PACIFIC NORTHWEST HONEY BEE POLLINATION SURVEY—2005

Dr. Michael Burgett

Since 1986 the Honey Bee Laboratory at Oregon State University has conducted an annual survey of pollination economics in the Pacific Northwest (PNW). The information from each year of the survey has been made available both regionally and nationally. The information has proved to be valuable to individual beekeepers who generate income from pollination rental.

The use of managed honey bee colonies for commercial crop pollination remains the most important function of the PNW beekeeping industry. The vast and diverse agriculture of the PNW relies on a healthy and strong beekeeping industry to maintain optimum production. An enhanced knowledge of pollination economics is critical to every beekeeper who enters into the world of commercial crop pollination. It is also important for those growers who contract honey bee colonies for managed pollination, to understand current economic conditions of the beekeeping industry.

The pollination requirement for commercial agriculture in the PNW is enormous. Between Washington, Oregon, and Idaho there are ca. 355,000 acres of crops grown that require or benefit from managed honey bee pollination. The “farm-gate” value of those combined crops is approximately $1,750,000,000! Nearly half of those acres and 60% of the dollar value are in one crop—apples.

The USDA National Agriculture Statistical Service estimates that there are 200,000 production honey bee colonies in the PNW. And with these numbers there are some interesting hypothetical calculations that can be made. If all growers were to rent 2 colonies for each acre of blooming crop (355,000 acres), the resulting pollination requirement would utilize 710,000 colony rentals. If we multiple this by the 2005 average colony rental fee ($5130), it results in a potential pollination rental income of more than 36 million dollars. If we add to that the estimated almond

Continued on page 2
pollination income (ten million dollars), we end up with a gross pollination income of 46 million dollars for PNW commercial beekeepers. Another way to look at this is how much pollination income should be produced from one commercial honey bee colony in one year? That figure is approximately $230.

Comparing the hypothetical PNW rental income (36 million dollars) to the farm-gate value of the crops pollinated in the PNW (1.75 billion dollars) shows that the money spent by growers to ensure adequate pollination is 2% of the value of total crop production. This is another impressive illustration of what a remarkable value pollination rental is to the commercial agricultural industry of the PNW.

This year’s survey provides data that continue to show a number of trends, one of which is the dependence of PNW commercial beekeepers on the income generated from colony rentals. For 2005 the average commercial beekeeper reported receiving 70% of his or her annual operating gross from pollination rentals. This percentage is higher than previous years. This increase is largely due to the very dramatic increase in the almond pollination rental fee for the 2005 pollinating season. In 2005 almond growers responded to a potential shortage of colonies by dramatically increasing the price they paid for pollination. Many commercial beekeepers in the PNW and elsewhere observed serious autumn and early winter colony losses in 2004. This created a situation where a potential colony shortage was perceived by both beekeepers and almond growers for a crop with more than 550,000 bearing acres. The average almond pollination fee for 2005 was $7940. This is a 63% increase from the 2004 average ($4870).

For 2005 the average pollination rental fee, computed from commercial colony rentals on all crops reported (including almonds), was $5130. This is an increase of almost 33% above the average pollination fee of 2004 ($3866) (see Tables 1 and 2). This dramatic escalation is due to the large increase in the average almond pollination rental fee, but most crops pollinated within the PNW also experienced rental fee increases. With the exception of cucumbers, all reported crops saw significant increases in the average pollination fee received in 2005 compared to 2004 rental prices (see Table 2). Excluding almonds, the average rental increase for PNW crops in 2005 was 23.7%. The average increase for PNW tree fruit pollination was 21.7%. Was this a “shirt-tail” effect from the dramatic almond increase? At this time it is difficult to say, but should these prices remain stable or even increase in future pollination seasons, it would be safe to say that almond pollination fees have indeed influenced a price increase for the majority of PNW crops.

For a commercial beekeeper the gross amount of income generated from pollination rental leveled off in 1997 and 1998, but increased in 1999 ($183,780). For 2005 this figure was calculated to be $231,865. The increase results from a trend of increasing the size of individual operations and an increase in per colony pollination income.

