

# BOVINE DIAGNOSTIC PLANS/PANELS



**Cornell University**  
Animal Health Diagnostic Center

Post Office: P.O. Box 5786  
607-253-3900 (telephone)  
607-253-3935 (telephone, shipping)  
607-253-3907 (fax)  
[diagcenter@cornell.edu](mailto:diagcenter@cornell.edu)  
<http://ahdc.vet.cornell.edu/>

The following diagnostic plans have been developed primarily as an **educational** tool to assist the veterinarian in designing a complete, although not exhaustive, diagnostic strategy. To encourage veterinarians to select only the tests that are deemed clinically appropriate in each situation, the price of the diagnostic plan is not discounted from the sum of the individual test costs. **Superscript numbers match the individual tests to the sample needed.** For the test groupings labeled as panels, there may be a discounted price versus the costs of the individual tests. Diagnostic plans and panels can be requested by writing the complete name as the test request. If appropriate samples are included all tests will be performed.

DIAGNOSTIC PLAN/PANEL	TESTS PERFORMED	PRICES	SAMPLES NEEDED
<b>Bovine Abortion Fetal Tissue Diagnostic Plan</b>	(3) <a href="#">Aerobic bacterial cultures</a> <sup>1</sup> Listeria included (1 sensitivity included); <a href="#">Bovine Herpesvirus-1 (Infectious Bovine Rhinotracheitis) FA</a> <sup>2</sup> ; <a href="#">Bovine Virus Diarrhea Virus (BVDV) Antigen Capture ELISA (ACE)</a> <sup>3</sup> ; <a href="#">Bovine Virus Diarrhea Virus (BVDV) FA</a> <sup>4</sup> ; <a href="#">Bovine Virus Diarrhea Virus (BVDV) SN, Type1</a> <sup>5</sup> ; <a href="#">Campylobacter fetus (Vibrio) FA</a> <sup>6</sup> ; <a href="#">Histopathology</a> <sup>7</sup> ; (2) <a href="#">Leptospira FAs</a> <sup>8</sup> ; <a href="#">Neospora IFA</a> <sup>9</sup> ; <a href="#">Virus isolation</a> <sup>10</sup>	\$393.50 per fetus  NYS subsidized contract fee: \$65.00	<b>Fresh tissue</b> <sup>1,2,3,4,6,8,10</sup> : lung, placenta including cotyledons, abomasal contents, kidney, liver, heart, adrenal, skin, <b>heart blood</b> <sup>5,9</sup> in sterile red top tube AND <b>Formalin fixed tissue</b> <sup>7</sup> : placenta, liver, lung, brain, adrenal, heart, thymus, small intestine, kidney, fetal skin. <b>SHIP FRESH TISSUE CHILLED AND PROTECT FIXED TISSUE FROM FREEZING.</b> Kit is available. See <a href="#">Abortion Kit, Ruminant</a> for more information.
<b>Bovine Abortion Serology Panel + Selenium</b>	<a href="#">Bovine Virus Diarrhea Virus (BVDV) SN, Type 1</a> <sup>1</sup> ; <a href="#">Brucella card agglutination</a> <sup>2</sup> ; <a href="#">Infectious Bovine Rhinotracheitis (IBR) kinetic ELISA</a> <sup>3</sup> ; <a href="#">Leptospira MAT, 5 standard serovars</a> <sup>4</sup> ; <a href="#">Neospora IFA</a> <sup>5</sup> ; <a href="#">Selenium, whole blood</a> <sup>6</sup>	\$82 single \$135.50 paired (1 selenium)  NYS subsidized contract fee: \$71.00 single	<b>Maternal serum</b> <sup>1,2,3,4,5</sup> (separated) and <b>maternal EDTA whole blood</b> <sup>6</sup> (LTT). <b>SHIP CHILLED.</b> When acute and convalescent samples are/will be collected, for most serology assays they should always be tested in parallel, and paired results interpreted. If acute samples are submitted alone please indicated if all tests should be performed. If second, convalescent samples are later submitted, tests on both samples will be run in parallel and fees for both samples will be charged. To avoid testing acute samples twice, hold and submit with convalescent samples. If convalescent samples will not be collected, or when infectious abortion is strongly suspected due to history, immediate testing of acute sample may be warranted.
