

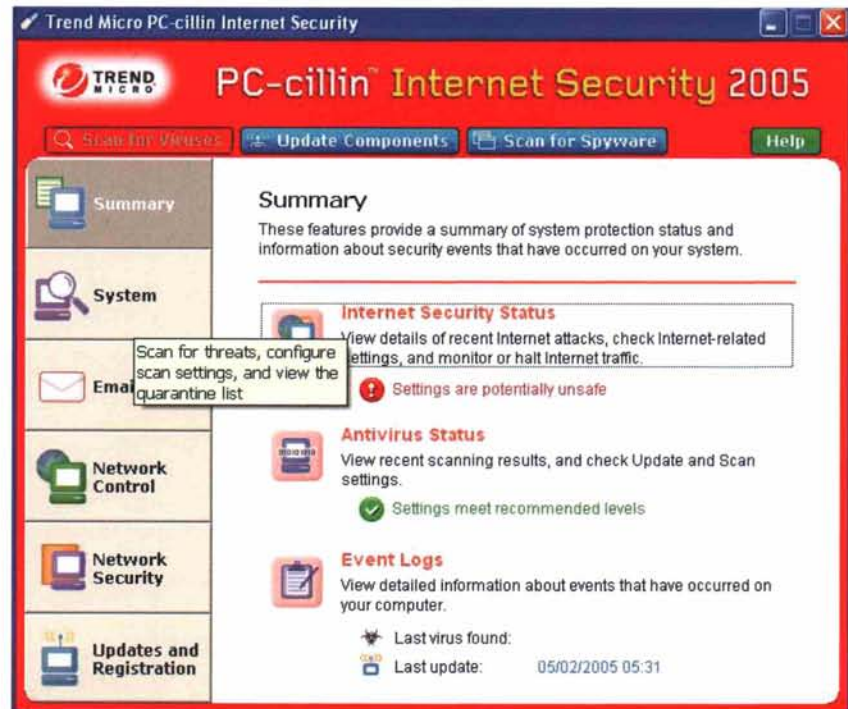
Safeguard Your Computer TODAY!

Just like humans, computers need check-ups too. And considering just how much computers affect our daily lives, we should be doing these check-ups frequently.

Viruses, spyware and spam, oh my! Here's a step-by-step guide to protecting your computer from those annoying pop-up ads and immunizing it from catastrophic virus attack.

Let's start with the anti-virus softwares. Viruses are the ever-feared bad guys of the computer world. Some are malicious and may crash systems or whole networks. Others are what appear to be fun and might reflect just a kid testing his or her programming/hacking abilities. The single best way to treat and stop viruses is to either purchase or download an anti-virus program.

My recommendation is Trend Micro's PC-cillin. The product is a combination of anti-virus, anti-spam and an Internet firewall. I recommend the program because at least once a day, the people over at Trend Micro are releasing an update to the virus definitions as well as the program in general. The cost of \$50 for one year of updates is so worth it for preventing the hard drive freezes and system crashes. Occasionally, you can purchase this product for less with rebates when you "trade-in" another anti-virus program. I recommend PC-cillin also because it scans the computer for known security loopholes that hackers look for in order to browse through your personal files.



Other anti-virus programs that are available include the two most popular, McAfee and Norton. Both of these programs offer the full Internet security suite. In the past, I myself have had troubles with Norton and Windows XP

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Service Pack 2. They have probably resolved that problem by now though.

Although Windows XP Service Pack 2 comes with a firewall, I strongly recommend having a suite of programs that includes the anti-virus and a firewall. Also, many people rely on the free anti-virus programs that come through some Internet service providers. Some of these programs have merit, but as the saying goes, sometimes you get what you pay for. The extra money invested is well worth the security of knowing that my computer is safe. My e-mail is scanned when it comes in and when it goes out, and nobody is getting into my user files!

