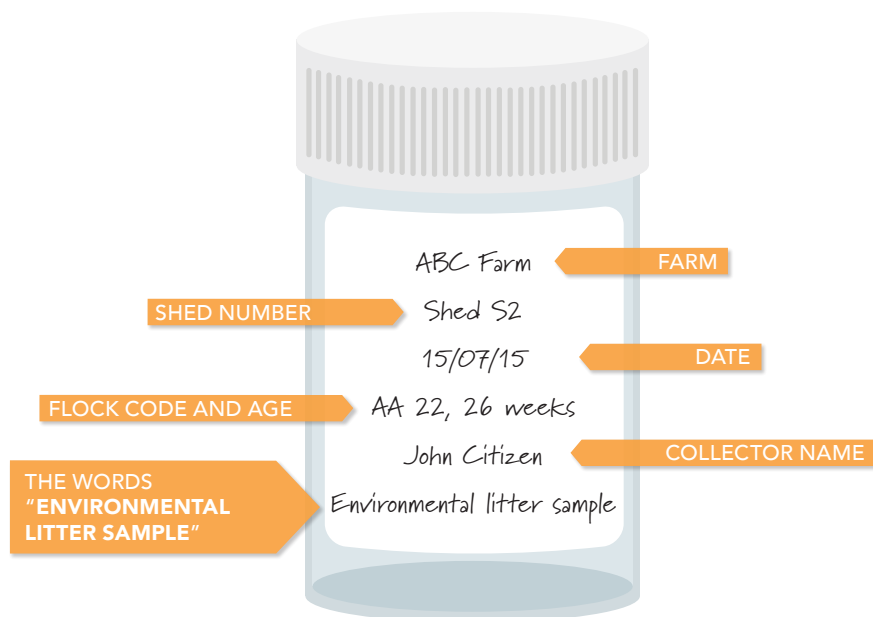
- 9 Seal the Twirl-tie bag.
- 10 **Repeat procedure 3 to 9** as required to complete shed swabbing. If gloves come into contact with litter or manure they should be changed between swabs.

### Step 3

#### Pack the samples

- 1 Each sample should be placed in it's own Whirl-Pak® bag or screw top plastic jar. Clearly label each bag or jar with permanent marker.
- 2 Include information as per Example 1.

Example 1. Information to include on the Whirl-Pak® bag or screw top plastic jar



- 3 Complete the laboratory sample submission form (always record on submission sheets as "ENVIRONMENTAL LITTER SAMPLES").

## PROCEDURE

## Step 4

### Submit the samples

- 1 Pack the swabs that are in the bags (Figure 8A) securely into a plastic container (Figure 8B) and put the container into a plastic post satchel (Figure 8C).

Figure 8. Pack swab samples



8B 

<https://ie.vwr.com/store/product/17962031/sample-container-with-screw-cap-sterilin#gallery-1>

8C 

<https://auspost.com.au/shop/product/flat-rate-small-satchel-10-pack-059049131?fm=recommendations:shop:1>

- 2 Put the completed sample submission form into the same plastic post satchel as the swabs.
- 3 Post the samples to the diagnostic laboratory.
- 4 If the swabs cannot be posted on the same day, store the swabs in the fridge (between 4 and 8°C) until ready to be posted. Conduct procedures 1 to 4 as soon as possible.

Swabs must not be frozen.

## REFERENCE

Romer Labs - SurfACE™ Sampling Solutions in Primary Production