During the past ten years (see Table 3), the average rental fee has increased from $2940 (1995) to $5130 (2005). It needs to be stressed that honey bee colony rental has for many decades been an underpaid service to the agricultural industry. It is really only within the past ten years that rental fees have begun to more accurately reflect the enormous value-added

### Table 1. Average Pollination Fee 1994–2005.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>28.10</td>
</tr>
<tr>
<td>1995</td>
<td>29.60</td>
</tr>
<tr>
<td>1996</td>
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<td>29.65</td>
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<td>1999</td>
<td>32.25</td>
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<td>2000</td>
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<td>2001</td>
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<td>2002</td>
<td>36.40</td>
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<tr>
<td>2003</td>
<td>36.45</td>
</tr>
<tr>
<td>2004</td>
<td>38.65</td>
</tr>
<tr>
<td>2005</td>
<td>51.30</td>
</tr>
</tbody>
</table>
THE SENTINELS OF SCOOGINS VALLEY

Dan Hiscoe

Those touring the countryside of Scoggins Valley find the area a beautiful place. The old highway will take you there, and you will soon become familiar with the local landmarks. Plantings of lavender and clover, landscape and nursery supplies, a well-kept cemetery, the corner grocery, old farmsteads, Hagg Lake, and—standing at attention on the hill above, overseeing all—the Sentinels of Scoggins Valley.

These hives of bees, and there are many, have been keeping watch on the good people of Scoggins for so long that a youngster leaving the valley on a school bus might return home from college saying, “At least some things never change.”

As often as not, a fair-weather day with at least a promise of sunshine and the air warming up, you’ll find the keeper of those bees amongst his hives. What could he possibly find so interesting inside those colorful boxes? For years this man has been opening these boxes and examining the contents! Many a beekeeper and curiosity seeker have stopped to be included in this exchange of mystery. And without fail, this keeper of the bees will stop his work to give you his time and attention.

We’ve all learned our beekeeping from someone, and for many of us that someone has been Jerry Schwanke. He has taught us by example and set a standard worthy of our best efforts. He has taught us through his attractive displays at the Farmers Market (comb/chunk/creamed/pollen/candles seen) and shared all by speaking at the Tualatin Valley group’s monthly meetings.

This is why it’s hard to believe he is retiring from the ultra-active beekeeping lifestyle. It’s maybe a good thing he never asked our permission on this decision as we would never have allowed such behavior.

“Oh, maybe I’ll keep 6 or 10 hives, possibly a dozen,” he states. This is where it gets fun. I’ve never seen Jerry be able to refuse a caged queen. Can Jerry look up and see a swarm in that apple tree, turn his back and pretend it’s not there? The sun will rise in the west before that happens.

All the same, his routine of stocking the shelves in grocery stores, setting up his display at the farmers markets, and providing strong hives dispersed to pollinate is giving way to free up some time. What’s Jerry going to do with all this new-found free time? Stop by the Scoggins Valley Sentinels sometime. There will always be a few hives standing at watch over this valley, and, if you’re lucky, you’ll meet the man in white who’s willing to share the time to answer that question.

Note: Jerry is in the process of sorting things out and has placed liquidation of existing equipment on hold. He asks that folks wait to contact him about what might be available until future notice. Please respect his request. He says he will place an ad in The Bee Line when the time is right for him. We’ll learn more about Jerry Schwanke and his adventures with bees in an upcoming issue.
OSBA REGIONAL REPRESENTATIVES

Columbia Basin: Debbie Morgan
3800 Benson Rd, The Dalles; (541) 298-5719

Eastern Oregon: Jordan Dimock
2635 Mitchell Butte Rd, Nyssa; (541) 372-2726

Metropolitan Area: Chuck Sowers
26730 S Hwy 170, Canby; (503) 266-1740

North Coast/Webmaster: Thom Trusewicz
90041 Logan Rd, Astoria
(503) 325-7966; ccbee@intergate.com

South Coast: Joann Olstrom
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Southern Oregon: Pat Morris
1333 Rogue River Hwy, Gold Hills
(541) 855-1402

Willamette Valley: Fritz Skirvin
6694 Rippling Brook Dr SE, Salem
(503) 581-9372

OSBA REGIONAL ASSOCIATIONS

Lane County Beekeepers
Meets 7:30 pm, third Tuesday, Eugene
EWEB Meeting Rooms, 500 E 4th Ave
President: Mike Harrington
(541) 689-8705; beekeeper@comcast.net
Vice Pres: Morris Ostrofsky
(541) 685-2875; ostrofsky@pacinfo.com
Secretary: Barbara Bajec
(541) 767-9086; mbartels@bbastrodesigns.com
Treasurer: Nancy Ograin
(541) 935-7065; woodrt@pacinfo.com