Moving on, spyware and malware have become buzzwords on the Internet and their presence has become a major headache for many IT professionals. Basically, spyware/malware comprises little tiny programs that you yourself are unwittingly downloading as you surf the Internet and visit different Web sites. These programs send information as to when you are online and what Web sites you visit back to companies that can then send you advertisements that "pop up" on your computer. Sometimes these pop-up windows are from the Web sites that you are on, and sometimes they come from all the spy programs. Many different ways exist to take care of this problem; I'm going to outline how I have successfully defeated pop-ups and spyware. Following is a list of the programs that you need. I'll walk you through how to use them next.

Go to <http://www.download.com/> and search for Ad-Aware SE. The personal edition of this program is free and can be downloaded from the Web site. Download the latest version.

While at <http://www.download.com/> do a search for Spybot – Search and Destroy. Download and install Spybot – Search and Destroy in the latest version

You're not done yet . . . now you need to search for Spyware Blaster and download and install Spyware Blaster in the latest version.

Finally, visit <http://www.nsclean.com/dsostop.html> and download the program DSOSTOP2.exe. To elimi-

nate confusion, choose the HTTP option. This will bring up the download box asking where to save it. I would recommend saving all of these on the desktop or in their own folder on the desktop.

First run the DSOSTOP2.exe program. This program blocks a known security loophole in Windows Internet Explorer that has not been fixed as of this writing. DSOSTop2 works to prevent Web sites that use ActiveX, used by Microsoft for online updates of Internet Explorer and Windows, from maliciously downloading malware



Next, install Ad-Aware, Spybot and Spyware Blaster. The first two are the key components to searching for and removing spyware and malware. Spyware Blaster works with Spybot by protecting your Web browsers from bad Web sites and preventing unwanted software installations on your computer.

After installing these programs, run each of them, first choosing the update option in the main screens of each and then doing the search and cleaning options offered by Ad-Aware and Spybot. Spybot also offers the tab of immunize. Immunize your computer and then click on the link in the window to open Spyware Blaster. Update Spyware Blaster in the update tab and then in the protection tab

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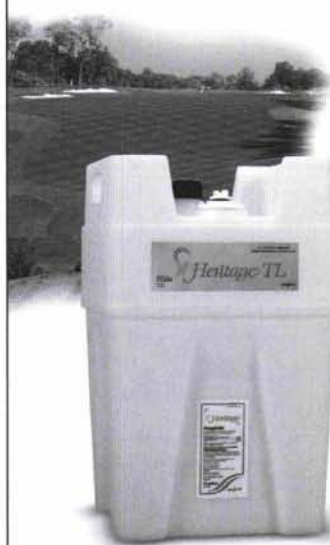
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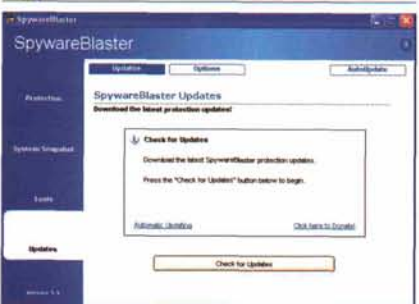
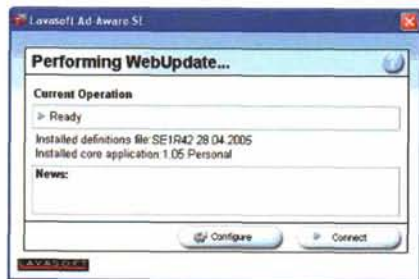
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If you are like many people that I have helped out, you will quarantine and remove a lot of programs that you didn't even know were on your computer. Your computer, if like the other computers I've done this to, will start to run noticeably faster and smoother, especially when you are on the Internet.

We've taken care of half of the problem now. In a sense we've just cleansed the system, but we still need to prevent it from happening again. Most of our spyware today is brought into the system through Internet Explorer and our friendly chat programs that are used to keep in touch with friends and family. Remove those programs and download Firefox.

