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**OMB Approved**  
0579-XXXX  
EXP: XX/20XX

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE  
VETERINARY SERVICES  
NATIONAL ANIMAL HEALTH MONITORING SYSTEM  
2150 CENTRE AVE, BLDG B  
FORT COLLINS, CO 80526

## NAHMS Sheep 2024 Study – Enteric Microbe Individual Sample Collection Record

**Supplies sent to Coordinators:** Lubricant

### **Kit contents:**

25 small Whirl-pak® bags, 25 polystyrene tubes, 2 gallon sized Ziploc® bags, 2 ice packs, 1 liner bag, 1 large insulated cooler, and paperwork that includes instructions, submission form, duplicate labels, and 1 FedEx airbill addressed to NCSU in Raleigh, NC. You will need to provide your own gloves. Clean gloves are needed for each animal.

### **Collection Instructions**

**Collect fecal samples Sunday-Wednesday.** Collect **duplicate** fecal samples from 5 sheep from each of the following sheep types: pregnant ewes, nursing ewes, preweaned lambs, weaned lambs, and open ewes. If one sheep type is not present on the operation, collect extra samples from the highest priority sheep type, to up to 10 sheep. **The sample priority order is pregnant ewes, nursing ewes, preweaned lambs, weaned lambs, and open ewes.**

**Fresh samples are a must.** Collect from the rectum or immediately off the ground while samples are still warm. Rectal retrieval might not be possible on some sheep (e.g. preweaned lambs).



**Collect AT LEAST 10 fecal pellets from each animal.** For each animal, place 5 fecal pellets into one Whirl-pak® bag and 5 fecal pellets in a polystyrene tube. On the duplicate labels provided, write the sheep's name or ID and attach the labels onto the bag and tube for each sheep. Make sure you label the tubes with the correct sample numbers and IDs.

**Close the labeled Whirl-pak® and tubes for each animal and divide them into 2 Ziploc® bags.**

Place your Whirl-pak® bag samples into one gallon sized Ziploc® bag **labeled NCSU** and the second tube sample in a second gallon sized Ziploc® bag **labeled ISU**. Once all labeled samples are placed into the Ziplocs®, secure the Ziploc® bags closed. Place both gallon sized Ziploc® bags into 1 liner bag. Cool down samples with ice packs, but do not freeze the samples. If necessary, replace ice packs with frozen ones before shipping.

## RECTAL RETRIEVAL


To avoid contamination from common organisms on the ground, rectal retrieval is best. Rectal retrieval might not be possible on some sheep (e.g. preweaned lambs), and fresh off the ground samples are acceptable.

|   |   |  |  |
|---|---|--|--|
|    | <p><b>1. Apply lubricating jelly to the glove before entering the rectum.</b></p> <ul style="list-style-type: none"><li>➤ Lightly stroking the rectum might encourage defecation.</li></ul> |  | <p><b>2. Collect duplicate samples.</b></p> <ul style="list-style-type: none"><li>➤ Retrieve a minimum of 10 pellets per animal (5 pellets for one Whirl-pak® bag and 5 pellets for the tube).</li></ul> |
| <p><b>3. On each label, write the sheep's name or ID and attach them on to a Whirl-pak® bag and a tube. Place the labeled Whirl-pak® and tube inside separate gallon sized Ziploc® bags.</b></p> <p><b>4. Continue collecting samples from other sheep using a clean glove for each animal.</b></p> |   |  |  |

## Collection Record

Fill out the pink submission form and the digital collection record.

Use the QR code or the URL below to access the Enteric Microbe Digital Collection Record.

|                                      |   |   |
|--------------------------------------|---|---|
| Enteric Microbe<br>Collection Record | <a href="https://usdaanimalhealth.gov1.qualtrics.com/jfe/form/SV_5swPfurvMQOTBpY">https://usdaanimalhealth.gov1.qualtrics.com/jfe/form/SV_5swPfurvMQOTBpY</a> |  |
|--------------------------------------|---|---|

## Shipping Instructions

**Ship on Sunday-Wednesday.** Keep samples cool and ship within 24 hours of collection. Wednesday collections must be shipped the same day. Do not collect or ship samples Thursday through Saturday.

Place all the samples in the liner bag and tie shut. Place an ice pack on the top and bottom of the samples. Add filler to box if necessary. Close the insulated cooler box.

Place the filled out pink submission form on top of the cooler lid and seal the cardboard box.

Secure the box and ship to NCSU in Raleigh, North Carolina, within 24 hours. Ship only Monday-Wednesday.