Portland Area Beekeepers
Meets 7 pm, second Thursday, Oregon City
Hous Auth Clackamas Bldg, 13930 S Gain
President: Sam Hutchinson
(503) 829-7744; samh@molalla.net
Secretary: Paul Hardzinski; (503) 631-3927
Treasurer: John Keely
(503) 632-3682; keeley81@bctonline.com

Southern Oregon Beekeepers
Meets 7:30 pm, first Monday, Central Pt
So Or Res & Ext Ctr, 569 Hanley Rd
President: John Jacob
(541) 582-BEES; oldsol@jeffnet.org
Vice Pres: Brian Bolstad
(541) 512-2364; bolstad815@hotmail.com
Secretary: Mysti Jacob; (541) 582-2337
Treasurer: Laurie Boyce
(541) 846-0133; leanira@hotmail.com

Tillamook County Beekeepers
Meets 7 pm, first Thursday, Tillamook
Forestry Building, 5005 Third St
President: Bob Allen; (503) 322-3819
Vice Pres: Terry Fullan
(503) 368-7160; tfullan@nehalemtnel.net
Secretary/Treasurer: Wayne Auble

Tualatin Valley Beekeepers
Meets 7:30 pm, last Friday, Beaverton
OSU Ext, #1400, 18640 SW Walker Rd
President: Todd Balsiger
(503) 357-8938; toddbalsiger@comcast.net
Vice Pres: Andrew Schwab
(503) 537-0506; Pry4ausi@verizon.net
Secretary: Preston Gabel
(503) 530-1436; preston@gabelhaven.com
Treasurer: Walt Amour; (503) 690-9930

Willamette Valley Beekeepers
Meets 7:30 pm, fourth Monday, Salem
Chemeketa Comm College, Bldg 34, Rm A
President: Fritz Skirvin; (503) 581-9372
Vice Pres: Mike Rodia
(503) 364-3275; drodia@yahoo.com
Secretary: Evan Burroughs
(503) 585-5924; n7ifj@qwest.net
Treasurer: Susan Rauchfuss
(503) 391-5600; smokfoot@cyberis.net
NEWS FROM THE REGION

Lane County Beekeepers
View the March newsletter of the Lane County group at: http://www.lcbaor.org/Newsletters/BeeNews%20March%202006.pdf.

Portland Metro Beekeepers
Sam Hutchinson notes that the group will be holding a Beginners Bee Day at George Hansen’s place on April 22, 2006 (see page 7). The event will begin about 9 AM and last until about 3 PM. The day’s sessions will include examples of beekeeping equipment and hive sizes, and a demonstration of how to light a smoker—and keep it going. Additional stations will be devoted to bee health, diseases, and medications, as well as to how to find the queen and why this is important. There will also be a station on how to maintain a honey bee colony and what to do at various times of the year. The group will provide a lunch to all those who register early. Any remaining lunches will be provided for folks who register at the event until they run out. Register early!

Although the March meeting was scheduled for a discussion on spring preparation, the group spent most of the meeting discussing the problem of overwintering losses—which have been serious for several members. This month (April), the group will finalize preparations for Bee Day and discuss current bee yard problems. The May meeting is scheduled for swarm control and a short talk on mason bees. Many of those attending the Portland Home and Garden Show (see page 12) had questions about mason bees. The Portland Metro Beekeepers will be setting up a booth at Clackamas County Fair this August. More information about this will be available at a later date.

Southern Oregon Beekeepers
John Jacob extends an invitation to all who may be interested to participate in an American foulbrood (AFB) research project being conducted in southern Oregon. Dr. Schrader, Dr. Watson, and John are going to survey for Terramycin-resistant strains of AFB in Oregon. For this, they will need some AFB-infected comb samples. They are also going to test their association’s supply of expired Beemix for efficacy. This will be a useful and interesting project, and provides a great opportunity to utilize some of the resources available at Southern Oregon University. For additional information about the project, contact John (contact information, page 4).

The group is also having a one-day Bee School on May 6th (see page 8). A portion of the proceeds will go to the OSBA Research Fund. Laurie Boyce reports that events for the day will focus on honey bee biology, bee diseases and treatments, hive structure and equipment, spring and summer management, and hive to harvest—honey and other hive products. In addition, they will include a live bee demo and time for questions and answers.

Tualatin Valley Beekeepers
Todd Balsiger says he will be discussing what to do with honey bee colonies now that we have an opportunity to work them at the group’s next meeting. He notes that, although TVBA is not a large group, meeting attendance has been fairly good. (See article about TVBA member Jerry Schwanke, page 3.)

