Cranberry Pollination

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When your cranberries are in bloom, do you observe bees gathering nectar and pollen from the blossoms? If you don’t see an average of 3-4 honey bees or 1-2 bumblebees per 100 sq.ft of cranberries, you may need to rent some bee colonies to enhance pollination.

Cranberries require insect (primarily bee) pollination to set fruit. Bees transfer pollen from the anthers of one flower to the stigmas of another flower. Multiple bee visits to many flowers ensure cross-pollination, which increase the size of the fruit, the number of seeds, and the consistency in the shape of the fruit. Relying on wild populations of bees (bumblebees, feral honey bees, other solitary bees) may not always provide adequate and reliable pollination. Wild nesting bumblebee colonies are not a reliable source of pollinators for cranberries, although when present, they are the most efficient of the bee pollinators. Honey bees are the most effective cranberry pollinators, but bumblebees are the most efficient. The difference is that honey bee colonies have 40,000 – 50,000 female workers while bumblebees have 200 - 300 female workers, so there are considerably more honey bees available for pollination per colony (from 25-50% of the workers in each kind of colony may actually be foraging on a nice day). But individual honey bees. (Continued on page 2)

Upcoming Events:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 10</td>
<td>WSCGA Summer Field Day</td>
<td>Warrens, WI</td>
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<tr>
<td>Aug. 16</td>
<td>CCCG’s Summer Field Day, UMASS Cranberry Experiment Station</td>
<td>Wareham, MA</td>
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<td>Aug. 18</td>
<td>Quebec Cranberry Field Tour</td>
<td>Quebec</td>
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<tr>
<td>Aug. 19</td>
<td>Quebec Cranberry Health Symposium, Laval University</td>
<td>Quebec City</td>
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<td>Aug. 20</td>
<td>Cranberry Institute Board Meeting</td>
<td>Quebec City</td>
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<tr>
<td>TBA</td>
<td>ACGA Summer Field Day</td>
<td>New Jersey</td>
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CMC to Evaluate Generic Promotion Benefits

Brooke Peterson

The Cranberry Marketing Committee recently began the official process of evaluating the Domestic Promotion Program. The Domestic Promotion Program began in 2002, with a proclamation by the Secretary of the USDA, proclaiming October as National Cranberry Month. The cranberry industry funds the domestic promotion program through an assessment paid by handlers on the barrels of cranberries handled. The program budget is set by the CMC on an annual basis. The budget for carrying out the domestic program activities has been set at $500,000 annually.

Congress, through the USDA, requires that promotional programs be evaluated for their effectiveness. The CMC must complete the process by December 2006. A subcommittee was established at the CMC’s February meeting to (Continued on page 2)
Cranberry Pollination

bees are not nearly as efficient in collecting the pollen from each flower as are bumblebees.

The effect of not renting honey bee colonies will vary between properties depending on the numbers of wild pollinators in the surrounding area and differing management practices. Wild pollinators are most likely to be effective during early and late bloom, but their numbers may not be sufficient during mid bloom, particularly at larger properties. Smaller properties that are surrounded by woods or other undisturbed land have the best chances for successful pollination from wild bees.

Cranberries require 2-3 honey bee colonies per acre for adequate pollination. Colonies can be rented from a reputable commercial beekeeper who will truck the bees in and out of the property. It is strongly recommended that the grower and beekeeper draw up a pollination contract before the bees are brought into the property. The contract will ensure that the beekeeper will bring in strong, healthy colonies at the desired time and to the desired location, and that the grower will pay the beekeeper a specified amount and will not spray toxic pesticides while bees are on the property.

Bumblebee colonies can be purchased from commercial producers and placed out in the cranberry beds. Some estimates indicate that 4 bumblebee colonies per acre are needed to pollinate cranberries. The number of colonies needed will vary depending on the number of feral bumblebees present and whether or not honey bee colonies are also being used for pollination. Honey bees and bumblebees seem to be compatible for use together. Bumblebee colonies can be placed in the bogs at or before the first flowering.

Although honey bees are effective pollinators of cranberry, some growers doubt the efficacy and necessity of renting honey bee colonies, especially during economically hard times. Good honey bee pollination results in larger berries and higher quality fruit. Lack of honey bee pollination reduces yield, and produces smaller berries. Is renting honey bee colonies worth the money? If producing and purchasing large quality fruit are the goals of growers and consumers, then renting honey bees is worth the money. Growers can reduce yield by not renting honey bee colonies, but fruit quality will be compromised.

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**2005 Section 18 Emergency Registrations**

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>State(s)</th>
<th>Target Pest(s)</th>
<th>Approval Date</th>
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</thead>
<tbody>
<tr>
<td>Mesotrione (Callisto)</td>
<td>WA, OR</td>
<td>Various weeds</td>
<td>4/05</td>
</tr>
<tr>
<td>Propiconazole (Orbit)</td>
<td>WI</td>
<td>Cottonball (pre-bloom)</td>
<td>4/05</td>
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<tr>
<td>Pronamide (Kerb)</td>
<td>MA</td>
<td>Dodder</td>
<td>4/05</td>
</tr>
<tr>
<td>Indoxacarb (Avaunt)</td>
<td>MA</td>
<td>Cranberry weevil (spring population)</td>
<td>5/05</td>
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</tbody>
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**Generic Promotion Benefits**

review evaluation guidelines and requirements to measure the effectiveness of the Generic Promotion Program. The evaluation sub-committee members selected include CMC member Doug Beaton (Chair), Clyde Barrows (Public Member) and Joe Darlington (Ex-Officio member) as well as handler representatives Brooke Peterson and Bill Frantz and USDA economists Kevin Kesecker and Donald Hinman.

