Aquaculture by definition is the farming of fish, crustaceans, molluscs, aquatic plants, algae, and other organisms. The Department of Agriculture (DoAg)’s Bureau of Aquaculture is the licensing/permitting agency for shellfish (hard clams, oysters, mussels) and algae seaweed (kelp) in Connecticut. DoAg has always viewed the way shellfish growers in Connecticut manage their crops as farming because the ground is worked and monitored. The bottom is cleaned off prior to oysters being relayed onto it from another lot. Oysters are moved to deeper, colder water to slow their growth. They are tumbled to produce a tougher shell and deeper cup. They are relayed to approved water for natural cleansing and can also be stockpiled for harvest at a later date.

Dried oyster shell—known as cultch—is put down to attract baby oysters that can then be moved to another site.

The Long Island Sound is a waterbody shared by many interests, including commercial/recreational fishing, recreational boating/sailing, kayaking, scuba, snorkel, jet skiing, swimming, birding, and sightseeing. Because all must be able to safely use, share, and enjoy this invaluable resource, there is regulatory oversight.

The use of any "structure" in the water column (i.e. bottom netting, bottom cage, hanging cage, floating bags, hatchery, upweller, or longline) requires an application to DoAg, which is reviewed by DoAg, the Connecticut Department of Energy and Environmental Protection (DEEP) and the U.S. Army Corps of Engineers (USACE). A Certificate of Operations is needed from DoAg. Other permits may also be needed from DEEP and USACE before work associated with any structure can begin.

Since 2000, when DoAg began keeping a database and actively tracking aquaculture projects, 39 entities (commercial companies, town shellfish commissions, schools, NOAA’s National Marine Fisheries Service, and DoAg) have applied for an Aquaculture Certificate to use primarily bottom cages, floating cages, upwellers, bottom netting, and hatcheries. Certificates have been issued to 35 entities.

Traditionally, hard clams and oysters have been grown on the bottom and harvested using dredges, relying on nature to produce enough product year after year. Over time, and with innovation, the idea of growing shellfish from seed in a hatchery was developed to produce a more reliable supply of shellfish. In Connecticut there are currently three hatcheries producing seed oysters with several more in the planning stages.

Once the baby oysters/clams seed reach a certain size, they are moved out of the hatchery and into a system of individual cylinders, or silos, through which ocean water is pumped, known as an upweller.

The upweller can be incorporated into/underneath a dock or moored alongside a floating dock. Having upwellers allows the company to purchase larger size seed, increasing the survival rate.

There are currently 12 companies permitted to have and use upwellers in Connecticut, with several more in the planning stages.

Because hard clams live in the mud, it is difficult to grow them in cages. However, they can be grown in the bottom under predator netting. The netting is spread on

(continued on Page 3)
### NEW ENGLAND SHELL EGGS
Per doz. Grade A brown in carton delivered store door. (Range)

<table>
<thead>
<tr>
<th>Grade</th>
<th>High</th>
<th>Choice</th>
<th>Medium</th>
<th>Choice</th>
<th>Select 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>375</td>
<td>330</td>
<td>375</td>
<td>320</td>
<td>300</td>
</tr>
<tr>
<td>90</td>
<td>375</td>
<td>330</td>
<td>375</td>
<td>320</td>
<td>300</td>
</tr>
<tr>
<td>100</td>
<td>375</td>
<td>330</td>
<td>375</td>
<td>320</td>
<td>300</td>
</tr>
<tr>
<td>110</td>
<td>375</td>
<td>330</td>
<td>375</td>
<td>320</td>
<td>300</td>
</tr>
<tr>
<td>120</td>
<td>375</td>
<td>330</td>
<td>375</td>
<td>320</td>
<td>300</td>
</tr>
</tbody>
</table>

### SLAUGHTER STEERS
Hi Choice/Prime 3-4 113.50 116.00 Choice 2-3 109.00 113.00 Select 1-2 104.00 108.00

### SLAUGHTER HOGS

<table>
<thead>
<tr>
<th>Weight</th>
<th>Choice 2-3</th>
<th>Select 1-2</th>
<th>Medium</th>
<th>Select E-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-300 lbs</td>
<td>49.50</td>
<td>44.90</td>
<td>39.80</td>
<td>33.90</td>
</tr>
<tr>
<td>300-400 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>400-500 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>500-600 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
</tbody>
</table>