OSBA Web Site (http://www.orsba.org)
Thom Trusewicz notes that if you haven’t visited the OSBA Message Board, you are missing out on some of the following discussions: queen rearing, minerals bees eat, how to find the queen, noxious weeds, and dysentery and Nosema. Join in the discussion or just sit back and read the posts. Go to www.orsba.org and click on the “Message Board” button to see what you are missing!

Taking a Pulse
Margaret Forsythe at GloryBee Foods says people coming into the store are mainly purchasing equipment, getting ready for the year. In addition to buying “boxes,” beekeepers are looking for screened bottom boards and...
Taking a Pulse (continued from page 5)

feeders. And many are buying bees and some medications. The major question is, “When will the bees be in?” In addition, she says that folks are still asking about feeding. She has no answer for a couple of beekeepers who checked their hives only a couple of weeks ago and now find that their bees are completely gone—other than that a swarm would have left some bees. Staff at GloryBee are busy preparing to set up a table with materials and to answer questions at the Lane County group’s bee school in late March.

Sheryl Johnson at Ruhl Bee Supply recommends that folks wanting to order bees do so soon. Ruhl’s was able to add to their order recently; otherwise, their second shipment would already be sold out. She says that this year is the largest ever in sales of bees—likely in part because the number of folks starting up has increased noticeably as well as because of this year’s losses. Thankfully, Ed Johnson is getting back on his feet from being run over by a truck. He is well enough now to be able to spend some time in the shop. Sheryl says there haven’t been too many questions lately—mostly, as is true for GloryBee, folks are getting ready for the year. Ruhl’s has supplies of all the medications approved for use in Oregon. In addition, the store is now stocking HappyKeeper and Country Rubes’ Combo bottom boards.

BEEKEEPING IN WESTERN OREGON

April

Harry Vanderpool

Check colony stores regularly. Add feed to light colonies to maintain them at 10–20 pounds until the nectar flow begins in your area and at your elevation.

If starting package bees on foundation, feed light syrup continuously until the nectar flow increases in your area. If possible, give the bees a couple of frames of drawn foundation.

Clean bottom boards and remove entrance reducers from all colonies.

Equalize brood and feed among healthy colonies as needed.

Add a second brood box to singles that are filling out. Checkerboard frames of feed in the upper box.

Consider reversing brood boxes. Base the decision on hive conditions. In general, at this point in the year, reverse the boxes when the reversal will result in moving the brood nest down and provide comb space with adequate feed in the upper brood box.

Watch for signs of scale in empty combs and for spotty brood that is partially uncapped, indications of American foulbrood. Ask for help from a senior beekeeper if you’re not sure of disease identification.

Dust the top bars of hives with three tablespoons of Terramycin-powdered sugar mix once a week such that the supply lasts 21 days.

If possible, quarantine colonies that show signs of Nosema disease. Scrape the top bars of all frames in the hive and remove all debris. Make a note to feed Fumidil-B in the fall. Dr. Eric Mussen has found that 2 years of persistent treatment and care can clear a colony of the disease.

Check your calendar to remind yourself of the exact day that mite strips are to be removed from your colonies. Follow recommendations.

Feed your “beekeeper’s disease” by making as many splits as possible. This will give you a good excuse to buy more equipment next winter!

Consider requeening colonies with undesirable traits, or with a queen with poor laying patterns or of unknown age.

Put your nuc boxes to good use. They are great for proving out new queens and for their smooth introduction into queenless hives.

Attend your regional beekeepers association meeting. We all have something to learn, and a whole lot we can teach.

Source: The Bee Line (April 2003 and 2005)
BEGINNERS BEE DAY
A DAY IN THE FIELD WITH THE BEES
PRESENTED BY THE
PORTLAND-METRO BEEKEEPERS ASSOCIATION
SATURDAY APRIL 22, 2006

Bee Day Mission: Teaching Beekeeping for Hobby/Business

PLACE: George Hansen’s
Foothills Honey Farm
30576 S Oswalt Rd
Colton, OR.

TIME: Saturday, April 22, 2006
Registration at 9:00 am
Presentations from
10:00 am to 3:00 pm

COST: $15.00 per person, if you just show up at George’s place on April 22nd
$15.00 per person, if you pre-register - which will include a box lunch!!

GEAR: Bring your “bee protection equipment” (bee veils, gloves, suite, etc.)

