

# William H. Miner Agricultural Research Institute FARM REPORT



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## WHAT'S HAPPENING ON THE FARM

It was a cruel practical joke: We were lulled into a spring reverie and then winter came snarling back. Employees fled indoors, calves retreated back into their deep-straw-bedded hutches, and feed intakes soared. Now rain, lots of it, mixed with dirty snow and productive maple trees—springtime in northern New York.

This whole lack of a reliable Posilac supply is raising all kinds of questions amongst farmers. Which animals should get the shot, which should not, should we give it to heifers who are fresh 63 days or rather give it to mature cows? Each farmer, scientist, and pseudo-expert has an opinion. Some even have what are tantamount to "facts." Here at Miner Institute, despite a few who shake their head at the decision, we've opted to give Posilac to mature animals, especially those cows with a history of being difficult/problem breeders, and cows many days in milk who are in danger of putting on too much weight. The thinking against giving it to heifers is that they are still growing and some of the hormone would be lost to growth rather than going to milk production. It still takes careful assessment of the mature cows, their health, and history.

The repro issue continues to bother us, although we are on strict synchronization programs: Fresh cows go onto Presynch, those that do not take go to Ovsynch, heifers are target bred, and despite getting the semen into the animals on time, the critters are not falling pregnant in sufficient numbers. Suggestions have been made about heat-spotting, Lepto Hardjo Bovis, BL, the quality of semen, nutrition, staff skills, and the weather. But we have *still* not got to the root causes and we are not getting the necessary number of heifers and cows bred each month. This is a worry to us, especially as we commence planning the move into the new dairy barn facility, which has capacity for 272 milking animals.

Talking of the new dairy barn, we have decided to open the herd and are sourcing animals to purchase to populate the barn as quickly as possible. One advantage,

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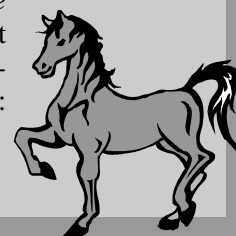
Construction of our dairy barn has been like breeding elephants: Accomplished only after a number of meetings at high places, and taking many months to see the final results.

We'll be moving heifers in this month, with the milking herd to follow.



## GOOD NEWS AND BAD NEWS

After this month, the *Farm Report* will no longer contain equine-related articles. Whether that's good news or bad news, well... What's certainly good news is the reason for the change—Miner Institute has a new quarterly newsletter just for horse owners: *The Stable Sheet*. Edited by Karen Lassell, this newsletter is available in hard copy and on our website. If you want to be added to *The Stable Sheet* mailing list, contact Karen at 518-846-7121 ext. 120 or email: [lassell@whminer.com](mailto:lassell@whminer.com).



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of course, is that we'll be able to use up our huge forage inventory sooner. The ADM students took measurements recently of our silage and haylage bunks and it seems we are good for two years of feeding at the current rate and with the present number of animals. The Crops Crew was happy about this as it implied they could take the next two summers off. Hmm!

One of the new things we'll be trying this year is to plant tall fescue mixed with a little ladino clover in an effort to see whether stockpiling forage in a pasture will enable us to graze the heifers, dry cows, and steers longer into the cold season before we must resort to harvested feeds. According to Rob Kallenbach of the University of Missouri, tall fescue is protected against early freezing by a waxy outer coating on the leaf. The plan is to graze the fescue/clover short in August and then fertilize it heavily ahead of autumn rains. The animals will be kept off of the growing pasture until it is needed for cold-weather feed. Should this be successful, it will mean a reduction in supplied feed costs for heifers, dry cows, and dairy steers as they are able to then do a lot of their own harvesting and be supplemented rather than fully fed by expensive hay, silage, and purchased feeds.

Milk prices are climbing steadily, the April MILC check will be miniscule, cheese prices are forecast to increase, and the long-term prospects for income are looking healthy. Should this prediction be accurate, the months ahead will be as joyful financially as the warm weather is sure to be.

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## LEAFHOPPER-RESISTANT ALFALFA: A NO-BRAINER

Cornell University entomologist Elson Shields made a bold but appropriate recommendation at last month's Corn Congress: *Farmers who seed alfalfa, either with or without a forage grass, should seriously consider using only leafhopper resistant alfalfa varieties.* There are several reasons for this:

1. There's no insecticide registered for control if leafhoppers attack an alfalfa-grass stand. NY farmers had a "Section 18" clearance last year for this purpose, but there aren't any guarantees for the future.
2. Many farmers don't regularly check fields for leafhopper damage, and if they do find leafhoppers they figure that the problem will soon go away. Wrong. Therefore, even if insecticides were available for mixed stands, many (most?) farmers wouldn't use them.
3. Leafhopper resistant varieties have improved considerably in their performance relative to nonresistant ones even when leafhoppers aren't a problem, and the price premium for resistant varieties has all but disappeared.