### SLAUGHTER NANNIES/DOES

<table>
<thead>
<tr>
<th>Weight</th>
<th>Choice 2-3</th>
<th>Select 1-2</th>
<th>Medium</th>
<th>Select E-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-110 lbs</td>
<td>90.00</td>
<td>85.00</td>
<td>80.00</td>
<td>75.00</td>
</tr>
<tr>
<td>110-130 lbs</td>
<td>90.00</td>
<td>85.00</td>
<td>80.00</td>
<td>75.00</td>
</tr>
<tr>
<td>150-200 lbs</td>
<td>90.00</td>
<td>85.00</td>
<td>80.00</td>
<td>75.00</td>
</tr>
</tbody>
</table>

### SWEET POTATOES, 40 LB, CRT

<table>
<thead>
<tr>
<th>Weight</th>
<th>Choice 2-3</th>
<th>Select 1-2</th>
<th>Medium</th>
<th>Select E-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-300 lbs</td>
<td>49.50</td>
<td>44.90</td>
<td>39.80</td>
<td>33.90</td>
</tr>
<tr>
<td>300-400 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>400-500 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>500-600 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
</tbody>
</table>

### DAIRY CATTLE
New Holland, Pa. Price per animal.

**FRESH COWS**
- APPROVED: 800.00 1275.00
- MEDIUM: 550.00 850.00

**SPRINGING COWS (7-9 MONTHS):**
- MEDIUM FEW: 500.00 625.00
- SHORT BRED COWS (1-3 MONTHS):
  - MEDIUM FEW: n/a n/a
  - SPRINGING HEIFERS (7-9 MONTHS):
    - SUPREME FEW: 975.00 1150.00
    - APPROVED: 600.00 1000.00
    - MEDIUM: 400.00 750.00

**BRED AND SHORT BRED HEIFERS**
(1-6 MONTHS):
- APPROVED FEW: 475.00 825.00

**OPEN HEIFERS:
- 50-300 lbs:
  - APPROVED: n/a n/a
  - MEDIUM: n/a n/a
- 200-600 lbs
  - APPROVED: 210.00 375.00
  - MEDIUM: 175.00 285.00
- 600-900 lbs
  - APPROVED: 370.00 510.00
  - MEDIUM: 235.00 375.00

---

**NEW ENGLAND GROWN ORGANIC**

- CABBAGE, 45 LB, CRT: 33.00 33.00
- MUSHROOM, CHITATE, 3 LB CRT: 13.00 13.00
- ONION, RED GLOBE, 50 LB, M: 15.00 16.00
- PARSNIPS, MI, 20 LBS: 26.00 26.00
- SPINACH, FLAT, CA, Bunch: 28.00 28.00
- SWEET POTATOES, 40 LB, CRT: 27.00 27.00

---

**MIDDLESEX LIVESTOCK AUCTION**
Middlefield, CT - January 14, 2019

<table>
<thead>
<tr>
<th>Weight</th>
<th>Choice 2-3</th>
<th>Select 1-2</th>
<th>Medium</th>
<th>Select E-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-300 lbs</td>
<td>49.50</td>
<td>44.90</td>
<td>39.80</td>
<td>33.90</td>
</tr>
<tr>
<td>300-400 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>400-500 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>500-600 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
</tbody>
</table>

---

**MIDDLE ENGLAND GROWN**

- CABBAGE, 45 LB, CRT: 33.00 33.00
- MUSHROOM, CHITATE, 3 LB CRT: 13.00 13.00
- ONION, RED GLOBE, 50 LB, M: 15.00 16.00
- PARSNIPS, MI, 20 LBS: 26.00 26.00
- SPINACH, FLAT, CA, Bunch: 28.00 28.00
- SWEET POTATOES, 40 LB, CRT: 27.00 27.00

---

**WHOLESALE FRUITS & VEGETABLES**
Boston Terminal and Wholesale Grower Prices
CONNECTICUT AND NEW ENGLAND GROWN

<table>
<thead>
<tr>
<th>Weight</th>
<th>Choice 2-3</th>
<th>Select 1-2</th>
<th>Medium</th>
<th>Select E-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-300 lbs</td>
<td>49.50</td>
<td>44.90</td>
<td>39.80</td>
<td>33.90</td>
</tr>
<tr>
<td>300-400 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>400-500 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
<tr>
<td>500-600 lbs</td>
<td>50.50</td>
<td>45.50</td>
<td>40.80</td>
<td>35.90</td>
</tr>
</tbody>
</table>
the bottom similar to row covers and held to the bottom with rebar around the edges.

This prevents predator crabs from eating the baby clams. There are currently three companies permitted to use predator netting for growing hard clams in Connecticut.

Bottom cages, similar in size and shape to lobster cages, are used to grow and hold oysters. The use of cages produces a more desirable and reliable product.

Using cages makes it easier to locate and handle the oysters and harvest the exact number needed to fill orders. The use of cages does, however, require a different boat design because dredges are not used.

