



Books and magazines of interest to Lancaster Farming readers

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Editor

THE BOTANY OF DESIRE,
by Michael Pollan. Random House, 2001, 286 pp., \$ 24.95. ISBN 0-375-50129-0

In what ways have we changed the very nature of plants? In what ways have they changed us?

Those two basic questions are introduced early and often throughout *BOTANY*, subtitled, appropriately, "A plant's-eye view of the world."

Author Michael Pollan notes, in his introduction, that "the seeds of this book were first planted in my garden — while I was planting seeds, as a matter of fact. Sowing seed is pleasant, desultory, not terribly challenging work; there's plenty of space left over for thinking about other things while you're doing it. On this particular May afternoon... I found myself thinking... what existential difference is there between the human being's role in this (or any) garden and the bumblebee's?"

The bee picks up and scatters pollen, thereby creating new varieties of life for flowers and vegetables. The human task, one that has been ongoing for centuries, is similar: we select and adopt new cultivars for color, or sweetness,

or pest resistance, or for thousands of traits that we've come to like.

And the plants have followed along quite nicely because, like domesticated livestock, their survival is entwined with ours.

Pollan notes, "we have spent the last few thousand years remaking these species through artificial selection, transforming a tiny, toxic root node into a fat, nourishing potato and a short, unprepossessing wildflower into a tall, ravishing tulip. What is much less obvious, at least to us, is that these plants have, at the same time, been going about the business of remaking us."

To prove his point, Pollan takes readers on an emotionally and mentally involving journey to several places, including the many homesteads of Johnny Appleseed (John Chapman) in his voyages to spread apple genetics throughout the Ohio River Valley and beyond. Pollan even recounts his own trips to an orchard expressly planted with wild apples in upstate New York, bringing back samples of wild apples to his own garden, to see what genetic magic they can make with his own fruit trees.

Pollan focuses on the vital need for genetic diversity in the garden — in fact, for agriculture in general. Monocultures can per-

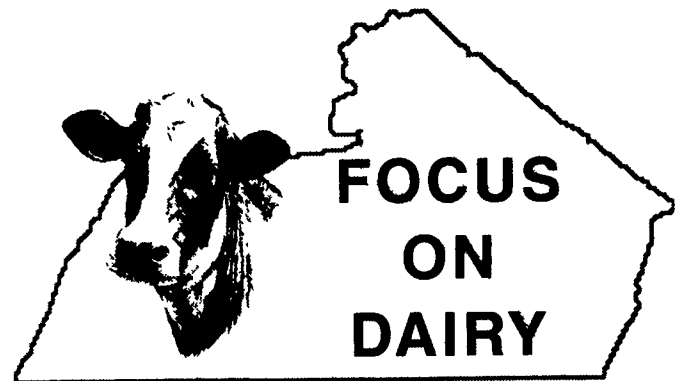
haps be too much of a technological challenge, he asserts, with humankind relying more on genetic technology to combat plant challenges.

But agriculture is a chiefly and uniquely human enterprise. On page 186, Pollan notes: "One theory of the origins of agriculture holds that domesticated plants first emerged on dump heaps, where the discarded seeds of the wild plants that people gathered and ate — already unconsciously selected for sweetness or size or power — took root, flourished, and eventually hybridized. In time, people gave the best of these hybrids a place in the garden, and there, together, the people and the plants embarked on a series of experiments in co-evolution that would change them both forever."

Pollan looks not only at apples, but at the Dutch tulip mania that gripped Holland between 1634-1637; about the illegal growing of plants and humankind's strange obsession with plant contraband; and tops the whole book off with a history of the world's obsession with potatoes, and how one Ireland famine rivaled the Black Plague in devastation.

But Pollan, when writing about potatoes, also compares the genetic breakthroughs made to give plant's internal resistance to pests. The remarkable technology could be a bold, forward leap — an advance so great, who knows what this will lead to in human agricultural endeavor?

BOTANY OF DESIRE is a landmark book for those fascinated with the history of our obsessions over gardens; over the beautiful connection we have with the garden, with the earth, and agriculture; and about our own striving for ultimate technological control on our planet.



**Penn State Cooperative Extension
Capitol Region Dairy Team**

**HEAT STRESS
ON DRY COWS**

Philip E. Wagner
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As I write this article today, it is 92 degrees under blazing sunshine. A few hours ago I drove by an open pasture with a group of dry cows huddled in the middle of the field. I thought to myself, "Should we be spending time, effort, and dollars to cool dry cows like we do lactating cows?"

Dry cows are less affected by heat stress than are lactating cows because they do not have to deal with large amounts of heat produced because of milk production. However, they should not be overlooked, especially those animals in the late dry period. Research has shown that cooling dry cows helps get the next lactation off to a healthier start and increases milk production.

The dairy cow goes through many physiological changes during the dry period. These changes are related to continued growth of the fetus, reduction of dry matter intake during the end of gestation, and the initiation of lactation at parturition.

More than 60 percent of total fetal growth occurs during the last two months of gestation. This fetal growth causes a significant nutritional burden on the dry cow. To further complicate matters, there is a reduction in dry matter intake 5 to 7 days prior to calving. As much as 30 percent reduction in dry matter intake has been reported.