### Enteric Microbe Collection Record

|                                |   |                                    |                                 |
|--------------------------------|---|------------------------------------|---------------------------------|
| <b>NAHMS ID</b>                | <b>Primary collector:</b>                         | <b>Date:</b>                       | <b>Enteric Kit # on labels:</b> |
| 6 digits<br><small>eid</small> | Name and phone number<br><small>ename/eph</small> | (mm/dd/yy)<br><small>edate</small> | <small>ekit</small>             |

| <small>e101</small> | <small>e102</small>        | <small>e103m/e103y</small>                        | <small>e104</small>   | <small>e105</small>   | <small>e106a-d</small>  | <small>e107a-e/107oth</small>   | <small>e108</small>   | <small>e109a-e/109otha-othc</small>  |
|---------------------|----------------------------|---|---|---|---|---|---|--|
| <b>1. Sample #</b>  | <b>2. Sheep name or ID</b> | <b>3. Age</b><br><small>(months or years)</small> | <b>4. Sheep Type</b><br><br>1= pregnant ewe<br>2=nursing ewe<br>3=preweaned lamb<br>4=weaned lamb<br>5=open ewe | <b>5. IF sheep type =1 or 2, provide date lambled or expected date to lamb</b><br><br><small>(mm/dd/yy)</small> | <b>6. Sheep housing</b><br>1= housed in individual pens<br>2=housed with other sheep of same type (column 4)<br>3=housed with other sheep types (column 4)<br>4=housed with other livestock (specify livestock)<br><i>[List all that apply]</i> | <b>7. Condition(s) in past 30 days</b><br><br>1=diarrhea<br>2=fever<br>3=respiratory infection<br>4=thin<br>5=other (specify)<br><i>[List all that apply]</i> | <b>8. Did this animal receive individual antimicrobial therapy in the last 30 days?</b><br><br><small>(Yes/No)</small><br><i>[If No, SKIP column 9]</i> | <b>9. Which individual antibiotic(s) were given in the last 30 days?</b><br><br><i>[See reference card and enter code]</i> |
| 1                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 2                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 3                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 4                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 5                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 6                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 7                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 8                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 9                   |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |
| 10                  |                            | __ mo<br>OR<br>__ yr                              |   |   |   |   |   |  |

| 1. Sample # | 2. Sheep name or ID | 3. Age<br>(months or years) | 4. Sheep Type<br>1= pregnant ewe<br>2=nursing ewe<br>3=preweaned lamb<br>4=weaned lamb<br>5=open ewe | 5. IF sheep type =1 or 2, provide date lambbed or expected date to lamb.<br>(mm/dd/yy) | 6. Sheep housing<br>1= housed in individual pens<br>2=housed with other sheep of same type (column 4)<br>3=housed with other sheep types (column 4)<br>4=housed with other livestock (specify livestock)<br><i>[List all that apply]</i> | 7. Condition(s) in past 30 days<br>1=diarrhea<br>2=fever<br>3=respiratory infection<br>4=thin<br>5=other (specify)<br><i>[List all that apply]</i> | 8. Did this animal receive individual antimicrobial therapy in the last 30 days?<br><br>(Yes/No)<br>[If No, SKIP column 9] | 9. Which individual antibiotic(s) were given in the last 30 days?<br><br><i>[See reference card and enter code]</i> |
|-------------|---------------------|-----------------------------|--|--|--|--|--|---|
| 11          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 12          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 13          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 14          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 15          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 16          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 17          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 18          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 19          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |
| 20          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |  |   |

| 1. Sample # | 2. Sheep name or ID | 3. Age<br>(months or years) | 4. Sheep Type<br>1= pregnant ewe<br>2=nursing ewe<br>3=preweaned lamb<br>4=weaned lamb<br>5=open ewe | 5. IF sheep type =1 or 2, provide date lambded or expected date to lamb.<br>(mm/dd/yy) | 6. Sheep housing<br>1= housed in individual pens<br>2=housed with other sheep of same type (column 4)<br>3=housed with other sheep types (column 4)<br>4=housed with other livestock (specify livestock)<br><i>[List all that apply]</i> | 7. Condition(s) in past 30 days<br>1=diarrhea<br>2=fever<br>3=respiratory infection<br>4=thin<br>5=other (specify)<br><i>[List all that apply]</i> | 8. Did this animal receive individual antimicrobial therapy in the last 30 days?<br><br>(Yes/No)<br>[If No, SKIP column 9.] | 9. Which individual antibiotic(s) were given in the last 30 days?<br><br><i>[See reference card and enter code]</i> |
|-------------|---------------------|-----------------------------|--|--|--|--|---|---|
| 21          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |   |   |
| 22          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |   |   |
| 23          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |   |   |
| 24          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |   |   |
| 25          |                     | ___ mo<br>OR<br>___ yr      |  |  |  |  |   |   |

Were samples: <sub>1</sub> stored overnight OR <sub>2</sub> shipped the same day as collected? estore

How many people in each category helped with the collection of the individual fecal samples?

\_\_\_\_\_ Fed VMO evmo    \_\_\_\_\_ Fed AHT eaht    \_\_\_\_\_ State government estate    \_\_\_\_\_ Producer eprod    \_\_\_\_\_ Other, specify eoth/eothsp:

Total sample time \_\_\_\_\_ hours ehr

# NAHMS Sheep 2024

## Enteric Microbe Submission Form

**NAHMS ID:**  
6 digits

**Date:**  
mm/dd/yy

**Kit #:**  
Printed on labels

1. Number of fecal samples?

\_\_\_\_\_

0-25