Consider the economics of chemical vs. genetic leafhopper control: While insecticides are cheap at about \$3 per acre, with application the cost is about \$10 per acre. Assuming 4 acres per 50-lb unit (12.5 lb/acre alfalfa seeding rate) and a four-year length of stand, the following table shows the per-acre costs. Nonresistant varieties average \$12.71/A/year while resistant ones average \$12.45. Even selecting the most expensive leafhopper resistant variety and the cheapest nonresistant one, resistant varieties are cheaper if you'd need to spray even once during the life of the stand.

| Variety              | Leafhopper resistance | Seed cost/A/year |
|----------------------|-----------------------|------------------|
| Pioneer 54V54        | No                    | \$14.37          |
| Lightening Extra     | No                    | \$12.68          |
| DeKalb DK140         | No                    | \$12.19          |
| WL 357HQ             | No                    | \$12.44          |
| Mycogen Multiplier 3 | No                    | \$11.88          |
| Pioneer 53H81        | Yes                   | \$12.50          |
| Preferred PS2003     | Yes                   | \$11.87          |
| WL 346LH             | Yes                   | \$12.87          |
| DeKalb DKA37-20      | Yes                   | \$12.81          |
| Mycogen 4375LH       | Yes                   | \$12.19          |

A few other notes:

- Leafhopper resistant alfalfa was developed using traditional plant breeding techniques and is not considered a genetically modified (GM) trait.
- The resistance trait—glandular hairs—doesn't develop right away, so some new seedlings may need an insecticide application.
- Older LH-resistant varieties may be cheaper, but buy the newer ones because most have a higher level of resistance and better yield than the old ones.
- Last but not least—and this is what makes LH resistant alfalfa a real no-brainer—is that recent research in four Midwestern states found that regardless of insecticide use, LH resistant varieties were significantly higher in crude protein, lower in NDF and higher in digestibility.

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## FROM THE PRESIDENT'S DESK— PREGNANT COWS NEED THEIR REST

For the past ten years there has been a consistent focus on management of the transition cow. Tremendous strides have been made in our understanding of close-up and fresh cow nutrition, management, and etiology of the many metabolic disorders that may occur in the periparturient period. Surprisingly, there has been virtually no research on the natural behavioral requirements of the transition cow and how facilities and management routines impact cow comfort, well-being, and productivity. Recently, however, several reports have been published that investigate the relationship between prepartum and postpartum behavior and what the consequences are relative to feed intake and milk production.

In 2003, Purdue University dairy scientists presented some really thought-provoking research on how the behavior of close-up heifers could influence subsequent productivity and behavior of the same animals. This research showed that there was greater dry matter intake on days 1 to 14 postpartum for heifers that spent more time lying down and ruminating on day -2 prior to calving. There was also greater milk production on days 1 to 14 postpartum for heifers that spent more time lying down and ruminating on days -6 and -2 before calving. These same heifers that spent more time resting and ruminating prior to calving also had greater feed intake on days -6 and -2 prior to calving. Again, we see a link between adequate resting time and better feed consumption. We have observed that lactating cows consume more feed when allowed adequate resting time (i.e. 12 to 14 hours daily), and now we see from the Purdue research that the same holds true for the close-up cow. And, even more importantly, we see for the first time that greater resting behavior prepartum can lead to

greater dry matter intake postpartum. This is a critical observation because we know from previous research that greater dry matter intake 1 to 3 days before calving is related to substantially greater feed intake at approximately three weeks postpartum when the cow should be rapidly increasing in feed consumption.

So it appears that the time budgets of heifers (and I would add that the same holds true for older cows as well) change as they move through the transition period from dry to lactating. Really, this shouldn't be too surprising given all the metabolic, social, and nutritional changes that the transition cow faces. The bottom line here is that there is tremendous opportunity to take advantage of cow behavior prepartum to positively influence dry matter intake and milk yield postpartum. A question we should be asking ourselves is: How do we encourage sufficient resting (and rumination) in close-up cows and heifers? Here is where researchers need to begin evaluating combinations of management strategies to optimize resting prepartum, but we already know several factors that will limit resting and feed intake for close-up cows. Obviously, cows require access to comfort-

able resting areas. There should be absolutely no overcrowding in the close-up pen. Previous research demonstrated that dry matter intake was actually higher when stocking density (relative to the feed manger) was 85 to 90% of capacity. Also, Cornell University research with lactating cows showed that 30% overcrowding of stalls and feed manger reduced rumination activity as well as resting time.