That's a simple instruction. Why don't people do it? First, chatting with friends is fun and a heck of a lot cheaper than a phone call. However these programs are full of security loopholes that are being exploited frequently, allowing back-door access to your personal computer files by persons with less-than-the-best of intentions. Some of the viruses that are making the news these days are installed onto computers using these very programs, such as AOL's Instant Messenger, Yahoo Messenger, ICQ and Windows Messenger. If these programs are going to be used, be sure to run a virus check and spyware check on a more frequent basis, like two to three times per week.

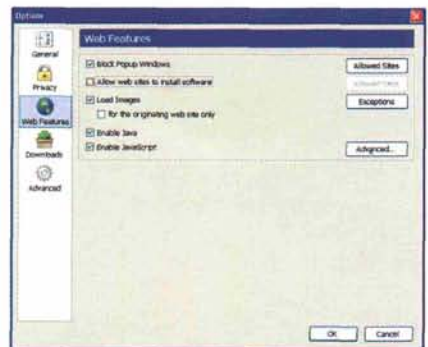
As to the second half of my recommendation above, yes, changing Web browsers can be very daunting. There's a fear of changing Web browsers, especially switching to one that might take some getting used to. Firefox is the latest development from a spin-off of Netscape that uses open source code. This allows the browser users to develop plug-ins and exten-

sions for customized browsing and enhanced security.

Download Firefox at <http://www.getfirefox.com>. The program is free and worth every bit of time you invest in learning. Firefox has enhanced security, tabbed browsing, pop-up blocking and the extensions that let you tweak it into something even more useful.



Above is a screen shot of my Firefox browser. I can read one page while more are loading in the background. The benefit is that I'm only using one window instead of having three or more open with Internet Explorer. When I'm ready to switch to another tab, I just push Alt+Tab or click the other tab.



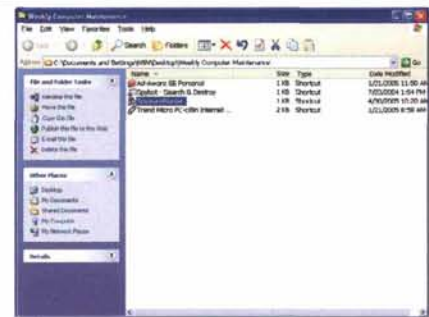
The feature that must be executed with Firefox is to uncheck the "Allow Web sites to install software" button in the Options under Tools Menu. However, if you want to install extensions, you will need to have the checkmark back in that box. I use the Adblock extension to stop the annoying ads on Web sites I frequent and the dictionary search extension to look up new and interesting words from Web pages.

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Do you see the annoying ad in the middle of my news? I click the little button that says Adblock at the lower left-hand side of the image . . . and now it's gone after I click the OK. Firefox also blocked a pop-up ad from this Web site. I can allow the pop-up if I want it by simply clicking in the yellow area and following the directions.

I know that this sounds like a lot of work for a computer that might not get used all too much, but if you're on the Internet it's better to be safe than sorry. There are too many companies looking to push their ads onto your desktop and too many people looking to get private information out of you and your computer.



In closing, I suggest making a weekly maintenance folder that you open and execute on a certain day each week. I've got my three spyware programs and Trend Micro in mine. A little bit of discipline in doing this weekly will help stop those headaches from pop-ups, slow Web surfing and the fear that you might not know who is nosing around in your computer.



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Nozzle Selection for Fungicide Application



How one applies fungicides is just as important as the selection of a fungicide that will control a disease. Spray nozzles help control the rate, uniformity, distribution and safety of product application. Factors that influence nozzle selection include the target area, wind speed, the type of product to be applied, operating pressures, ground speed, desired water volume and application rate. Due to these variables, one nozzle does not work for all applications.

There are several nozzle types that deliver either a "flat fan" or a "hollow cone" spray pattern. Examples of nozzles that deliver a flat fan distribution pattern include XR TeeJet®, Turbo TeeJet®, AI TeeJet® and TurfJet™, and the nozzles that deliver a hollow cone distribution pattern are ConeJet® and raindrop nozzles. Depending upon the nozzle type and pressure, droplet sizes can range from very fine to extremely coarse.

