DATE: February 26, 2015
TO: Dairy Processors, HR Personnel and Others Interested in Dairy Processing
FROM: Steven C. Murphy, Sr. Extension Associate
RE: HTST Pasteurizer Operator Workshop, April 14-16, 2015

Cornell University’s Department of Food Science in collaboration with NY State Department of Agriculture and Markets, Division of Milk Control, is again offering a High Temperature Short Time (HTST) Pasteurizer Operator Workshop, April 14-16, 2015. The program will be held in the Food Science Conference Center, 148 Stocking Hall on the Cornell University Campus in Ithaca, NY. It begins 9:00 AM on Tuesday, April 14 and will end by 1:00 PM on Thursday, April 16.

This workshop is designed for pasteurizer operators, but should be beneficial to all involved with milk pasteurization, including production, QA/QC & maintenance personnel. The course is instructed by industry experts and representatives from NYS Agriculture & Markets and provides an overview of the design, operation, cleaning and maintenance of HTST systems. All required regulatory tests for HTST pasteurizers will be discussed and/or presented in a hands-on format to meet the training requirements for performing HTST system testing under the NY State Broken Seal Policy. Information on HHST/UP systems will be covered, as warranted. Background in dairy microbiology & product safety will be provided. A complete program follows.

PRE-REGISTRATION IS REQUIRED. Enrollment is limited to 35 participants on a first-come, first-serve basis; please send your registration as soon as possible. The fee is $450.00 per person for NY Companies; for companies outside New York State the fee is $540.00. Late fees apply. Materials, breaks and lunch (April 14 & 15 only) are included. Due to space limitations, only 2 from each company location will be accepted. Please note that Cornell University has moved to Credit Card payment only and on-line registration. For those with difficulties paying on-line, please contact Louise Felker at lmf226@cornell.edu.

To Register and Pay On-Line, Go To: http://dairyextension.foodscience.cornell.edu/content/htst-workshop-april-14-16-2015
1. Fill in all required information and click “submit.” Up to 2 participants (max.) can be entered on the form.
2. When your registration is received, you will be sent an automatic e-mail confirmation of receipt and the payment link for credit card payments. If you do not receive this following submission of your registration form, contact Louise Felker (lmf226@cornell.edu) or Steve Murphy (scm4@cornell.edu).
3. Once you receive the payment link, fill out all required information and click “submit.” Please include the names of the participants that you are paying for in the comment section and any other appropriate information. You should receive a receipt of payment by e-mail within minutes. Your confirmation will be e-mailed to you with appropriate course information.

CANCELLATIONS: The deadline for registration is March 27, 2015. No refunds can be given if not cancelled by COB March 27, 2015. Substitutions are accepted at any time.

A listing of hotels, Cornell parking permit information, directions and area maps are included with this mailing.

The course will be held in the Food Science Conference Center, Room 148 Stocking Hall on the Cornell University Campus in Ithaca, NY.

Please call Steve Murphy (607-255-2893) if you have questions.

This course meets the Core Course Requirement of the Dairy Foods Certificate Program for Fluid Milk. The option to enroll in the program is included with the on-line registration. For questions/more information, contact Louise at lmf226@cornell.edu, or go to: http://dairyextension.foodscience.cornell.edu/programs/certificate-program
Tuesday, April 14

8:30 am  Registration & Coffee (please sign in on arrival)

9:00 am  Welcome, goals and objectives
           *Hosts:* Cornell University ............ Steve Murphy
           NYS Agriculture & Markets ... Becca Durant

9:15 am  Program Overview & Pre-Test
           *Staff*

9:30 am  Why Pasteurize: Basics of Dairy Microbiology &
           Product Quality
           Steve Murphy
           Cornell University

10:15 am  BREAK

10:30 am  Why Pasteurize: Product Safety
           Rob Ralyea
           Cornell University

11:15 am  Equipment System Design & Control
           Bob Price
           Seiberling Associates, Inc.

12:15 pm  LUNCH – Provided

1:00 pm  Equipment System Design & Control (continued)
           Bob Price, Seiberling Assoc.

