

Ohio OPP/CAE Test-Negative Program

Participation in the Ohio OPP/CAE Test-Negative Program will be available to any Ohio sheep or goat producer. Blood serum samples from flock animals will be tested annually for OPP/CAE at a laboratory accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) using the USDA-licensed agar gel immunodiffusion (AGID) test kit for sheep and goats or the USDA-licensed CAE/cELISA test only for goats.

Where flocks/herds are found to be infected with the OPP/CAE virus (OPPV/CAEV), producers will work with their USDA-accredited veterinarian for development and monitoring of an eradication and/or control program. Test results will be sent to the veterinarian to be reviewed with the owner, and both parties will review the eradication/control program annually.

All laboratory fees for testing, as well as any costs for routine sample collection and/or processing done by the veterinarian, will be the responsibility of the enrolled producer. In the case of indeterminate or questionable test results, and upon the request of the flock/herd owner, serum remaining from an initial test will be sent to the USDA Animal Disease Research Unit (ADRU) in Pullman, WA, for further testing with real-time polymerase chain reaction (PCR), caprine arthritis encephalitis/competitive enzyme-linked immunosorbent assay (CAE/cELISA), and/or western blot and AGID to determine the infection status of the animal(s).

Enrolled producers will submit all laboratory test reports to the designated ODA Administrator, who will in turn issue an annual notice of flock/herd status. The OPP Concerned Sheep Breeders Society (www.OPPsociety.org) will serve as an educational resource, with information packets mailed to all enrolled producers and their flock veterinarians. Requirements for participation, testing protocol and status levels follow.

REQUIREMENTS FOR PARTICIPATION

The flock owner or manager who wishes to participate in the Ohio OPP/CAE Test-Negative Program will agree to:

- Arrange for annual blood sampling for OPP/CAE testing. Samples will be collected by or under the supervision of the accredited flock veterinarian who will process and deliver or ship them to the designated AAVLD accredited laboratory.
- Maintain flock/herd inventory records in a format approved by the ODA Program Administrator, and at each annual sample collection submit an inventory update to the ODA Program Administrator, or his designee, accounting for all acquisitions, departures, births and deaths having occurred since the previous annual sampling.
- Identify each test eligible animal with a form of official identification, approved by the ODA Program Administrator, and appropriate to the species. For this program, official identification methods approved for the National Scrapie Eradication Program will be used.
- Mail all OPP/CAE test results and flock inventory records documenting changes since the previous year's sampling to the ODA Program Administrator within 30 days following receipt of the lab test results.
- Adhere to the Ohio OPP/CAE Test-Negative Program testing protocol as outlined below.
- If the flock is found to be infected with OPP/CAE virus, follow a flock-specific management protocol (see Appendix 4) including separation of test-negative from any retained test-positive animals, as well as from those of unknown status. ***Any retained test-positive animals must be managed as a separate flock as described in Appendix 2 if the owner wishes to continue in the program.*** If the flock/herd owner wishes to remain in the program (Enrolled status) an eradication and/or control program will be developed in partnership with, and monitored by, the designated accredited veterinarian, and the eradication/control program will be reviewed by both parties annually.

PARTICIPATION / STATUS LEVELS:

- **Enrolled** — All animals 12 months of age or older which are believed to be negative are tested annually (11-13 month interval) and laboratory results are submitted to the ODA Program Administrator. Flocks undergoing eradication may also elect to do additional testing. If a farm has sheep and goats that are not always managed as separate flocks with no commingling or sharing of equipment, **both species must be enrolled in the program.** Strains of OPP and CAE viruses have been shown to be able to infect animals across species and cause positive blood test reactions.

• **Test-Negative** — After 3 consecutive annual whole-flock tests have been completed with all negative test results, or a 5-year test and monitoring program has been completed as described below with no positives detected, the flock will be assigned “Test-Negative” status. From that point forward, assuming no animals test positive, a percentage of the flock will be tested annually and laboratory results submitted to the Program Administrator.

TESTING PROTOCOL:

YEAR ONE: Initial Screening Test (may be either whole flock or a percentage)

Option One

Whole-flock: Test all sheep/goats in the flock/herd 12 months of age or older.

—If 100% negative, select either the 3 or 5-year program for subsequent annual tests.

