



WEEK of JUNE 5, 1994

STATION NOTES

CALENDAR of EVENTS

Monday, June 6, 12:10 pm

Sawdust Cafe

Aerobics/Fitness class for all employees

Wednesday, June 8, 12:10 pm

Sawdust Cafe

Aerobics/Fitness class for all employees

Wednesday, June 8, 3:30 pm

Room A133, Barton Lab

Chairs' and Unit Leaders' Meeting

Friday, June 10, 12:10 pm

Sawdust Cafe

Aerobics/Fitness class for all employees

Friday, June 10, Noon

Conference Room, Food Science

SAGES Meeting

SEMINAR

HORTICULTURAL SCIENCES

Date: Friday, June 10

Time: 11:00 am

Place: Staff Room, Jordan Hall

Speaker: Dr. Hank Hill
(former Post-Doc with Al Taylor) Seed Dynamics, Inc., Salinas California

Topic: Seed Pelletting: History and Fundamentals

SAGES NEWS

Meeting Scheduled

SAGES (the Student Association of the Geneva Experiment Station) will have a meeting Friday, June 10 at noon in the Food Science conference room. Topics to be discussed will include developments in the career committee, SAGES list servers, budget refinements and summer academic and social activities, amongst other things. All students, prospective students and interested faculty are welcome. Please bring your lunch and join us.

OUT & ABOUT:

FIELD WORK UNDER WAY AT THE STATION

The big push is on. A late, cold spring and wet fields means researchers haven't been able to get onto the fields as early as they would have liked.

"We're out in full force now," said Dan Van Vleet on Wednesday, under a clear blue sky, after a night that had left an inch of rain. "This is perfect planting weather." Van Vleet is the manager of the Plant Genetic Resources Unit's Wellington Farm. He and his crew of four—Doug Davis, Dave Cook, Derek Fisher and Mike Miles—were setting up the pollination cages to preserve the genetic integrity of accessions of *Brassica oleracea* (cabbage) and *Trifolium* (clover).



The Wellington farm crew assembles galvanized framework for pollinating cages.

No pollinating insects can penetrate the super-fine netting which is the cage material. To drill the 18" holes for the galvanized piping that provides the frames for the 12' x 24' cages, Van Vleet's crew was using water from the pressurized hose attached to the hydraulic sprayer on a Kubota 245H tractor.

Two cages had already been erected around two plots of *Brassica oleracea* that had already started to flower. Experimental Plot #124 contained three sets of brassicas: two rows of roots that had been vernalized in cold storage and replanted; two rows that had been overwintered under an insulating layer of straw and plastic; and two rows that had been overwintered under styrofoam cases—an innovation developed by Van Vleet. Of 26 test plots, two had responded positively to the overwintering treatment, and it is the styrofoam-insulated brassica that are currently in full-flower.

"Of course, we had some hard freezes before we had time to put up the foam," said Doug Davis. "And if you remember, it snowed on Halloween. Maybe our

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results would have been better if the weather had cooperated a little more."

Van Vleet and his crew anticipate having some 250 cages in operation before the end of the growing season on the 35-acre farm. This year, in addition to red and white clovers and brassicas, the crew will be regenerat-

ing seeds from squash and a wild species of tomatoes that grows in the mountainous regions of South America.

Working in the field alongside the PGRU crew were controlled pollination technicians Dave Sharman and Paul Kisly. "That's a fancy job description," said Sharman. "We're beekeepers."

Dressed in full-body bee suits and using smokers to placate the honey bees, the two were medicating the hives with Fumidil B for Nosema (a kind of bee dysentery), Terramycin (for foulbrood), combining weaker hives with stronger ones, and feeding the bees with corn syrup. Because the bees are on limited forage, they are fed year-round, consuming roughly 500 gallons of corn syrup a season.

"The bees had a rough winter," he said. "We lost roughly two-thirds of our hives." Usually, PGRU maintains about 110 hives. "We are managing for pollination, not honey production. It's a very different kind of beekeeping," said Sharman, who supervises the PGRU apiaries on the Wellington and Hansen farms.