The subcommittee is currently busy reviewing evaluations of other promotional programs and preparing a bid for the work to be done on cranberries. By the end of 2006, we should all have a better idea of “how much bang the industry got for the bucks spent” on cranberry promotions.

Through the CMC Domestic Promotion effort, the CMC provides funding for activities, conducted through the Cranberry Institute that focuses on providing the cranberry health message to health professionals. The CMC also attends and makes displays at trade shows directed towards the food service industry as well as working with various consumer groups to distribute cranberry health information.
If a cranberry property is a reflection of the manager, then Luc Decubber scores an A+. Luc is a partner and the on-site manager of Canneberges Becancour, a beautiful cranberry property located in St-Louis-de-Blandford in Québec, Canada.

Luc has been at Canneberges Becancour since the beginning, which was in 1996 when the first 30 acres of ground was prepared for planting in 1997. The plantings continued with 75 more acres in 1998, 45 in 1999 and 30+ acres per year in ’03, ’04, and ’05. Today there are around 250 acres of cranberries. The plantings at Canneberges Becancour consist of the Stevens, Pilgrims and Ben Lear varieties. Risk is reduced with some diversification in varieties.

Decubber was born and raised in Belgium, where he attended school through high school. His family moved to Québec in 1980 and he started Laval University in 1981, earning a degree in Agronomy in 1985. For the next two years, based on a recommendation from the faculty at Laval, he was a project manager for a group of dairy farms in Québec, analyzing the farming operations, measuring efficiencies and making recommendations. Luc was then hired as a Bank Manager by the Royal Bank in Québec. This experience provided experience with cranberry farms, which were just getting started in the region. After banking for five years, Luc then worked as general manager at Atoka Cranberries in Québec for two and a half years before returning to the bank for one year. Luc left the bank, for good, in 1996, with the startup of Canneberges Becancour (literally “Cranberries Becancour”, which references the name of the river that flows nearby).

According to Luc, one of the biggest challenges in growing cranberries at Canneberges Becancour is “the really short growing season with very cold spring and very cold fall weather.” Despite this, the property produces good yields with excellent quality, which Luc contributes primarily to “hard work and a lot of observation”. His observations include paying attention to the different stages of plant growth and how the vines are responding to fertilizer and other inputs. They work to not apply too much fertilizer. The usual fertilizer program consists of 4 applications (10% bloom, just before 50% bloom, 50% fruit set, 100% fruit set) of 20-20-20 fertilizer. If additional nitrogen is needed, a touch-up application of 21-0-0 may be applied in mid to late July. The results are impressive. The property has averaged around 250 barrels per acre the last five years and EVERY load of fruit is over 40 TACY with 50% of the loads testing over 50 TACY. A quick glance of the property also shows that weed control is a priority. Weed control “consists of lots of hand weeding the first two years, followed by Devrinol and Casoron (35 lbs and 35 lbs.). Follow up weed control is done by wiping with Roundup.

Luc is quick to point out that the property is a partnership. His partners are Donna Jeffers, Bob Hampson, and Matt Rhodes from Massachusetts. According to Luc, “I have some very capable partners. Everybody brings something to the table”. Matt visits the property almost every other week during the growing season. According to Luc, “Matt is a really good grower. He’s always looking for quality, too.” After a visit to the farm, or with any one of the partners, it is easy to understand that matters at Canneberges Becancour are in capable hands.
Market Observations

Shawn O’Connell, Marketing Manager, Clement Pappas & Co.

Note: For each Cranberry Connection newsletter, I attempt to get information on the current cranberry market from someone in our Marketing/Sales group. Invariably, I seek information from Shawn O’Connell, whose job it is to continuously track and research the juice market. The following are Shawn’s latest comments. It is important to keep market observations in perspective. The following observations are only a “snapshot”. A real understanding of the market comes with multiple observations over time. My goal is to offer brief market observations in each newsletter and allow readers to draw their own conclusions. ~Brooke Peterson

Cranberry Juice Cocktail and Cocktail Blends:
The category is stable with a slight increase (+0.9%) for the period ending April 16, 2005. Growth is coming from Ocean Spray and Old Orchard who are both driving volume through low prices and increased promotion. Store Brands have suffered from the increased promotions (-4.0%) however have performed better in the latest 13 weeks with sales up 5.6% versus the year-ago period. Langers has also suffered declines with sales down -9.1%.

100% Cranberry Juice and Juice Blends:
The overall category is down -5.0% and continues a 5 year trend. Category leaders Northland and Ocean Spray are down -7.2% and -17.0% respectively. Of the top 5 brands only Store Brands have positive sales up 24.9%. Average retails are relatively the same, however distribution is declining.

Combined Cocktails and 100% Juices:
Combined sales of Cranberry show sales flat. Category leader Ocean Spray is up 2.4% and Store Brands are down -1.1%.

Cranberry Sauce:
Cranberry Sauce continues a 5 year decline with latest 52 Weeks sales down -3.7%. Ocean Spray is down 5.0% and Store Brands are down -1.1%. Average Retail and Promotions are relatively unchanged.