<b>Bovine Diarrhea, Adult (Acute) Diagnostic Plan</b>	<a href="#">Bovine Virus Diarrhea Virus (BVDV) Virus isolation</a> <sup>1</sup> ; <a href="#">Fecal quantitative</a> <sup>2</sup> ; <a href="#">Salmonella culture</a> <sup>3</sup> (no sensitivity included)	\$71.00  NYS subsidized contract fee: \$58.50	<b>Fresh Feces</b> <sup>2,3</sup> in leak-proof container (20 g) and <b>EDTA whole blood</b> <sup>1</sup> (LTT). <b>One fecal sample</b> <sup>3</sup> (1 g, fill to line on container but do not overfill) can be put in ParaPak® transport media to assist with Salmonella recovery (call shipping 607.253.3935 to order these). <b>SHIP CHILLED, EXCEPT FOR PARAPAK® WHICH SHOULD BE KEPT AT ROOM TEMPERATURE</b>

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<b>Bovine Diarrhea, Adult (Chronic) Diagnostic Plan</b>	<a href="#">Bovine Virus Diarrhea Virus (BVDV) Antigen Capture ELISA (ACE)</a> <sup>1</sup> ; <a href="#">Fecal quantitative</a> <sup>2</sup> ; <a href="#">Johne's fecal PCR</a> <sup>3</sup> ; <a href="#">Salmonella culture</a> <sup>4</sup> (no sensitivity included)	\$67.00  NYS subsidized contract fee: \$50.00	<b>Fresh feces</b> <sup>2,3,4</sup> in leak-proof container (20 g) and <b>serum</b> (separated) <sup>1</sup> or <b>ear notch</b> <sup>1</sup> . <b>One fecal sample</b> <sup>4</sup> (1 g, fill to line on container but do not overfill) can be put in ParaPak <sup>®</sup> transport media to assist with Salmonella recovery (call shipping 607.253.3935 to order these). <b>SHIP CHILLED, EXCEPT FOR PARAPAK<sup>®</sup> WHICH SHOULD BE KEPT AT ROOM TEMPERATURE.</b>
<b>Bovine Diarrhea, Calf (Acute) Diagnostic Plan</b>	<p><a href="#">Aerobic bacterial culture</a><sup>1</sup> (1 sensitivity included); <a href="#">Anaerobic bacterial culture</a><sup>2</sup>; <a href="#">Bovine Virus Diarrhea Virus (BVDV) Antigen Capture ELISA (ACE)</a><sup>3</sup>; <a href="#">Clostridium perfringens Entertoxin</a><sup>4</sup>; <a href="#">Fecal qualitative</a><sup>5</sup> if ≥ 3 days old; <a href="#">Histopathology</a><sup>6</sup>; <a href="#">Salmonella culture</a><sup>7</sup>;</p> <p>(3) <a href="#">Virus FAs</a><sup>8</sup> [<a href="#">Bovine Rotavirus</a>, <a href="#">Bovine Coronavirus</a>, <a href="#">Bovine Virus Diarrhea Virus (BVDV)</a>] <b>on intestinal tissue or Electron microscopy</b><sup>*9</sup> referral test on <b>feces</b> (Bovine Rotavirus and Bovine Coronavirus)</p> <p>May also consider <a href="#">Cryptosporidium ELISA</a> (\$15) on calves 3-30 days and <a href="#">Giardia ELISA</a> (\$15) on calves from 14 days to 6 months. Both of these are performed on fecal samples. Also <a href="#">selenium</a> on an <b>EDTA whole blood sample</b> (\$21) or <b>liver</b> (\$55) may be appropriate in some situations.