The late pregnant cow undergoes a series of complex metabolic changes as she approaches parturition. Add to this the effects of heat stress and you increase the chances of problems at calving time. Cow comfort is especially important for these mothers-to-be.

Milk production is related to birth weight of the calf. Cows giving birth to large calves give more milk in a lactation than cows giving birth to small calves. Heat stress during late pregnancy has been shown to reduce calf birth weight and postpartum milk yield of the dam. Research has shown that cows housed under shade during the last trimester of pregnancy gave birth to larger calves than cows with no access to shade and went on to produce more milk during the lactation. Numerous research trials have found that cooling dry cows with fans and sprinklers increased calf weights and 150-day milk weights when compared to control cows.

Dairy producers need to



Philip E. Wagner

provide the basics of water, shade, airflow, and air exchange to help reduce heat stress. This is especially critical during the last trimester of pregnancy. Provide plenty of water at one or more locations depending on the size of the group. Remember, water intake per cow can double on hot summer days when compared to a winter day.

Make sure adequate natural or artificial shade is available. Although shades do not generally reduce ambient temperatures, they do decrease the heat load on cows by blocking solar radiation. Shaded cows have lower rectal temperatures and lower respiration rates. Providing 45-50 square feet of shade per cow is adequate to reduce solar radiation. For dry cows on pasture without access to natural shade, consideration should be given to constructing an artificial shade structure. To obtain plans, e-mail pew1@psu.edu or call (717) 263-9226.

Many dry cows are housed in bedded pack facilities. The design criteria is generally for 80-100 square feet of pack area per cow. If possible, aim to give each cow more "space" in the hot summer months to reduce heat stress. Aim for 100-150 square feet per cow.

So, what is the answer to my question at the beginning of this article? Research has shown many times that cooling the dry cow improves milk production and overall health. In Pennsylvania, we need to focus first on reducing heat stress in the lactating herd. Then we should focus our efforts on the dry cows, especially those animals in the last trimester of pregnancy.

Yes, dairy producers should be spending time, effort, and dollars to reduce heat stress on dry cows. Dr. Richard Adams, professor emeritus of dairy science at Penn State, said many times, "Take care of the dry cow and she will take care of you."

**Two State Golf Tournaments
To Benefit FFA Foundation**

STATE COLLEGE (Centre Co.) — Because of overwhelming support, the Pennsylvania FFA Foundation has planned two separate Hoss's Fore FFA golf tournaments this year.

The first event is the Hatfield Fore East tournament Monday, July 23. As in the past, it will be based at the Foxchase course near Denver.

The nearby Galen Hall golf course will also be used to accommodate as many golfers as possible. Last year both courses were filled with a total capacity of 288 entries. Golfers are assigned to a course in the order that registrations are received.

The second golf tournament, the Hoss's Fore FFA West tour-

namment, is scheduled for Aug. 13 at Scotch Valley Country Club in Hollidaysburg, Blair County.

Hosting the golf tournament is a notable addition to the impressive list of Hoss's and the Campbell family's efforts to support youth programs, especially livestock. The restaurant chain has purchased the Farm Show grand champion steer for several years and thus is a very strong supporter of the Farm Show Scholarship Fund.

The Hoss's Fore FFA West FFA tournament is being conducted at a golf course near their home base in Duncansville. No more than 144 entries can be accepted. Entries are accepted in the order they are received.

To participate, the charge for either tournament is \$100 per person, a large part of which goes to the FFA organization. Plus the charge includes a round of golf with cart, a complimentary mul-ligan, shotgun scramble, refreshments along the course, lunch, complimentary "Happy Hour," and dinner.

At the evening dinner, awards will be presented and a special auction is planned. Prizes will be awarded in team and individual contest categories. Registration begins at 10:30 a.m. for both events.

Sponsorship categories include Grand Champion, Hole in One Contest, Show Champion Sponsor, Driving Range Sponsor, 19th Hole Sponsor, Refreshment Station, Par Three Contest, Putting Contest or Longest Drive Contest, Hole Sponsor and Team Awards Sponsor.

Hatfield Quality Meats and Hoss's Steak and Sea House are the major sponsors and hosts of the two FFA golf tournaments. Many agribusinesses join them in supporting the FFA by providing "a great day of golf."

For more information or to participate, contact The Pennsylvania FFA Foundation, Inc. at (814) 880-0013.

**USDA Announces Grant To
MDA And Howard County**

COLUMBIA, Md. — The Maryland Department of Agriculture and the Howard County Economic Development Authority were recently awarded a \$1,500 grant provided under the Federal-State Marketing Improvement Program to conduct a feasibility study for an on-line virtual community support agriculture (CSA) program to attract consumer subscriptions for local produce.

The feasibility study will collect information useful in gauging the interest that busy professionals working in the Columbia, Maryland area have in joining a virtual CSA to receive a weekly

market basket delivered to a site close to their work. The survey will collect consumer preference for items to be included in the subscription baskets, the variety of items to include desired quantity and price of produce and the most desirable time of day for delivery and pick-up near the customers' workplace.

The grants provided under the Federal-State Marketing Improvement Program are used to improve marketing systems for food and agricultural products or to identify new market opportunities for farm products.