We now have a direct link between cow comfort and behavior prior to calving and how well a cow will perform after calving. Specifically, adequate resting prepartum is associated with greater feed intake and milk yield postpartum. We need to focus even more on our close-up animals and ensure that they are comfortable and free from overcrowding. Finally, we need to understand that poor cow management during the close-up period will certainly negatively impact the time budget of the fresh cow and her ability to successfully consume large amounts of feed and efficiently produce milk during that critical first several weeks of lactation.

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## MINER INSTITUTE CROP UPDATE

Due to several factors we have a huge silage inventory, much more than we'll need between now and when this year's crops are harvested. We anticipated some of this and chopped all our 2003 corn silage at 13" and 17" height, thus reducing yields while markedly increasing quality. We're also buying dairy replacements, but this still won't be enough and since we haven't been successful in selling surplus corn silage this would seem like an ideal time to plant a significant acreage of brown midrib (BMR) corn. We'll put this silage in a separate silo and feed it to transition and high group cows. We'll plant a bit over 60 acres (or one third of our corn acreage) to two BMR hybrids. Normally, BMR hybrids yield 10-20% less than other corn hybrids, so figuring an average 15% lower yield, based on our normal 20-ton yields that's about 200 fewer tons of corn silage. But not so fast... Cornell University research has shown no advantage to chopping BMR hybrids higher than normal, so while we might lose 15% yield by planting BMR, we'll gain most of this back by chopping at 6-8" rather than 13-17". And this might well be the year when we don't get any summer drought stress (some BMR hybrids aren't very stress tolerant) and our BMR will yield as well as any other corn. Just our lousy luck...

—E.T.

## VET CORNER

Except for a few heroic OB cases, herd health at the Miner Institute dairy farm was uneventful this month. With apologies to the Vermont Large Farm Discussion group, this month's article is on Subclinical Ketosis (SCK), which was my subject at their April 2 meeting.

In the past five years, several new tests have become commonly used on dairies. MUN, Rumenocentesis, Urinary pH, and NEFA testing have given dairymen, feed reps, and veterinarians definite criteria and common ground for diagnosing feed-related problems in a dairy herd. BHBA (blood B-hydroxybutyrate) is the gold standard test for SCK. As SCK is better understood, this test will become as familiar as the others.

SCK is "a condition marked by increased levels of circulating ketone bodies without the presence of clinical signs of ketosis" (Dufield, 2000). In addition to milk production loss, cows are prone to DAs so the blood testing is part of our DA epidemic investigations. Garrett Oetzel, DVM at the Univ. of Wisconsin, advises us to test a dozen cows that are 5-50 DIM. If a cow tests over 14.4 mg/dl, she is a problem cow that warrants a herd investigation. It is not normal for high producers in negative energy balance to run high BHBA.

Present estimates of clinical ketosis by the dairy are inconsistent from farm to farm, so it is common to have the vet and feed rep confused or unaware of the problem on the farm. Some farmers can smell ketones in the milk or are aggressive about using urine sticks on off-feed cows and report a high incidence of clinical Ketosis, while other larger, TMR-fed herds don't observe cows as closely for appetite and report low incidence. Often there are surprise SCK cases when a fresh pen is randomly sampled, which respond to ketosis treatment.

Dr. Oetzel suggests that BHBA be run prior to other tests. If the fresh cows don't have SCK, then the dairyman's lab-testing money shouldn't be wasted on dry cow NEFA testing. If BHBA is very high in cows throughout the 5-50 DIM, then classical underfeeding ketosis should be investigated. If BHBA is high mainly in the first 15 DIM, Fatty Liver Syndrome and fat cows should be checked out with NEFA testing. This will lead the feed rep to increasing energy density of the close-up ration and lead the vet to observe the close-ups for over crowding, heat stress, and empty-bunk syndrome.