</p> <p>May want to consider <a href="#">Clostridium perfringens genotyping PCR</a> (\$36.75) for identification of the genes for specific toxins if Clostridium perfringens isolated. If E. coli is isolated you may want to consider <a href="#">Escherichia coli genotyping PCR</a> (\$36.75) to further identify which genes for which adhesins and toxins are present.</p>	<p>\$231.50 (ante mortem samples)</p> <p>\$316.50 (full set of necropsy samples)</p> <p>NYS subsidized contract fees: \$135.00 (ante mortem samples)</p> <p>\$75.50 (full set of necropsy samples)</p>	<p>Ante mortem samples: <b>Fresh feces</b><sup>1,5,7,9</sup> in leak-proof container (20 g) and <b>frozen feces</b><sup>4</sup> (5 g), <b>fecal swab</b><sup>1,2,7</sup> placed in <b>anaerobic transport media</b> (BBL™ Port-a-cul™), and <b>fresh ear notch</b><sup>3</sup>. <b>One fecal sample</b><sup>7</sup> (1 g, fill to line on container but do not overfill) can be put in ParaPak<sup>®</sup> transport media to assist with Salmonella recovery (call shipping 607.253.3935 to order these). <b>SHIP CHILLED AND KEEP FROZEN SAMPLES FROZEN EXCEPT FOR Port-a-cul™ AND PARAPAK<sup>®</sup> WHICH SHOULD BE KEPT AT ROOM TEMPERATURE.</b></p> <p>Necropsy samples: <b>Tied off loop of bowel with contents</b><sup>1,2,4,7</sup> (frozen), <b>+/- intestinal swab</b><sup>1,2,7</sup> placed in <b>anaerobic transport media</b> (BBL™ Port-a-cul™), <b>tied off loop of bowel with contents</b><sup>1,7,8</sup> (fresh), <b>fresh feces</b><sup>1,5,7</sup> in leak-proof container (10 g), <b>fresh ear notch</b><sup>3</sup>, <b>full set of tissues</b><sup>6</sup> (including multiple sections of intestinal tract) placed in formalin. <b>SHIP CHILLED AND KEEP FROZEN SAMPLES FROZEN EXCEPT FOR Port-a-cul™ WHICH SHOULD BE KEPT AT ROOM TEMPERATURE. PROTECT FIXED TISSUE FROM FREEZING.</b></p>

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<b>Bovine Pinkeye Diagnostic Plan</b>	<a href="#">Aerobic bacterial culture</a> <sup>1</sup> (1 sensitivity included); <a href="#">Bovine Herpesvirus-1 (Infectious Bovine Rhinotracheitis) FA</a> <sup>2</sup> ; <a href="#">Mycoplasma culture</a> <sup>3</sup>	\$97.50  NYS Subsidized contract fee: \$50.00	<b>Conjunctival swab</b> <sup>1,3</sup> in aerobic transport media (Amies w/out charcoal) and <b>conjunctival scraping</b> <sup>2</sup> on glass slide and air dried. <b>SHIP SWAB CHILLED AND SLIDE AT ROOM TEMPERATURE.</b>
<b>Bovine Reproduction Bacteriology Panel A (formerly "Reproductive Bacteriology Cultures, Panel 4")</b>	<a href="#">Aerobic bacterial culture</a> <sup>1</sup> ; <a href="#">Mycoplasma culture</a> <sup>2</sup> ; <a href="#">Ureaplasma culture</a> <sup>3</sup> ; (no sensitivities included)	\$85.50  NYS subsidized contract fee: \$50.00	<b>Uterine swab</b> <sup>1,2,3</sup> in aerobic transport media (Amies w/out charcoal) or <b>semen, urethral, or preputial sample</b> <sup>1,2,3</sup> in sterile container. <b>SHIP CHILLED.</b> This panel often combined with panel B below.