—If any animals test positive, they should be culled or separated from the negatives.

The flock may enter the 3-year program outlined below as soon as all animals test negative at least 6 months, but no more than 13 months, following removal of all test-positives.

Option Two

Partial-flock: Test a statistical subset of the flock/herd as defined in Appendix 1.

— If there are no positives, it is recommended, though not required, that the remainder of the flock be tested as soon as possible so that any positives can be culled or separated from the negatives. If the owner elects to test the remainder of the flock within 60 days of the initial test, and all animals are determined to be test-negative, this two-stage test will be considered a whole-flock 100% negative test for the purposes of this program and the owner may select either the 3 or 5-year program for subsequent annual tests.

— If there are no test positive animals, and the owner **does not test** the remainder of the flock within 60 days, all animals 12 months of age or older must be tested the following year. If that whole-flock test is negative, the owner may select either the 3 or 5-year program for subsequent annual tests. If any animals are positive on that first whole-flock test, they should be culled or separated from the negatives.

The flock may enter the 3-year program outlined below as soon as all animals test negative at least 6 months, but no more than 13 months, following removal of all test-positives.

— If any animals are positive on the initial partial-flock test, the producer and his/her veterinarian should consider all options for control and/or eradication (see Appendix 4) prior to further testing.

Subsequent Annual Tests to attain “Test-Negative” status (three year or five year programs)

Three year program

YEAR TWO:

—Test all sheep/goats 12 months of age or older.

—If all test negative, the flock will proceed to Year Three for the next annual test.

—If any animals test positive, the flock should be tested again 6-13 months following removal of all test positive animals. *“Test Negative” status will not be awarded until three consecutive annual whole-flock negative tests have been achieved.*

YEAR THREE:

- Test all sheep/goats 12 months of age or older.
- If all test negative, the flock will be assigned “Test Negative” status.
- If any animals test positive, the flock should be tested again 6-13 months following removal of all test positive animals. *“Test Negative” status will not be awarded until three consecutive annual whole-flock negative tests have been achieved.*

Five-Year Program

YEAR TWO:

- Test only those sheep/goats that were between 12 and 24 months-of-age at the time of the initial whole-flock 100% negative screening test.
- If those animals all test negative, the flock may continue in the Five-Year Program.
- If any animals test positive, the flock will no longer be eligible to participate in the Five-Year Program.

YEAR THREE:

- Test only those same animals that were tested in year two.
- If those animals all test negative, the flock may continue in the Five-Year Program.
- If any animals test positive, the flock will no longer be eligible to continue in the Five-Year Program.

YEAR FOUR:

- Test 10% of the flock (or a minimum of 5 animals if the flock consists of fewer than 50 animals) preferably consisting of ewes/does at least 5 years of age.
- If those animals all test negative, the flock may continue in the Five-Year Program.
- If any animals test positive, the flock will no longer be eligible to continue in the Five-Year Program.

YEAR FIVE:

- Test all animals in the flock 12 months of age or older.
- If all animals test negative, the flock will be assigned “Test Negative” status.
- If any animals test positive, the flock will no longer be eligible to continue in the Five-Year Program.

Acquisitions

All acquisitions, unless from an OPP/CAE Program-enrolled flock of equal or higher status, must be tested within the 30 days immediately before or after arrival on the premises, and included in the annual flock testing for the next three years if they remain in the flock for that length of time.

Maintaining “Test-Negative” Status

Once “Test-Negative” status has been achieved, only 10% of the flock (a minimum of 5 animals if the flock consists of fewer than 50 animals) needs to be tested annually, preferably consisting of ewes/does that have been in the flock for at least 2 years. In addition to these animals, all animals acquired since beginning the program must be tested as noted above.

Veterinarian submits to laboratory

The accredited veterinarian is responsible for processing and submission of all samples to the designated AAVLD accredited laboratory for testing with the USDA-licensed OPP/AGID (sheep and goats), or CAE/cELISA (goats) tests. Only serum should be submitted.