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## DRAFT HORSE SHOE & TRIM CLINIC

At Country Dreams Farm, Pellerin Road, Plattsburgh, NY, Sat. May 22 and Sun. May 23, 2004, 11:00 am to 3:00 pm. Demonstrations and hands-on with Bruce Matthews, clinician. This event is for the draft horse owner, farrier, or anyone interested in learning more about the proper care of draft horse hooves. There will be demonstrations and discussions on trimming and shoeing techniques, as well as the use of stocks and shoeing surcingles. Fees: \$15 if pre-paid, \$20 at the door. Food will be available and door prizes will be awarded. By appointment only, Bruce will be available to work on horses brought to the farm. For more information or to pre-register, call 518-561-8941 or email: cdfarm@superior.net.

## AG LIME

An article in the mid-January edition of *Farm Journal* summarized comments from George Rehm, University of Minnesota soil fertility specialist—and farmer. One subject has been making the rounds in the Northeast: the idea that there's an ideal calcium/magnesium ratio in the soil and that top yields can't be achieved unless that ratio is achieved. However, university research in several states has been very consistent in proving that the calcium/magnesium ratio has no effect on yield. This really shouldn't be news: at least 20 years ago Cornell University's soil fertility specialist W. Shaw Reid was telling New York farmers that if the cheapest source of ag lime is high in magnesium (called "dolomitic" lime) then use that instead of calcitic lime. And for years that's what many farmers in Northern NY have done, since one of the best local sources of ag lime is high in magnesium.

Agricultural soils often need lime, but it makes no difference at all whether you apply calcitic or dolomitic lime unless you have low soil magnesium levels, in which case dolomitic lime is preferable. That's because it's cheaper to use dolomitic lime than to apply a fertilizer source of magnesium.

George Rehm's ideas are well worth remembering, and not only as they apply to the subject of ag lime:

- Evaluate product claims based on research, preferably that done by universities or other unbiased testing organizations. Farmer testimonials are entertaining, but often useless.
- Look for local research, in soils and climatic conditions similar to yours.
- Be skeptical of any research that promises miraculous yield results or quality improvements.
- Test new concepts on a limited acreage before making a big investment or risking your crop.



## FORAGE LAB NOTES

I attended the Missisquoi River Basin Association (MRBA) meeting held in Swanton recently. I found it very informative regarding the initiatives proposed in the Capital Appropriations Bill in the Vermont legislature. There were a fair number of “greens” in attendance, some real farmers, some local politicians, and Governor Douglas as well. The Governor outlined the programs and monies available to put toward efforts to clean up this particular watershed, as well as others around the state. There is a lot of money available. The primary issue discussed was not nutrient management programs, but soil erosion. Soil erosion is the primary cause of nutrient loading of the Missisquoi Bay. Soil sediments, manure, fertilizer all get flushed into Lake Champlain with each successive 2” rain event. If we can minimize erosion, we can lower the nutrient loading of the watersheds as well as help preserve cropland and the nutrients applied to them. I urge you to be proactive and look into ways to reduce erosion. Whether it’s stream bank stabilization, planting buffer strips, or no-till corn planting, information about programs and money is available at MRBA@pshift.com, (802-933-9009), or by contacting your local Extension agent.

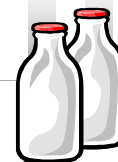
Speaking of being proactive, we had a 2004 crop year planning meeting the other day. Officiated by our “crops guru,” Ev, it was strictly business—no donuts. Upon inventorying our silage bunkers, it was figured that we have approximately 2,000 T of corn silage and 1,600 T of haylage remaining in our bunkers with a few random Ag Bags to boot. For incoming crop, we only have about 50% of our total bunker space available. As we are cropping more acres and are still at “pre-expansion” cow numbers,

we have a glut of forage. As such, it was decided that we be more selective about what we put into the limited bunker space. As protein is likely to be exorbitant this year, high quality forage is a must. We made a general agreement that headed grasses will be left in the field, baled for horse hay, or possibly shipped to Texas—anywhere but our silos. If need be, we can finish planting corn when the high quality 1<sup>st</sup> cut is in.

Concerning fresh forage DM determinations using the Koster Tester, we will be intensively monitoring them against microwave and over-night oven drying. The Koster runs hotter, with more air exchange than the over night oven method. As a result, the Koster DMs run a bit lower than the

oven DMs, leading one to believe the crop is still wetter than we think, hence we have been letting it wilt a bit more before we chop. At issue are the different amounts of residual moisture remaining in the forage after drying. When the residual moisture is accounted for, the Koster and oven DMs will be nearly identical. A second issue that may be unique to fresh forage is the possibility that more volatile organic acids and sugars are being cooked out of the forage with the Koster than the oven. We will be monitoring this situation more closely, and chopping earlier.