PRESENTATIONS: Each presentation will last about 45 minutes:

A. Examples of beekeeping equipment, sizes and weights, etc., including
   use of the smoker.
B. Hive inspection.
C. Finding the queen.
D. Medication and Spring management of your hive.
E. Hive housekeeping and maintenance.

To pre-register (and help us with how many box lunches to make), please detach and return the
form below with $15.00 per attendee to Bee Day, C/O John Keeley, 20774 S. Lower Highland Rd.
Beavercreek, OR 97004. (keeley81@bcitonline.com) Checks may be made out to the Portland-
Metro Beekeepers Association.

NAME ____________________________________________________________

ADDRESS _________________________________________________________

CITY ___________________________ STATE _______ ZIP ________________

NUMBER PLANNING TO ATTEND ______ TELEPHONE OR E-MAIL _____________

IF YOU NEED A VEGETARIAN BOX LUNCH, PLEASE INDICATE

More information contact Sam Hutchinson. (samh@molalla.net) (503)829-7744.
Start at 9:00 am with a complimentary warm beverage and a muffin for purchase.
Hope to see you in the bee yard in Colton on April 22nd.
SOUTHERN OREGON BEEKEEPERS ASSOCIATION
PRESENTS

Bee School 2006

IF YOU HAVE AN INTEREST IN BEES OR BEEKEEPING,
THIS IS YOUR OPPORTUNITY TO LEARN MORE.

THIS ONE DAY BEE SCHOOL IS DESIGNED TO GET BEGINNERS
STARTED IN
BEEKEEPING AND FAMILIARIZE PEOPLE WHO MAY BE INTERESTED
IN BEES WITH THE BASICS OF BEEKEEPING.

MAY 6, 2006
9 AM TO 5 PM
CHECK-IN FROM 8:30-9:00 AM
(WE WILL BREAK FOR LUNCH FROM NOON TO 1 PM, SO
BRING A LUNCH!)

OSU EXTENSION ANNEX
569 HANLEY ROAD
CENTRAL POINT, OR 97502

CALL 582-2337 OR 846-0133 FOR MORE
INFORMATION.
PRE-REGISTRATION IS REQUIRED DUE TO LIMITED SPACE.

SOUTHERN OREGON BEEKEEPERS’ ASSOCIATION BEE SCHOOL
REGISTRATION FORM

NAME: _______________________________   NAMES OF
PARTICIPATING FAMILY MEMBERS:

ADDRESS: ____________________________
____________________________________
service of managed pollination. This is shown by the 180% increase in the average pollination fee during the last sixteen years: from 1990 = $1840 to 2005 = $5130.

Within the PNW, tree fruits are the dominant crops for pollination income (see Table 2). In 2005 the combination of pears, sweet cherries, and apples accounted for 58% of all reported rentals and 42% of all reported pollination income. Paradoxically, the single most important crop for PNW beekeepers is grown in California, i.e., almonds. Almonds were responsible for 33% of all rentals and 51% of all rental income in the 2005 survey. Almonds consistently have produced a high average pollination fee; for 2005 the average was $7940. Based on beekeeper reports for contracted pollination for 2006, almond rental prices are expected to remain at a level greatly elevated from the average prices of the previous decade.

In 2005 the combination of California almonds and PNW tree fruit accounted for 91% of all rentals and 93% of pollination income, which illustrates the dominance and importance of these crops for a commercial PNW beekeeper. All other PNW cropping systems that utilize honey bee pollination contributed only 7% of a beekeeper’s gross pollination income in 2005.

In 2005, for crops pollinated in the PNW, squash and pumpkin seed provided the highest average fee at $4710 per colony rental. In terms of acreage, apples are the largest crop grown in the PNW and this is reflected by the large number of reported rentals (58% of all rentals and 42% of the total reported rental income).