The flat fan spray pattern generally produces the most uniform distribution within a sprayed area with a minimum of a 30% overlap. There is a large selection of nozzle types that produce the flat fan pattern with optimum coverage under a variety of conditions.

The hollow cone nozzle also produces a uniform application, but the particle sizes are smaller than the flat fan spray nozzle. The hollow cone nozzles are used to assure a finely atomized spray droplet. The hollow cone nozzle is commonly used on hand-held sprayers.

The raindrop nozzle or whirl chamber nozzle produces a much larger

droplet size in a hollow cone pattern. Applications with this nozzle type are generally less uniform and spray coverage may be incomplete. The raindrop nozzle was developed to minimize clogging and reduce spray drift.

When selecting a flat fan nozzle, choose a nozzle that provides the right size of droplet to achieve the desired result. Spray droplets are measured in microns (1/1,000 mm or 1/25,000 inch). Most nozzle manufacturers produce charts that follow the American Society of Agricultural Engineers' droplet size classification

standard that indicate a given nozzle at various pressures (Table 1). If applying a fungicide at 0.5 gallons per 1,000 square feet from a nozzle that puts out a 400-micron droplet, there will be about 360 droplets per square inch. Whereas, a nozzle that produces a 200-micron-size droplet will output eight times more droplets or about 2,900 droplets per square inch. Keep in mind that the potential for drift increases as droplet size decreases. Match nozzles to achieve the droplet size and water volume that is needed.

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**Table 1.
Droplet Size Categories**

CATEGORY (MICRONS)	SYMBOL	COLOR CODE	APPROXIMATE VMD* (0.5)
Very Fine	VF	Red	<150
Fine	F	Orange	150-250
Medium	M	Yellow	250-350
Coarse	C	Blue	350-450
Very Coarse	VC	Green	450-550
Extremely Coarse	XC	White	>550

*VMD (volume mean diameter) = droplet size where half of volume has droplets > the VMD, and half the volume in droplets smaller than the VMD.

For fungicides, it is best to select a nozzle that delivers a fine-to-coarse droplet size. This allows for uniform coverage, especially when water volumes approach 1.0 gallon per 1,000 square feet and light winds (less than 3 mph) are anticipated. For example, an XR TeeJet extended-range flat-spray tip XR11008, when applied at 40 psi and a ground speed of 5 mph, will deliver 1.1 gallons of water per 1,000 square feet and a droplet size that is coarse. Changing to a XR11006 extended-range flat-spray tip at 40 psi and a ground speed of 4 mph will deliver 1.0 gallons of water per 1,000 square feet, but the droplet size is reduced to a medium droplet, thereby increasing the number of droplets per square inch. If using a TurfJet wide-angle flat-spray tip 1/4TTJ08 applied at 40 psi and a ground speed of 5 mph, expect 1.1 gallons of water per 1,000 square feet and an extremely coarse droplet size. While the extended-range flat-spray tips are good for both contacts and upward-systemic fungicides, the 1/4TTJ08 is definitely a poor choice for fungicides as the droplet coverage

is not enough under low-water-volume conditions. When wind conditions are greater than 3 mph, it is best to choose a nozzle that makes a larger droplet size. For proper coverage, make applications at a lower ground speed, increase water volume up to 2 gallons per 1,000 square feet and opt for a nozzle that produces a very coarse droplet. The Turbo TeeJet wide-angle spray tip TT11008, when applied at 40 psi and a ground speed of 3 mph, will deliver 1.8 gallons of water per 1,000 square feet and a droplet size that is very coarse and less susceptible to spray drift. Sprayers used by golf courses should

be equipped with a minimum of three spray nozzles. This can easily be achieved by using a multiple-body nozzle that holds between three and five nozzles (Figure 1). Table 2 contains a list of nozzles that are suggested for fungicide applications.