An onboard crane system is needed to lift the cages on deck. The cages can either be emptied onsite, or the whole cage can be brought back to shore. Cages are set either individually with one buoy per cage or several on the same ground line with one buoy per line.

There are currently 23 companies permitted to use bottom cages to grow oysters in Connecticut.

FOR SALE

1-R. Blumenthal & Donahue is now Connecticut's first independent NATIONWIDE Agri-Business Insurance Agency. Christmas tree growers, beekeepers, sheep breeders, organic farmers and all others, call us for all your insurance needs. 800-554-8049 or www.bludon.com

2-R. Farm, homeowner and commercial insurance—we do it all. Call Blumenthal & Donahue 800-554-8049 or www.bludon.com

3-R. Gallagher electric fencing for farms, horses, deer control, gardens, & beehives. Sonpal’s Power Fence 860-491-2290.

4-R. Packaging for egg sales. New egg cartons, flats, egg cases, 30 doz and 15 doz. Polinsky Farm 860-376-2227.

5-R. Nationwide Agribusiness Insurance Program, endorsed by the CT Farm Bureau, save up to 23% on your farm insurance and get better protection. References available from satisfied farmers. Call Marci today at 203-444-6553.


WANTED

9-R. Used green house approximately 20 x 24 ft in good working condition. Please call 203-213-8833.
FARM TRANSITION GRANT APPLICATIONS DUE FEBRUARY 14, 2019

Grant guidelines and applications for the Dept. of Agriculture’s Farm Transition Grant program are available online and must be submitted by February 14, 2019. The program provides grants to up to $49,999. Applicants must provide a one to one match. The purpose of the program is to strengthen the economic viability of Connecticut farmers and agricultural cooperatives. Funding priorities for 2019 include:

- On-farm improvements to comply with the Produce Safety Rule of the Food Safety Modernization Act
- Meeting food safety requirements for advanced positioning in the marketplace.
- Strengthening infrastructure to meet changing climate conditions.
- Projects that increase year-round availability of Connecticut Grown products while enhancing farm viability.
- Diversification of existing farm operations into new and emerging crops and/or product lines.

Grant guidelines and forms can be found at www.CTGrown.gov/grants. Two opportunities to learn about the application process and how to write a project plan will be offered:

- **Thursday, January 31, 1:30 - 3:30 p.m.**
  (Snow Date: Friday, February 1, 1:30 - 3:30 p.m.)
  CT Farm Bureau Association
  78 Beaver Road, Wethersfield
  RSVP to Jaime Smith: Jaime.Smith@ct.gov or 860-713-2559

- **Saturday, February 2, 10:15 – 11 a.m. and 11:15 a.m. – 12 p.m.**
  At the 3rd Annual Agricultural Re$ource Fair
  4-H Education Center at Auerfarm
  158 Auer Farm Rd, Bloomfield, CT
  RSVP and more info: https://newfarms.uconn.edu/solidground/3rd-annual-agricultural-resource-fair/

Questions regarding the Farm Transition Grant can be directed to Jaime Smith or found online at www.CTGrown.gov/grants.

HARVEST NEW ENGLAND PRE-CONFERENCE TOUR & SCHOLARSHIPS AVAILABLE

Attend the Harvest New England Agricultural Marketing Conference & Trade Show in Sturbridge, MA, on February 27 and 28 and take your farm marketing to the next level. Experience 28 workshops on topics such as retail and wholesale marketing, agri-tourism, business planning, value-added product development, social media, and more.

A pre-conference farm tour on Tuesday, February 26 will provide the opportunity to see how farms and venues across the region are diversifying marketing opportunities to expand their customer base. Tour stops in Rhode Island and Massachusetts include Wright’s Dairy and Bakery, Wachusett Mountain, Red Apple Farm and Hardwick Farm and Winery. The complete agenda and details can be found online.

A limited number of scholarships are available for growers to attend the conference. Apply by January 30 for consideration. Early bird registration ends January 30. Go to www.harvestnewengland.org/events for additional details.

Advertise Rates: Fifteen or fewer words: $3.75 per insertion. More than 15 words: 25 cents per word per insertion. Ads must be related to agriculture in Connecticut and are accepted on a first-come, first-served basis. Payment must be received by noon on Friday before publication the following Wednesday. Make check or money order payable to the Connecticut Dept. of Agriculture, and mail copy and remittance to the department at 450 Columbus Blvd., Suite 701, Hartford, CT 06103. For more information contact Crystal.Morris@ct.gov or call 860-713-2533.

Postmaster: Send address changes to the Connecticut Department of Agriculture, 450 Columbus Blvd., Suite 701, Hartford, CT 06103.

Print subscriptions expire Dec. 31, 2019.