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### Table 2. 2005 Average pollination fees by crop as reported by 14 Pacific Northwest commercial beekeeping operations.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Number of Rentals</th>
<th>Average Fee</th>
<th>Fee +/-</th>
<th>Income ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pears</td>
<td>1,582</td>
<td>$38$^{40}</td>
<td>22.6%</td>
<td>56,912</td>
</tr>
<tr>
<td>Cherries</td>
<td>6,254</td>
<td>$37$^{70}</td>
<td>12.0%</td>
<td>235,912</td>
</tr>
<tr>
<td>Apples</td>
<td>22,658</td>
<td>$36$^{30}</td>
<td>30.6%</td>
<td>835,314</td>
</tr>
<tr>
<td>Berries$^{2}$</td>
<td>634</td>
<td>$30$^{30}</td>
<td>31.8%</td>
<td>19,126</td>
</tr>
<tr>
<td>Blueberries</td>
<td>860</td>
<td>$37$^{75}</td>
<td>17.3%</td>
<td>32,128</td>
</tr>
<tr>
<td>Cranberries</td>
<td>56</td>
<td>$30$^{00}</td>
<td>25.0%</td>
<td>1,680</td>
</tr>
<tr>
<td>Vegetable seed</td>
<td>1,308</td>
<td>$44$^{00}</td>
<td>18.3%</td>
<td>58,712</td>
</tr>
<tr>
<td>Clover seed$^{3}$</td>
<td>243</td>
<td>$37$^{70}</td>
<td>15.6%</td>
<td>9,160</td>
</tr>
<tr>
<td>Crimson clover seed</td>
<td>86</td>
<td>$24$^{40}</td>
<td>n/a</td>
<td>2,130</td>
</tr>
<tr>
<td>Radish seed</td>
<td>123</td>
<td>$33$^{50}</td>
<td>37.7%</td>
<td>4,081</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>430</td>
<td>$38$^{30}</td>
<td>(21.9%)</td>
<td>16,470</td>
</tr>
<tr>
<td>Squash and Pumpkin seed</td>
<td>383</td>
<td>$47$^{10}</td>
<td>48.1%</td>
<td>18,030</td>
</tr>
<tr>
<td>Watermelon</td>
<td>60</td>
<td>$42$^{30}</td>
<td>21.6%</td>
<td>2,520</td>
</tr>
<tr>
<td>Meadowfoam</td>
<td>330</td>
<td>$36$^{75}</td>
<td>n/a</td>
<td>12,060</td>
</tr>
<tr>
<td>Miscellaneous$^{4}$</td>
<td>88</td>
<td>$37$^{50}</td>
<td>n/a</td>
<td>3,296</td>
</tr>
<tr>
<td>Almonds</td>
<td>17,244</td>
<td>$79$^{00}</td>
<td>63.9%</td>
<td>1,377,182</td>
</tr>
</tbody>
</table>

$^{1}$% change from 2004.

$^{2}$Includes blackberries, raspberries, marionberries, and loganberries.

$^{3}$Includes red and white clover as grown for seed.

$^{4}$Plums and sour cherries.

SUM = 52,399 rentals generating $2,684,713
Average Pollination Fee = $51.30
Berry crops (blackberries, raspberries and blueberries) are late spring to early summer bloomers and copious nectar producers (blackberries and raspberries). The 2005 average pollination fee for all combined berry crops was $3020, a lower price than the average fee because beekeepers have an expectation that a honey crop will also be produced.

The average PNW commercial honey bee colony was rented 2.2 times in 2005 and this includes California almonds. This is a slight increase from the past several years. This statistic had been dropping since 1999 when the average number of rentals per colony was 2.8. Does this actually reflect the real world situation? Are commercial beekeepers concentrating on almonds and PNW tree fruit (which historically provide the major sources of pollination income) and reducing the number of colonies involved in minor crop pollination? At this time our data are not able to provide a reasonable answer to this question.

For the 2005 pollination season an average rental fee of $51^{30}$, combined with an average of income ($2,684,713) by a factor of 5, we have a ball-park estimate of the pollination income generated by commercial beekeeping in the PNW, i.e., a regional pollination income of approximately $13,000,000. This is far more than the normal “estimates” assigned to the bee industry by agricultural economists, who, for reasons unexplained, usually do not even include pollination rental income in their estimates of the beekeeping industry economic status. Pollination income in the PNW far exceeds the value of honey and wax sales for our regional beekeeping industry. Pollination rental income is frequently three to four times greater than honey and wax sales in any given year.