<b>Bovine Reproduction Bacteriology Panel B (formerly "Reproductive Bacteriology Cultures, Panel 5")</b>	<a href="#">Campylobacter fetus (Vibrio) FA</a> <sup>1</sup> ; <a href="#">Tritrichomonas culture</a> <sup>2</sup>	\$28.50	Special Lactated Ringers vial <sup>1</sup> and InPouch™ TF culture system <sup>2</sup> inoculated with <b>cervical mucus</b> or <b>preputial scraping</b> . KIT AND INSTRUCTIONS AVAILABLE. Bulls should be sexually rested for three weeks to maximize recovery. <b>CONTACT LAB TO SCHEDULE SUBMISSION. SHIP LACTATED RINGERS VIAL CHILLED AND INPOUCH™ TF AT ROOM TEMPERATURE.</b> This panel often combined with panel A above.

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<p><b>Bovine Respiratory (Acute) Diagnostic Plan</b></p>	<p><a href="#">Aerobic bacterial culture</a><sup>1</sup> (1 sensitivity included); <a href="#">Cytology</a><sup>2</sup>; <a href="#">Histopathology</a><sup>3</sup>; <a href="#">Mycoplasma culture</a><sup>4</sup>; (4) <a href="#">Virus FAs</a><sup>5</sup>: [<a href="#">Bovine Virus Diarrhea Virus (BVDV)</a>, <a href="#">Bovine Herpesvirus-1 (BHV-1) (IBR) FA</a>, <a href="#">Bovine Respiratory Syncytial Virus (BRSV)</a>, <a href="#">Bovine Coronavirus</a>]; <a href="#">Virus isolation</a><sup>6</sup></p> <p>Testing for evidence of lungworms, <a href="#">quantitative fecal</a> (\$25) may be warranted depending on season. Also <a href="#">selenium</a> on an <b>EDTA whole blood</b> (\$21.00) <b>sample</b> or <b>liver</b> (\$55) and <a href="#">vitamin E</a> (\$22) on a <b>serum</b> sample (separated) may be appropriate in some situations. Paired acute and convalescent <b>serum</b> samples for <a href="#">(BVDV) SN, Type 1</a> (29.00), <a href="#">(IBR) KELISA</a> (\$14.50), and <a href="#">BRSV SN</a> (\$29.00) may be warranted in acute disease episodes.</p>	<p>\$242.25 (ante mortem samples)</p> <p>\$297.25 (full set of necropsy samples)</p> <p>NYS subsidized contract fee:</p> <p>\$105.00 (ante mortem samples)</p> <p>\$65.00 (full set of necropsy samples)</p>	<p>Ante mortem samples: <b>transtracheal wash (TTW)</b> (preferred sample) or bronchial alveolar lavage (BAL) fluid in <b>RTT</b><sup>1,4,5,6</sup> (alternatively can use viral transport media), and EDTA tube<sup>2</sup>(LTT), (2) <b>air dried slides</b><sup>2</sup> of fluid, and (1) <b>swab</b> inoculated with sample<sup>1,4</sup> and placed in aerobic transport media (Amies w/o charcoal). <b>SHIP CHILLED EXCEPT FOR SLIDES WHICH SHOULD BE AT ROOM TEMPERATURE.</b></p> <p>See <a href="#">Transtracheal wash procedure</a> for more information. It may be helpful to collect and bank a serum sample for possible acute and convalescent serology. [<b>Nasal or pharyngeal swabs</b><sup>6</sup> are only appropriate for virus isolation and PCR. Submit in viral transport media or a RTT with a 0.5 ml sterile saline for virus isolation and PCR. <b>SHIP CHILLED</b>]</p> <p>Necropsy samples: Section of <b>fresh lung</b><sup>1,4,5,6</sup> +/- <b>(1) swab inoculated with sample</b><sup>1,4</sup> and placed in aerobic transport media (Amies w/o charcoal) and <b>full set of tissues</b><sup>3</sup> placed in formalin. <b>SHIP FRESH TISSUE AND SWABS CHILLED AND PROTECT FIXED TISSUE FROM FREEZING.</b></p>