IF ANIMALS ARE FOUND TO BE TEST-POSITIVE, SUSPECT, OR INCONCLUSIVE:

Any animal from an “Enrolled” status flock with a positive, suspect, or inconclusive test result, if not removed from the flock, will be placed in isolation and, at the request of the owner, the designated veterinarian may obtain another sample which will be retested at the same AAVLD accredited laboratory within 30-60 days of the previous test. All costs will be the responsibility of the owner. If the retest result is negative, the animal may return to the flock. If the retest is positive, suspect, or inconclusive, the flock owner or manager may request that serum remaining from the AGID (sheep and goats) or CAE/cELISA (goats) retest be shipped to the USDA-Animal Disease Research Unit in Pullman, WA, for further testing. The final status of the animal in question will be as determined by USDA-ADRU. If negative, the animal may return to the flock.

Any animal from a “Test-Negative” status flock with a positive, suspect, or inconclusive test result, if not removed from the flock, will be placed in isolation and serum remaining from the test will be shipped immediately to the USDA-ADRU in Pullman, WA, for further testing. The final status of the animal will be as determined by USDA-ADRU. If negative, the animal may return to the flock but must be included in the next round of testing in an addition to the required 10% of the flock.

ATTACHMENTS:

APPENDIX 1: Random Testing Table

APPENDIX 2: Management Recommendations and Considerations

APPENDIX 3: Producer’s Check List

APPENDIX 4: Program Application Form

APPENDIX 1

RANDOM TESTING TABLE

When a flock of unknown OPPV/CAEV status is tested for the first time, the owner or flock manager may elect to sample only a portion of the animals for the initial screening. The following table shows the number of animals 12 months of age and older that needs to be randomly sampled and tested in order to be 95% confident of detecting at least one positive animal if 5% or more of the flock is infected.

- If there are no positive animals on this first round of testing, it is recommended, though not required, that the remainder of the flock be tested as soon as possible so that any

positives can be culled or separated from the negatives should they desire to participate in the Ohio OPP/CAE Test-Negative Program.

- If any animals test positive on this first round of testing, the producer should consider all options for control and/or eradication (see Appendix 2) prior to further testing.

Flock Size	Sample Size	Flock Size	Sample Size
10	10	180	50
20	19	200	51
30	26	250	53
40	31	300	54
50	35	350	54
60	38	400	55
70	40	450	55
80	42	500	56
90	43	600	56
100	43	700	57
120	47	800	57
140	48	1000	57
160	49	2000	58

NOTE: Since sampling a truly random subset can present difficulties at the management level, the flock owner or manager may wish to select for testing ewes/does that have been in the flock for at least 2 years. Doing so may increase the odds of detecting OPPV/CAEV infection at the flock level.

APPENDIX 2

GENERAL MANAGEMENT RECOMMENDATIONS AND CONSIDERATIONS

Any program to eliminate or control OPP/CAE must first include separation of test-negative from test-positive animals, as well as from sheep and/or goats of unknown status. Once initial test status of the flock is known, a management and testing protocol that fits the annual flock calendar should be developed by the producer working in partnership with his/her veterinarian

- Once initial test status is known, all test-positive animals should immediately be removed from the flock. If positive animals are retained they should be managed as a separate group.
 - ✓ No commingling of test-positive and test-negative animals.
 - ✓ No nose-to-nose contact between positives and negatives at any time.
 - ✓ No shared fence lines, feeders, or waterers.
 - ✓ No transport of positives (or animals of unknown test status) and negatives in the same truck or trailer unless separated by a solid barrier.
- Due to the unstable nature of OPP/CAE viruses in the environment, equipment such as syringes, ear taggers, tattoo pliers and water buckets may be used for both infected and test-negative groups if they are cleaned and disinfected first. Likewise, positive and negative groups may rotate through buildings and pastures. However, it is recommended that test-negative groups should always be handled (chores, etc.) before dealing with any test-positives.
- There is a significant correlation between needle re-use and OPP/CAE seroprevalence as flock size increases. Therefore, to decrease the risk of transmitting OPP/CAE viruses and other infectious diseases when giving injections, a new needle should be used for each animal.
- It has been observed that some test-positive animals will become temporarily seronegative following lambing/kidding, probably because of the large quantity of antibodies removed from the blood to the colostrum. Therefore, it is often recommended that blood samples not be collected from ewes/does during the first few weeks of lactation.
- If an animal tests positive and later tests negative, it is likely that human error is responsible, rather than an animal becoming test-negative. In such a case, it may be wise to retest the animals whose blood was collected just prior to, and after, that of the newly test-negative animal.
- Although OPP/CAE virus *transmission* via semen has not been documented, owners, managers and veterinarians utilizing artificial insemination should be aware that *the OPP virus has been detected in semen*. It is recommended that male animals being collected for use in artificial insemination programs be tested well in advance of the collection date, and again prior to use of the semen.
- Further information, including detailed instructions for artificially raising lambs/kids orphaned for eradication, is available from the OPP Society at:
<http://www.OPPsociety.org>