The 2005 survey asked commercial beekeepers to report the total number of full-time or part-time employees working for their operations. The figure for the “average” commercial beekeeping operation in 2004 was 2.9 full-time employees; for 2005 it was 3.4 employees. Another interesting way to look at this is to ask the question, “What is the ‘colony equivalent’?” —meaning what is the number of colonies

Table 3. Average colony numbers, average rental fee per hive, and average annual rental income per hive for a commercial beekeeping operation in the Pacific Northwest 1992–2005.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Number of Colonies</th>
<th>Average Rental Fee</th>
<th>Average Annual Rental Income per Colony</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>765</td>
<td>$19^{25}$</td>
<td>$49^{70}$</td>
</tr>
<tr>
<td>1993</td>
<td>990</td>
<td>$22^{50}$</td>
<td>$62^{25}$</td>
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<td>1994</td>
<td>1,225</td>
<td>$28^{10}$</td>
<td>$78^{70}$</td>
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<tr>
<td>1995</td>
<td>1,348</td>
<td>$29^{60}$</td>
<td>$78^{15}$</td>
</tr>
<tr>
<td>1996</td>
<td>1,350</td>
<td>$31^{55}$</td>
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<tr>
<td>2005</td>
<td>2,055</td>
<td>$51^{30}$</td>
<td>$112^{85}$</td>
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2.2 pollination sets per colony, results in an annual per colony pollination income of $112^{85}$, which is up significantly from that of the past few years. With the “average” commercial operation running 2,055 colonies, a hypothetical 2005 gross pollination income for the “average” commercial beekeeper was $231,906.

The combined colony numbers from those commercial beekeepers who responded to the 2005 survey (23,285 hives) represent about 20% of the USDA’s estimate of colony numbers in Oregon and Washington. Therefore, if we multiply the total reported pollination income ($2,684,713) by a factor of 5, we have a ball-park estimate of the pollination income generated by commercial beekeeping in the PNW, i.e., a regional pollination income of approximately $13,000,000. This is far more than the normal “estimates” assigned to the bee industry by agricultural economists, who, for reasons unexplained, usually do not even include pollination rental income in their estimates of the beekeeping industry economic status. Pollination income in the PNW far exceeds the value of honey and wax sales for our regional beekeeping industry. Pollination rental income is frequently three to four times greater than honey and wax sales in any given year.

The 2005 survey asked commercial beekeepers to report the total number of full-time or part-time employees working for their operations. The figure for the “average” commercial beekeeping operation in 2004 was 2.9 full-time employees; for 2005 it was 3.4 employees. Another interesting way to look at this is to ask the question, “What is the ‘colony equivalent’?” —meaning what is the number of colonies
necessary to hire one full-time employee? That figure is very close to 1,500 colonies/employee in both the years 2004 and 2005.

While colony income from pollination rental is a critical statistic, so therefore is the annual cost to maintain a healthy hive of honey bees. Responses to this question on the survey have varied widely, often from a misunderstanding of what was being asked. However, numerous commercial beekeepers, who have over the years maintained good cost accounting records, have responded with numbers that are very reasonable relative to today’s economy. The average annual hive maintenance cost was $117 per colony for the year 2005 (highest reported per colony maintenance cost = $155; lowest = $75). This wide range suggests that beekeepers should try to be more precise in calculating their operational costs. If you can’t answer the question of your operating cost on a per colony basis you should seriously re-evaluate your operational strategy.

It is important to recognize that the average colony maintenance cost is higher than the average per colony pollination income. From the 2005 survey, pollination income was $112\text{\$}/colony and the colony maintenance cost was $117; a difference of $4\text{\$} per colony. This illustrates that net operational profit is generated by sources of income outside of pollination rental, most importantly, honey production.

Remember that the data presented here represent the pollination rental situation of a hypothetical “average” commercial beekeeper in the Pacific Northwest. For individual beekeepers the survey results are most useful as benchmarks against which they should compare their individual operations. Please let me stress again that all of these “projections” are only as accurate as the data provided by responding beekeepers. The projections also assume that the participating beekeepers collectively represent the mainstream of commercial beekeeping in the Pacific Northwest. And as a further cautionary note for this 2005 report, total colony numbers (hence, number of rentals) reported were only about half of those reported in recent years. Fewer larger scale beekeepers in Oregon and Washington participated in the 2005 survey. However, averages generated from a collective 52,000 rentals in 2005 are not insignificant.

I wish to again thank all those beekeepers in Oregon and Washington who took the time to participate in the survey, which over the past 19 years has generated the most accurate assessment of commercial pollination known in the United States.
MAKING THYME

Thymes are excellent bee plants, as are many herbs. In addition, thyme is among the great culinary herbs. Make time to plant thyme this year! There’s an old saying, “When in doubt, use thyme.” Thyme blends well with dozens of foods, and there are varieties that mimic other herbs almost exactly when used in cooking. Thyme is very nearly the perfect useful culinary herb.