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## FARM FACTS

- During the first three months of 2003, **Wal-Mart** accounted for 14% of all sales of milk in gallon containers.
- Research has shown that children consuming lots of **dairy products** are less likely to be overweight than their soft drink-guzzling buddies.
- N.Y. farmers paid \$145 per ton for **muriate of potash in 1920**. Last year Miner Institute bought potash for just over \$150, and that included use of a spreader.
- **China’s** harvested grain area has shrunk by 15% since 1998, and it could import up to 50 million tons of grain this year. This could increase demand for U.S. grains and increase grain prices worldwide.
- **Northern Ireland** scientists discovered that cows eating canola grain produced milk with lower saturated fat. The research wasn’t intended for this purpose, but to make butter that spreads easier. (Remember Ev’s unsolicited testimonial a couple months ago about *Land O’ Lakes Butter with Canola Oil*? Those clever Irish are simply adding the canola to the cow rather than to the butter.)
- Legislation passed the House of Representatives that would protect fast-food establishments from **obesity lawsuits**. “Ronald McDonald made me do it” won’t fly if this bill, also known as the “Cheeseburger Bill,” is signed into law. Isn’t it interesting that this is happening just as the Atkins Diet (“All meat, all the time”) is so popular?



## CORN HYBRID TRIALS

Following is a table summarizing the yield and weather data from the corn grain hybrid trials Cornell University planted across N.Y. State last year. The hybrids were entered by seed companies, which paid a fee for inclusion in the trials.

| Location        | Yield, Bu/A | 2003 GDD | Ave. GDD | 2003 precip. | Ave. precip |
|-----------------|-------------|----------|----------|--------------|-------------|
| Chazy           | 209         | 2346     | 2099     | 23.8         | 19.8        |
| Morrisville     | 165         | ---      | 1956     | 32.8         | 19.8        |
| Madrid          | 169         | 2143     | 2065     | 25.6         | 21.4        |
| New Hope        | 154         | 2642     | 2488     | 25.6         | 21.4        |
| Pike            | 121         | 1742     | 1751     | 30.1         | 24.0        |
| Lansing         | 176         | 2104     | 2170     | 25.6         | 23.3        |
| Chemung         | 180         | 2399     | 2230     | 26.4         | 20.2        |
| Sacketts Harbor | 140         | 2133     | 2092     | 22.3         | 18.2        |
| New Hope        | 164         | 2462     | 2488     | 25.6         | 22.4        |
| Aurora          | 148         | 2472     | 2421     | 22.6         | 20.7        |
| Chemung         | 192         | 2399     | 2230     | 26.4         | 20.2        |
| Albion          | 171         | 2581     | 2610     | 18.6         | 18.8        |
| Kingston        | 186         | ---      | 2196     | 33.4         | 24.1        |
| Kingston        | 169         | ---      | 2196     | 33.4         | 24.1        |
| Albion          | 141         | 2581     | 2610     | 18.6         | 18.8        |

A few comments:

1. Precipitation is in inches and GDD is base 50F, May through October. No GDD available for two locations because of missing data for a number of days.
2. The shading separates the four maturity groups: Early, Medium early, Medium, and Late.
3. Chazy normally is relatively dry and cool, but in 2003 it was more like the rest of the state. Note the 209 Bu/A average yield! With reasonably good weather, the soils in the Champlain Valley are very productive.
4. The hybrids in the Chazy trial yielded 175 to 247 Bu/A, with only 3 of the 20 hybrids under 190 Bu/A. All seed companies have hybrids with high yield potential. The highest yielding hybrid was tops in all five trials, while the lowest yielding one was near the bottom in four of the trials (animal damage wiped it out in the other trial). This consistency suggests that Cornell's grain corn hybrid trials do a good job of sorting the wheat from the chaff—or should we say the kernels from the husks.

—E.T.