<p><b>Calf Management Diagnostic Plan</b></p>	<p>(4) <a href="#">Bedding modified bacterial counts</a><sup>1</sup>; (8) <a href="#">Colostrum/milk modified bacterial counts</a><sup>2</sup>; <a href="#">Milk replacer/Electrolyte Osmolality</a><sup>3</sup>; (10) <a href="#">Total Protein - refractometer</a><sup>4</sup></p> <p>May also want to consider <a href="#">selenium</a> (\$21.00) on an <b>EDTA whole blood sample</b> in some situations.</p>	<p>\$359.00</p> <p>NYS subsidized contract fee:</p> <p>\$309.00</p>	<p><b>EDTA whole blood</b><sup>4</sup> (LTT) on 10 calves less than one week of age; (1) 5 ml <b>sample Milk Replacer or Electrolyte Supplement</b><sup>3</sup>, as mixed for use; (2) 5 ml <b>samples Colostrum</b><sup>2</sup>, as collected from cow; (2) 5 ml <b>samples Colostrum</b><sup>2</sup>, as fed, collected from regular feeding utensil, after routine storage, if any; (2) 5 ml <b>samples Milk/milk replacer</b><sup>2</sup>, as collected or mixed; (2) 5 ml <b>samples Milk/milk replacer</b><sup>2</sup>, as fed, collected from regular feeding utensil, after routine storage, if any; (2) <b>bedding samples</b><sup>1</sup>, clean stalls ready to occupy; (2) <b>bedding samples</b><sup>1</sup>, stalls with calves. <b>SHIP CHILLED.</b></p>
<p><b>Coagulation Panel, Large Animal</b></p>	<p><a href="#">aPTT</a>; <a href="#">PT</a>; <a href="#">Fibrinogen (Clauss method)</a></p>	<p>\$38.50</p>	<p><b>2 ml separated citrate plasma</b> in plastic or siliconized glass tube (blue top and then separated and transferred). <b>SHIP CHILLED.</b></p>

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<b>Dermatology Diagnostic Plans</b>	<a href="#">Aerobic bacterial culture</a> <sup>1</sup> (1 sensitivity included); <a href="#">Biopsy for parasite exam</a> <sup>2</sup> ; <b>Deep lesion</b> <a href="#">Fungal culture</a> <sup>3</sup> ; <a href="#">Gram stain</a> <sup>4</sup> ; <a href="#">Histopathology (biopsy)</a> <sup>5</sup> ;	Deep lesion: \$177.50  NYS subsidized contract fee: \$50.00	<b>Deep lesion:</b> (2) <b>fresh skin biopsies</b> <sup>1,2,3,4</sup> in plain <b>RTT</b> with 0.5 ml sterile saline to keep moist (not wet) +/- <b>swab</b> <sup>1,3</sup> <b>from deep in tissue</b> placed in aerobic transport media (Amies with charcoal), multiple <b>formalin fixed skin biopsies</b> <sup>5</sup> . <b>SHIP CHILLED AND PROTECT FIXED TISSUE FROM FREEZING.</b>