APPENDIX 3 PRODUCERS CHECK LIST

The Ohio OPP/CAE Test-Negative Program is designed to be producer driven, meaning that the flock owner or manager is responsible for:

- ✓ *Scheduling and facilitating the collection of blood samples for OPP/CAE testing, and*
- ✓ *Where needed, develop an eradication plan in consultation with the flock veterinarian.*

To keep the Program running smoothly, it is imperative that producers make every effort to comply with the following guidelines:

- ✓ Arrange to have animals tested for OPP/CAE. Blood samples may be collected by or under the direct supervision of the accredited flock veterinarian.
- ✓ Arrange to have adequate help on hand to ensure speedy processing of animals
- ✓ Have extra official identification tags and applicator ready to replace any missing tags.
- ✓ Beginning 4-5 days after your samples have been shipped, check the with the submitting veterinarian for preliminary test results so that any positive animals can be removed as soon as possible and retests scheduled if needed.

Your veterinarian will provide you with a copy of the final test results. If testing has detected OPPV/CAEV positive animals, you will need to develop and implement a flock/herd-specific eradication plan in consultation with your veterinarian if you wish to continue in the Program.

- Final results will be reviewed and an annual letter confirming your flock's status will be mailed from the ODA Program Administrator within 60 days following the date of testing.

APPENDIX 4

Ohio Department of Agriculture
8995 East Main St.
Reynoldsburg, OH 43068
Tel: 614-728-6220 Fax: 614-728-6310
Ohio OPP/CAE TEST-NEGATIVE PROGRAM
Flock Enrollment Application

Please complete all parts this form, sign, and return to:
OPP Test-Negative Program, c/o The Ohio Department of Agriculture, Division of Animal Health
at the above address

It is important to note that, while adherence to the Ohio OPP/CAE Test-Negative Program protocol and recommended management practices may in fact facilitate the eradication of OPPV from infected flocks, this program does not profess to be a guaranteed eradication scheme.

Routine Annual Testing

Blood serum samples from enrolled flocks will be tested with the USDA-licensed agar gel immunodiffusion (AGID) test kit (sheep and goats) or CAE ELISA test kit (goats) at the Ohio Department of Agriculture Animal Disease Diagnostic Laboratory. Questionable or indeterminate samples may be forwarded to the USDA Animal Disease Research Unit in Pullman, WA for further testing as described in the program standards. All costs of routine annual testing, including veterinary and laboratory fees, will be the responsibility of the participating producer.

Testing Protocol

As described in the program standards, flock owners or managers with all animals testing negative on a whole-flock initial screening test will select either a 3-year or 5-year testing scheme. Those flocks with test-positive animals detected on the initial screening test will work toward eradication following a program developed in consultation with the flock/herd veterinarian.

Based on your flock's previous test history, if known, please indicate which testing protocol you would like to use.

Three Year Test Protocol Five Year Test Protocol

NAME _____ FARM NAME _____

STREET _____ CITY _____ ZIP _____

PHONE _____ EMAIL _____ COUNTY _____

PRIMARY BREED(S) _____ TOTAL NUMBER OF EWES _____ Flock ID# _____

VETERINARIAN _____ CLINIC _____

STREET _____ CITY _____ ZIP _____

PHONE _____ EMAIL _____ COUNTY _____

My signature below indicates that I have read, understand and agree to follow all Ohio OPP/CAE Test-Negative Program requirements and guidelines. I also understand that my flock's test results will be made available for review by the ODA, Division of Animal Health, who will oversee the Ohio OPP/CAE Test-Negative Program.

Owner Signature _____ Date _____

Veterinarian Signature _____ Date _____