UH-OH

- A judge in Leon County, Florida ruled that the Sunshine State's environmental regulatory program didn't meet Clean Water Act standards, and that all dairy farms regardless of size have to obtain EPA "National Pollution Discharge Elimination System" (NPDES) permits. Prior to this, only farms with over 1,000 animal units had to obtain permits. Last year an environmental coalition sued the state for allowing large dairy farms to operate without NPDES permits. The Florida Department of Environmental Protection argued that federal permits weren't necessary since state-negotiated agreements with individual dairy farms accomplished the same thing, but the judge disagreed. This reportedly will force some Florida dairy farms to go out of business immediately and will most likely raise havoc with a number of others.
- You've heard of a flat tax; but have you heard of the flatulence tax? Yup, the government of New Zealand has proposed a tax on livestock methane emissions, which they claim is responsible for over half the country's greenhouse gases. Farmers are raising a stink about the tax, saying that they're being singled out. Let's hope this idea is just a lot of hot air.

## OUT THERE

—M.T.

U.S. Health and Human Services Secretary Tommy Thompson wrote to European Health Commissioner David Byrne, asking him to reconsider the **European Union's** (EU) decision last autumn to stop accepting any new additions to the list of U.S. dairy plants allowed to export to EU nations. At least 36 dairy companies have been affected by this delay. Despite Secretary Thompson's appeal and other similar attempts by the U.S. government, the EU "pause" remains in effect. The decision appears to be heavily influenced by the increasing tension between the United States and EU recently on a variety of trade issues. The EU announced its decision to the United States last October in a letter stating that an EU team that inspected some U.S. dairy plant list applicants in September found "serious deficiencies," which were not described until a follow-up letter sent in December. To date, the EU has not responded to repeated overtures by the United States to resolve the issues in question.



**China** is changing rapidly and so are its tastes. As a consumer society emerges, so new products are appearing with increasing regularity. Dairy products are among them. Rising average annual incomes, greater ownership of fridges and freezers, increased exposure to western and international cuisines and a greater array of goods in the supermarket are all combining to increase sales of dairy products in China. Historically, dairy and milk-based products were rare in China. A high incidence rate of lactose intolerance, low level of milk production, no cultural history of cheese and other dairy products combined to keep the market restricted. Add to this the mammoth transportation problems, southern climate, poor storage and packaging and dairy products were not the easiest things to produce and sell either for local or international companies.



On March 15, the United States and the **Dominican Republic** announced that the Caribbean island nation would become part of the proposed U.S.-Central American Free Trade Agreement (CAFTA), which is awaiting ratification. Of specific interest to U.S. dairy companies, the agreement would allow the Dominican Republic to export a limited amount of additional sugar to the United States. For dairy, it was announced that tariff-rate quotas would be used to manage U.S. exports to the island. U.S. dairy products entering the Dominican Republic will be duty-free up to an unspecified amount immediately after CAFTA's finalisation. Currently U.S. dairy exports to all six CAFTA countries (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua) are valued at approximately \$34 million annually. Congress must ratify CAFTA for it to take effect. The debate is expected to take significant time, since the pact will likely be opposed by organized labor and the sugar industry.

## WORLDWIDE BIOTECH CROP GROWTH CONTINUES

With all the negatives in the popular press about the problems of genetically modified crops (this country or that not wanting U.S. GM crops, GM crops requiring more pesticides than non-GM crops, etc.), it may come as some surprise that for the seventh consecutive year farmers around the world planted ever-greater amounts of GM crops. In 2003 farmers planted 167 million acres of GM crops, an increase of 15% from 2002. This probably understates the case since we really don't know how many million acres of Roundup Ready soybeans were planted in Brazil. You see, while Brazil only approved the planting of GM soybeans last year, it's no secret that Brazilian farmers were planting a whole lot of unapproved GM soybeans prior to this. That's why the 7.4 million acres of 2003 Brazilian GM soybeans is termed a "provisional conservative estimate," a nice governmentspeak term.

While GM crops are grown in eighteen countries, six account for about 99% of GM crops: The U.S., Argentina, Canada, China, South Africa, and Brazil. China and South Africa both increased plantings of GM crops by one-third compared to 2002.

## NOTABLE QUOTES FROM FAMOUS FOLKS

- With fame I become more and more stupid, which of course is a very common phenomenon. *Albert Einstein*
- Kids, go get your mother. She'll never see another fire like this one. *Thomas Edison*, on seeing his 14-building laboratory complex burn to the ground.
- In politics, stupidity is not a handicap. *Napoleon Bonaparte*
- If you are not enjoying your work, you should either change your attitude, or change your job. *Leo Tolstoy*
- Once you can accept the universe as matter expanding into nothing that is something, wearing stripes with plaid comes easy. *Albert Einstein*



## CLOSING COMMENT

The older you get  
the tougher it is to lose weight,  
because by then  
your body and your fat  
are really good friends.