<b>Superficial lesion</b>	<a href="#">Fungal culture</a> <sup>3</sup> ; <a href="#">Gram stain</a> <sup>4</sup> ; <a href="#">Histopathology (biopsy)</a> <sup>5</sup> ; <a href="#">Skin scraping for ectoparasite identification</a> <sup>6</sup> ; <a href="#">Cytology</a> <sup>7</sup>	Superficial lesion: \$156.75  NYS subsidized contract fee: \$90.00	<b>Superficial lesion:</b> (1) <b>hair and skin scraping</b> <sup>3,4</sup> for fungal culture and gram stain sent in a sealable paper envelope, (1) <b>skin scraping</b> <sup>6</sup> for ectoparasite identification in an escape proof, non-porous container, (2) <b>impression smears/skin scrapings/fluid aspirates</b> <sup>7</sup> for cytology placed on glass slides and air dried, and multiple <b>formalin fixed skin biopsies</b> <sup>5</sup> . No aerobic culture is included in the superficial plan. <b>SHIP AT ROOM TEMPERATURE AND PROTECT FROM TEMPERATURE EXTREMES.</b>
<b>Embryo Transfer Recipient Panel</b>	<a href="#">Bovine Leukosis Virus (BLV) AGID</a> ; <a href="#">Bovine Virus Diarrhea Virus (BVDV) Antigen Capture ELISA (ACE)</a> ; <a href="#">Neospora IFA</a>	\$27.50	<b>Serum</b> (separated). <b>SHIP CHILLED.</b>
<b>Fever of Unknown Origin Diagnostic Plan</b>	(3) <a href="#">Blood cultures, aerobic/fungal</a> <sup>1</sup> (1 sensitivity included); (3) <a href="#">Blood cultures, anaerobic</a> <sup>2</sup> ; <a href="#">Fibrinogen (heat-precipitated)</a> <sup>3</sup> ; <a href="#">Hemogram, routine (CBC)</a> <sup>4</sup> (examination for blood parasites included); (2) <a href="#">Virus isolations</a> <sup>5</sup> ( <b>nasal, whole blood</b> )  If case is chronic, virus isolation can be omitted if desired, see comment to right. If not previously tested a <a href="#">Bovine Virus Diarrhea Virus (BVDV) Antigen Capture ELISA (ACE)</a> (\$5.50) on <b>serum</b> or an <b>ear notch</b> and a <a href="#">Large animal chemistry panel</a> (\$41.75) on <b>serum</b> or <b>heparinized plasma</b> (separated from a green top tube) may be warranted.	Chronic case with no virus isolation: \$220.25  NYS subsidized contract fee: \$114.50 (full plan)  \$99.50 (Chronic case with no virus isolation)	(3) inoculated <b>aerobic/fungal blood culture bottles</b> <sup>1</sup> , (3) inoculated <b>anaerobic blood culture bottles</b> <sup>2</sup> , <b>nasal swab</b> <sup>5</sup> in 0.5 ml sterile saline to keep moist (not wet), (2) tubes <b>EDTA whole blood</b> <sup>3,4,5</sup> (LTT), and (2) <b>air dried blood smears</b> <sup>4</sup> . <b>SHIP CHILLED EXCEPT FOR BLOOD CULTURE BOTTLES AND SLIDES WHICH ARE SHIPPED AT ROOM TEMPERATURE.</b> See <a href="#">Blood Culture Technique</a> for more information. It may be helpful to collect and bank a serum sample for possible acute and convalescent serology.  This diagnostic plan is designed to detect a broad spectrum of systemic bacterial, viral, and some blood parasite causes of acute fever of unknown origin, as well as certain inflammatory changes which may assist in determining the underlying problems. Viral causes of illness are best detected acutely and most are unlikely to be detected in a patient with a chronic fever of unknown origin. This plan is intended to be used as an adjunct to targeted, disease-specific testing appropriate to the species, clinical history and geographic location or conditions. See <a href="#">url</a> for other ideas of testing.