To replenish the hives, on Monday, June 6, Sharman expects the delivery of 40 two- and three-pound packages of bees from Shumann's Apiaries in Georgia. A three-pound package contains about 10,000 bees. Sharman uses the three-pound packages for the "parent hives," which are divided in half for the "nuclear hives" which they use in the pollination cages.

One of Sharman's biggest problems is demoralized bees. "They don't like to work these 12' x 24' cages day after day," he said. Demoralized bees are depressed bees and they lose their motivation for work, clinging to the side of the cages and refusing to forage. "They want to fly," said Sharman. "So we let them."

To keep the bees happy, the beekeepers have devised a special nuclear hive that sits half-in and half-out of the pollination cages. About once a week, they seal off the cage-side entrance and let the bees use the back entrance so they can forage freely out in the fields. In addition to making for more productive bees, this management practice also allows workers to freely weed, cultivate or harvest inside the cages without having to tangle with thousands of unpredictable bees.



Controlled pollination technicians, Dave Sharman and Paul Kisly, apply medication to one of the hives.

NURSERYMAN'S CONFERENCE TO BE HELD AT STATION

On June 7-9, the departments of Horticultural Sciences and Plant Pathology will host a Cornell Licensed Nurseryman's Conference here at the Station. The conference was organized for foreign and domestic nurseries who are licensed to propagate and sell Cornell released fruit varieties and rootstocks. The objective is to improve communications with these nurseries and increase their understanding of our fruit breeding programs.

SEM COURSE SCHEDULED

A scanning electron microscopy (SEM) course has been scheduled for June 7, 8 and 9 from 9:00-11:00 am. The goal of this three-part course is to train individuals to be proficient and independent SEM users. This course will cover specimen preparation and microscope operation. This will be the only SEM training session offered this year; therefore, those individuals interested in using the SEM for research purposes are encouraged to attend this course. To sign-up or for further information contact Harvey Hoch x332.

STATION SOFTBALL

Last week's results:

Tuesday, May 31:	GR def. PP
Wednesday June 1:	HS def. ENT

This week's schedule:

Tuesday, June 7	BP vs. GR
Wednesday, June 8	XT vs. ENT
Thursday, June 9	PP vs. HS

SOCCER AND VOLLEYBALL ANYONE?

Bring a friend and join us in friendly games of volleyball every Tuesday at 6:00 pm and soccer every Thursday at 5:30 pm behind Jordon Hall. No prior experience is required and players of all levels are welcome. For further information contact Pat x221 or Muhammad x239

A CASE FOR POWER NAPS

Just in case you thought you were alone, 100 million Americans are seriously sleep-deprived, thereby posing a potential hazard to themselves and others, reports health columnist Jane Brody. Several industrial mega-disasters—including nuclear accidents at Three Mile Island and Chernobyl, the gas leak at Bhopal, and the Exxon Valdez oil spill—all happened at night under the supposed supervision of workers who were, somehow, asleep at the switch. Equally disquieting is the report of aviation experts who admit that, once in a while, all three members of a flight crew on a trans-Atlantic 747 have fallen asleep while the plane is on automatic pilot. And what late-night driver hasn't experienced those "microsleeps"—brief seconds when the brain involuntarily dozes off—before awakening with a jerk as the car wanders onto the shoulder of the road. Sleepiness is believed to account for more than 200,000 car accidents and 10,000 deaths in North America alone.



Our ancestors' sleep habits more closely adhered to seasonal patterns of daylight. And research has shown that people who "sleep" or at least "rest" according to the amount of available daylight, actually achieve a more meditative, relaxed state when they are awake.

It's easy to blame the inventor of the electric light bulb for human beings' current propensity for 24-hour-a-day activity. Or the dual-income, whirlwind family of the '90s, shuttling at high speed between after-school activities, home offices, message machines, and other responsibilities. Sleep is one of the first casualties of most schedules.

The need for sleep is also a highly individual characteristic. Some people require only five hours; others need ten.

Two forces regulate sleep. One is the circadian pacemaker which is programmed by cycles of daylight and darkness—popularly known as the biological clock. This clock makes most people sleepy in the mid-afternoon, sleepest from 4 to 5 in the morning, and most alert a few hours before bedtime. This clock drives whole cultures to the siesta. The second force, the homeostatic clock, makes a person sleepest after being awake 16 hours.