Thyme is a perennial herb that is basically a small, many-branched, aromatic shrub (6–12 inches in height). It has small lilac to pink flowers in June and July. Although native to the western Mediterranean region, thyme is cultivated widely. It has a green taste with something of a clove aftertaste, and blends well with lemon, garlic, and basil. Often used as a garnish in salads and chowders, thyme goes well with just about any meat, casserole, stew, soup, or vegetable dish.

Thyme is an easy plant to grow, and will do well in sun or partial shade. If started indoors, transplant after the plant has spent a week outdoors. Alternatively, choose starts from the many varieties available from nurseries and greenhouses. Plant thyme 8–12 inches apart in a sunny location with well-drained soil. Cut leafy tops and flower clusters when first blossoms open to promote bushiness. The smaller varieties can be grown between brick pavers on pathways. And some varieties are wonderful container plants, and will cascade over the sides of baskets and pots. In addition, thyme is a very good rock garden specimen, and provides a nice companion planting for other herbs and many vegetables.

Adapted from: http://www.gardensablaze.com/HerbThyme.htm

PORTLAND HOME AND GARDEN SHOW

Sam Hutchinson

The Portland Home and Garden Show was an unqualified success. The people who helped with the show made it go well. The Garden-smith provided an excellent design and set-up of the garden with the help of the bee group members.

Members of the Oregon State Beekeepers Association who helped provided good information to a steady crowd of interested visitors to both the garden and the booth. Those who came to provide information and sell honey mostly ran out of honey but still kept the information going. We had a problem with communication about the seminars and will fix that next year.

Congratulations to all participants!

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HONEY BUNNIES FOR KIDS

Sweet Bread (makes about 15 bunnies)
4 1/2–5 cups all purpose flour
2 packages dry yeast
1 teaspoon salt
2/3 cup evaporated milk
1/2 cup water
1/2 cup honey
1/2 cup butter, cut into pieces
2 eggs
raisins (for eyes)

Combine 1 1/2 cups flour, undissolved yeast, and salt in a large bowl. Heat evaporated milk, water, honey, and butter until warm (105 degrees F). Gradually add to the dry ingredients, and beat for 2 minutes at medium speed with an electric mixer. Scrape the bowl occasionally. Add eggs and 1/2 cup flour, and then beat again for 2 minutes at high speed. Stir in enough of the remaining flour to make soft dough. Place in a greased bowl, grease the top of the dough, and cover tightly. Refrigerate for 2–24 hours. Remove dough from refrigerator and punch down. Place dough on a floured surface and divide into 15 equal pieces. Roll each into a 20-inch rope. Then divide each rope into 1 (12-inch), 1 (5-inch), and 3 (1-inch) strips. Coil the 12-inch strip to make bunny body; coil 5-inch strip to make head. Attach head to body, and pinch to seal. Shape remaining 3 strips into ears and tail and attach. Place bunnies on 2 large greased baking sheets. Cover and let rise in warm place until doubled in size, about 20–40 minutes. Bake at 375 degrees F for 12–15 minutes. Remove from sheets to wire racks.

Glaze
1/2 cup honey
1/4 cup butter
Combine in small saucepan. Cook, stirring occasionally, over low heat until butter melts. Brush bunnies with glaze while warm and insert raisins for eyes.

Adapted from: http://www.katsmouse.com
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Membership in the Oregon State Beekeepers Association is open to anyone with an interest in bees and beekeeping. You do not need to own bees or reside in Oregon to join. OSBA membership includes a vote in OSBA elections, discounts on publications, and ten issues of *The Bee Line*.

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Mailing address: ___________________________________________________________________________

City/State/Zip: ____________________________________________________________________________

Telephone number: ___________________________ e-mail address: ________________________________

Regional Association (if applicable): ___________________________________________________________

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The OSBA respects the privacy of members and will not sell any information provided. May we include your name and address in a membership list that will be given to OSBA members only? YES/NO (please circle one).

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Publication(s): Indicate journal(s) and period(s) of subscription $_________

Additional voluntary contribution: Designate Research Fund/General Fund (please circle one) $_________

Amount enclosed: $_________

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Regional Association Treasurers and others: Make check payable to OSBA and send with form to: Phyllis Shoemake, 1702 Toucan St NW, Salem OR 97304.
Please check your mailing label. If the date on the label is near 1-Apr-2006, your membership is due to expire. This is your friendly renewal notice.

Day is now longer than night. A sweet time of year!

Oregon State Beekeepers Association is a nonprofit organization representing and supporting all who have an interest in bees and beekeeping.

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