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<b><u>Large Animal Basic Workup</u></b>	<a href="#">Fibrinogen (heat-precipitated)</a> <sup>1</sup> ; <a href="#">Hemogram, routine (CBC)</a> <sup>2</sup> ; <a href="#">Large animal chemistry panel</a> <sup>3</sup>	\$91.25	<b>EDTA whole blood</b> <sup>1,2</sup> (LTT), (2) <b>air dried blood smears</b> <sup>2</sup> , and <b>serum</b> <sup>3</sup> (separated). <b>SHIP CHILLED.</b>
<b><u>Large Animal Liver Panel</u></b>	<a href="#">AST</a> ; <a href="#">SDH</a> ; <a href="#">GGT</a> ; <a href="#">GLDH</a> ; <a href="#">Total/Direct/Indirect Bilirubin</a> ; <a href="#">Total Protein</a> ; <a href="#">Albumin</a> ; <a href="#">Globulin</a> ; <a href="#">A/G Ratio</a> ; <a href="#">CK</a> ; <a href="#">Triglycerides</a>	\$22.00	<b>Serum</b> (separated) or <b>heparinized plasma</b> (separated from a green top tube). <b>SHIP CHILLED</b>
<b><u>Large Animal Renal Panel</u></b>	<a href="#">Na</a> ; <a href="#">K</a> ; <a href="#">Cl</a> ; <a href="#">Bicarb</a> ; <a href="#">Anion gap</a> ; <a href="#">Urea</a> ; <a href="#">Creatinine</a> ; <a href="#">Albumin</a> ; <a href="#">Ca</a> ; <a href="#">P</a>	\$22.00	<b>Serum</b> (separated) or <b>heparinized plasma</b> (separated from a green top tube). <b>SHIP CHILLED</b>
<b><u>Metabolic Profile Test Panel</u></b>	<a href="#">Albumin</a> ; <a href="#">Aspartate Aminotransferase</a> ; <a href="#">Beta-Hydroxybutyrate (BHBA)</a> ; <a href="#">Non-Esterified Fatty Acid (NEFA)</a> ; <a href="#">Urea Nitrogen</a>	\$25.00	<b>Serum</b> (separated), do not use serum separator tubes. Serum can be frozen and placed in chest freezer that is not a frost-free freezer to minimize the freeze-thaw cycles. <b>SHIP CHILLED.</b>  For BHBA and NEFA testing on the herd level, it is recommended to sample 12 animals per herd from cows that are 3-14 days in milk. See <a href="#">Appendix A</a> for more information on sampling and interpretation.
<b><u>Transition Cow Energy Panel</u></b>	<a href="#">Beta-Hydroxybutyrate (BHBA)</a> ; <a href="#">Non-Esterified Fatty Acid (NEFA)</a>	\$21.00	<b>Serum</b> (separated), do not use serum separator tubes. Serum can be frozen and placed in chest freezer that is not a frost-free freezer to minimize the freeze-thaw cycles. <b>SHIP CHILLED</b>  For BHBA and NEFA testing on the herd level, it is recommended to sample 12 animals per herd from cows that are 3-14 days in milk. See <a href="#">Appendix A</a> for more information on sampling and interpretation.  If negative energy balance in prepartum cows is the primary concern you may want to consider sampling 12 prefresh animals (2-14 days precalving) and only performing NEFAs.

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<b>Transition Cow Management Diagnostic Plan (Transition Cow Energy Panel + Selenium + Vitamin E)</b>	<a href="#">Beta-Hydroxybutyrate (BHBA)<sup>1</sup></a> ; <a href="#">Non-Esterified Fatty Acid (NEFA)<sup>2</sup></a> ; <a href="#">Selenium, whole blood<sup>3</sup></a> ; <a href="#">Vitamin E<sup>4</sup></a>	\$64.00	<p><b>Serum<sup>1,2,4</sup></b> (separated), do not use serum separator tubes and <b>EDTA whole blood<sup>3</sup></b> (LTT). <b>SHIP CHILLED.</b></p> <p>For BHBA and NEFA testing on the herd level, it is recommended to sample 12 animals per herd from cows that are 3-14 days in milk. See <a href="#">Appendix A</a> for more information on sampling and interpretation.</p> <p>If negative energy balance in prepartum cows is the primary concern you may want to consider sampling 12 prefresh animals (2-14 days precalving) and only performing NEFAs.</p> <p>In some herd situations there may be value in considering testing on the herd level for subclinical hypocalcemia and this could be done by sampling 12 fresh animals (0-2 days) and performing <a href="#">calcium</a> (\$6.50) only.</p>
<b><u>Virus Isolation, IBR/BVD Semen Panel</u></b>	<a href="#">Virus Isolation IBR/BVD</a>	\$55.25	<b>Semen</b> in sterile container. <b>SHIP CHILLED.</b>

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