2:30 pm  BREAK

2:45 pm  HTST Recording Charts; Exercise and Review
           Becca Durant
           Vickie Pedersen
           NYS Agriculture & Markets

3:45 pm  HTST Instrumentation for Control
           Gary Ratajczak
           Anderson Instrument Co.

5:15 pm  End of Session

Wednesday, April 15

8:00 am  Coffee & Questions

8:15 am  NYS Requirements for Operating with a
           Broken Regulatory Seal;
           Review of Regulatory Tests for HTST
           Becca Durant
           Oscar Cox
           NYS Agriculture & Markets

10:00 am  BREAK

10:15 am  HTST Testing: Demonstrations & Hands-On
           Breakout Sessions
           Participants will rotate in assigned groups
           through 5 stations set up to demonstrate
           regulatory requirements and HTST testing
           procedures with hands-on participation.

           *Breakout sessions described on the next page:*
### Wednesday, April 15 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
<th>Speaker</th>
<th>Organization</th>
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</thead>
<tbody>
<tr>
<td>10:15 am</td>
<td><strong>Breakout Session 1</strong></td>
<td>Safety Thermal Limit Recording (STLR) Device - accuracy; cut-in/cut-out; event pen/flow meter alarms; chart requirements; system set-up and calibration procedures (Anderson 9900 STLR)</td>
<td>Gary Ratajczak</td>
<td>Anderson Instrument Co.</td>
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<td><strong>B.</strong></td>
<td>HTST Holding Time &amp; Flow Rates ** - salt test; holding tube slope; and can fill; HTST system operation run &amp; overview</td>
<td>Rob Ralyea, Cornell U.</td>
<td>Joanne Lawton, NYSDAM</td>
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<td><strong>C.</strong></td>
<td>Safety Thermal Limit Recording (STLR) Device - thermometric response; electronic magnetic interference; chart requirements &amp; testing with mag-flow recording parameters; system set-up, pen-lift adjustments/functions and calibration procedures (ABB STLR)</td>
<td>Vickie Pedersen</td>
<td>Grant Fine</td>
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<td><strong>D.</strong></td>
<td>Flow Diverion Device - Valve Testing - leak detection; valve seat control; device assembly; response time; time delay</td>
<td>Oscar Cox</td>
<td>NYS Agriculture &amp; Markets</td>
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<td><strong>E.</strong></td>
<td>Pressure Differential &amp; DART Thermometers - testing pressure sensors; calibration; inter-wiring; digital reference thermometer overview</td>
<td>Bruce Krohn</td>
<td>Anderson Instrument Co.</td>
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<td>11:15 am</td>
<td>Breakout Session 2 – Group Switch</td>
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<td>12:15 pm</td>
<td>LUNCH – Provided</td>
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<td>1:15 pm</td>
<td>Breakout Session 3 – Group Switch</td>
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<td>2:15 pm</td>
<td>Breakout Session 4 – Group Switch</td>
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<tr>
<td>3:15 pm</td>
<td>BREAK</td>
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<tr>
<td>3:30 pm</td>
<td>Breakout Session 5 – Group Switch</td>
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**Station B**

**UP/UHT/HHST – Sequence Logic Demo for Group(s) with personnel from UP/UHT/HHST**  
Becca Durant  
NYS Agriculture & Markets

### Thursday, April 16

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>8:15 am</td>
<td>Coffee and Questions</td>
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<tr>
<td>8:30 am</td>
<td>NYS Broken Seal Policy Review; Phosphatase Testing and Sampling - Regulatory Requirements</td>
<td>Joanne Lawton, NYSA&amp;M Steve Murphy, Cornell U.</td>
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<td>9:00 am</td>
<td>Cleaning &amp; Sanitizing HTST and Product Distribution Systems</td>
<td>Dan Seitzer Ecolab, Food &amp; Beverage</td>
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<td>10:15 am</td>
<td>BREAK</td>
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<tr>
<td>10:30 am</td>
<td>Maintenance of HTST Systems</td>
<td>Jim McFadden</td>
<td>Morrisville State College</td>
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<td>11:15 am</td>
<td>Program Review: Post-Test</td>
<td>Staff</td>
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<tr>
<td>12:00 am</td>
<td>Review/Q &amp; A/Certificate Distribution &amp; Adjourn</td>
<td>Staff</td>
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Staff