Fungicide efficacy is dependent upon getting the fungicide to the right location and concentration on the turfgrass plant. When applying a contact fungicide, it is important to coat the foliage to prevent the pathogen from entering the plant. When applying an upward-systemic fungicide, it is important to penetrate into the plant canopy to the plant

Table 2.**Suggested nozzles for fungicide applications.**

NOZZLE TYPE	SUGGESTED USE	DESIRED DROPLET SIZE RANGES
XR and XRC	Contacts and Systemic	Medium to Coarse
Turbo TeeJet	Contacts and Systemic	Medium to Coarse
AI TeeJet	Drift reduction	
	Contacts and Systemic	Coarse to Very Coarse
	Drift reduction	
TurfJet	Systemic only	Extremely Coarse
	Drift reduction	
	High water volume applications	

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crown, achieving a uniform application to ensure best plant uptake of the fungicide. In a dense stand of turfgrass, this is easier said than done. For this reason, the flat-fan spray nozzle is the obvious choice for either of these applications.

In 2004, a field trial was initiated to determine which droplet sizes were best for applications of Banner® MAXX®, Daconil Ultrex® and the combination of both. While the trial is in preliminary stages, the photos taken of spray patterns and the actual droplets provide dramatic evidence that droplet size is one of the determining factors for fungicide efficacy. Figures 3 and 4 are close-up photos of the spray droplets for the XRC11003 nozzle and the 1/4TTJ04 nozzle that were applied at 0.95 gallons per 1,000 square feet at a nozzle pressure of 40 psi. The XRC11003 is a fine droplet size and the 1/4TTJ04 is an extremely coarse droplet size. Figures 5 and 6 are pho-

tos of the actual spray pattern during the application for the XRC11003 nozzle and the 1/4TTJ04 nozzle. The fine droplet provided excellent coverage, however the droplet drift potential was high. The extremely coarse droplet did not drift but failed


to provide adequate spray coverage. One alternative is to use an air induction nozzle. These nozzles produce a very coarse droplet size, lower drift potential with very good coverage. The spray pattern for this nozzle is displayed in Figure 2. 



Figure 1. Multiple-nozzle body with five different nozzles.

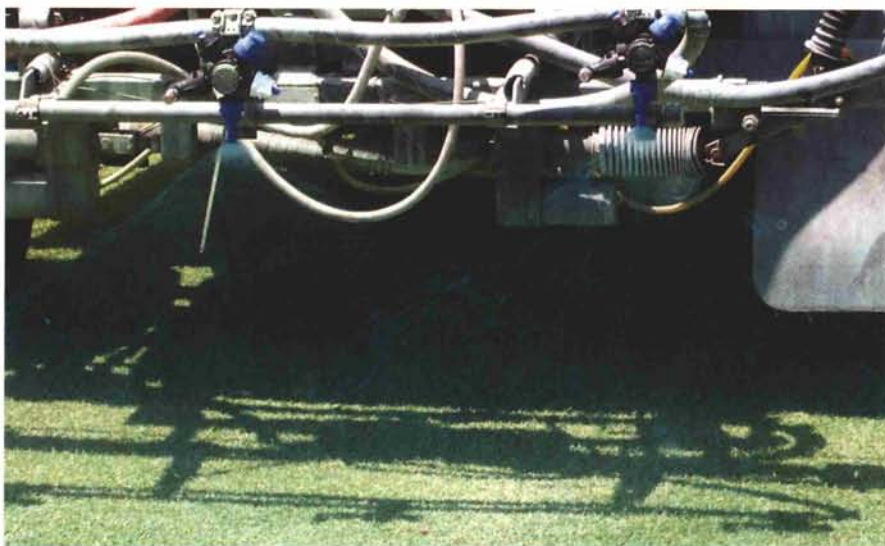


Figure 2. The AI11003 Air Induction Spray Tip produces very coarse droplets, lower drift potential and good coverage.



Figure 3. Droplets from XRC11003 Extended Range Flat Spray Tip.



Figure 4. Droplets from 1/4TTJ04 Wide Angle Flat Spray Tip.