The interaction of these two rhythms regulates sleep patterns. By plugging in a few numbers, and being aware of how much sleep you need to feel well-rested, it is pretty easy to predict when you are apt to feel sleepest. Some treat the problem with caffeine and/or sugar. Another solution, of course, is to try and get more sleep at night. It is a popular idea, but it isn't always practical. After all, who has the time?

If more sleep at night is not possible, Dr. James Maas, a psychologist at Cornell University, suggests taking "power naps." He reports benefits from brief naps of only 15 to 20 minutes. And even though people may still feel tired after so brief a nap, researchers indicate they perform better on tasks that require attention, clear thinking, and quickness.

FLEET VEHICLE REMINDER

With the warmer weather upon us fleet vehicles are used more frequently. Please be sure to get vehicles back to the garage on time for the next person signing it out.

NEW MAILING LISTS AVAILABLE

Two mailing lists for SAGES (Student Association for Geneva Experiment Station) have been started:

1. SAGES_ACTIVITY-L: for the activities related with SAGES, announcements concerning the students, seminars, scientific discussion or any other issue of common concern. Subscription is open to everyone interested, especially students. To subscribe, send a message to listserv@cornell.edu leaving subject blank and in text type: subscribe SAGES_ACTIVITY-L your first and last name.

2. SAGES_JOBS-L: to report the availability of jobs in the Ithaca and Geneva campuses, in particular, and national and international jobs in general (Job announcements will not be posted in MOLBIO_NYSAES-L anymore). Subscription is open to faculty especially project leaders, department secretaries and others who are planning to hire in future. To subscribe, send a message to listserv@cornell.edu leaving subject blank and in the text type: subscribe SAGES_JOBS-L your first and last name.

A third list, MOLBIO_NYSAES-L, already exists for activities related to molecular biology, in particular, and biology in general. It is open to everyone for subscription. Send a message to listserv@cornell.edu, leave subject blank and in the message type: subscribe MOLBIO_NYSAES-L.

Subscription through Pine or Eudora mail is simple but through QuickMail could be difficult due to the format of the mail form. If you are interested in subscribing through QM, use a blank form from Public folder of Hort Science QM. Please send your input to make these lists successful and more useful. In case of further questions, contact Muhammad Lodhi x239 or Tina Carrasco x254.

WOULD YOU BELIEVE: NIGHT TILLAGE?

Research being conducted in Germany suggests that night tillage may be a way to manage weed germination. Large-seeded weeds and crops germinate in the light or the dark, but small seeds tend to require some exposure to light before they will germinate. Consequently, bringing the seeds to the surface and then reburying them at night can prevent weed seed germination.

In side-by-side strips described in one study, ground cover by weeds was 80% in plots worked during the day and

only 2% in plots worked at night. Thus, to reduce the weed seed bank, plots were plowed on bright days to provoke a flush of emerging weeds. Subsequent planting and cultivation of crops was done in the dark at least one hour after sunset and before sunrise.

In order for the practice to work, all light pollution, including tractor headlights or other light visible to the human eye, has to be avoided. Instead, a military type infrared scope with an infrared spotlight or a searchlight with a short-wave cut-off filter

was recommended. Also, tilling under cloudy skies—even at night!—was preferable.

— As reported by the NYS Vegetable Growers Assoc.

CLASSIFIED

FOR SALE: Lawn Mower, 21", two yrs old, \$35.00. Call 789-8112 after 5:00 pm.

BICYCLING: Is anyone interested in bike riding on the weekends? Long and short trips. If so, contact Frank at x278 or e-mail: fdm1@cornell.edu.

Friday, July 15, 1994

Country & Western Pig Roast

Chow at 6:00 pm

**Music 8:00 pm-Midnight by
"Country Smoke"**

Live Band

Choice of
Pig, Hot Dogs or Just Fixin's



Sweet Corn
Fixin's ✱ Salt Potatoes
Tossed Salad
Fruit Cup

✱ Pig-n-Fixin's \$7.00

✱ Dog-n-Fixin's \$4.00

✱ Just Fixin's \$3.00

All Drinks On The House



See your department
representative for tickets.