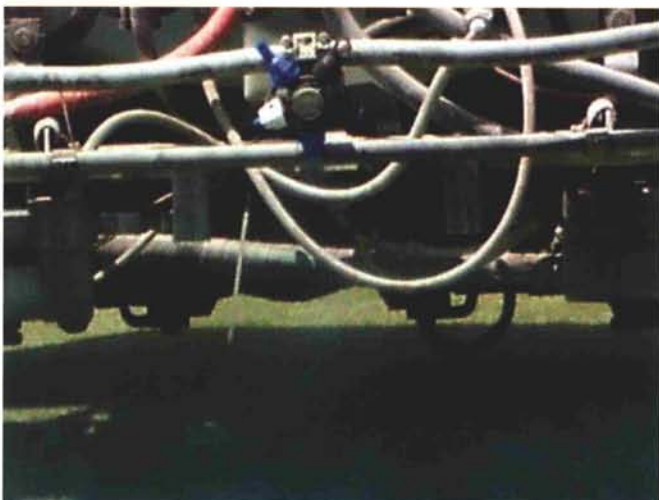


Figure 5. Actual spray pattern during application of the XRC11003 Extended Range Flat Spray Tip.

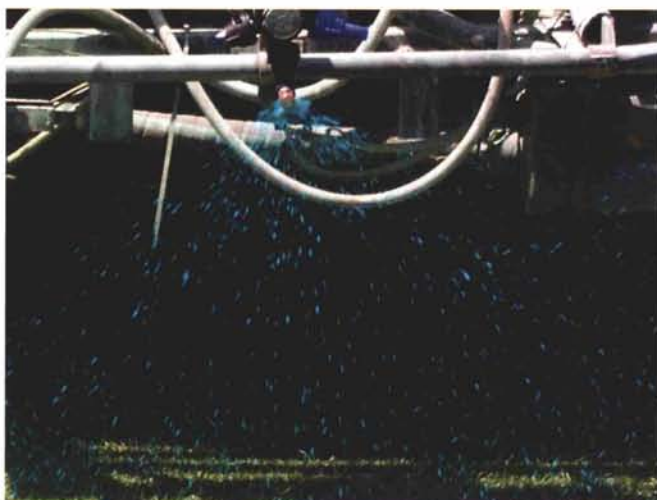


Figure 6. Actual spray pattern during application of the 1/4TTJ04 Wide Angle Flat Spray Tip.

the Bull Sheet

John Gurke, CGCS
Contributing Editor

DATES TO REMEMBER

June 9-12 – LaSalle Bank Open at The Glen Club in Glenview, IL, **Steve Daurer** host.

June 13 – MAGCS monthly meeting at Phillips Park Golf Course in Aurora, IL, **Todd Schmitz** host.

June 27- July 3 – Cialis Western Open at Cog Hill Golf Club in Lemont, IL, **Ken Lapp** host.

June 29 – Annual John Buck Scholarship Outing at Hughes Creek Golf Club in Elburn, IL, **Darin Ayres** host.

July 1 – Deadline for submission of 2006 GCSAA Board of Directors nominations.

July 7 – CAGCS monthly meeting at Bryn Mawr Country Club in Lincolnwood, IL, **Brian Bossert**, CGCS host.

July 16 – MAGCS monthly meeting/annual Kane County Cougars outing at Elfstrom Field in Geneva, IL.

August 13-14 – 2005 Walker Cup Matches at Chicago Golf Club in Wheaton, IL, **Jon Jennings**, CGCS host.

August 15 – MAGCS monthly meeting at Water's Edge Golf Course in Worth, IL, **Jason Lemansky** host.

August 22 – John Deere Team Championship at Glen Oak Country Club in Glen Ellyn, IL, **Andy Dauksas** host.

A last reminder to sign up quickly for the John Buck Scholarship Out-

ing at Hughes Creek Golf Club on the 29th of this month. The event is a scramble, and proceeds benefit both the John Buck and MAGCS Scholarship funds, as well as the Kane County Farm Bureau Foundation and the Northwest Illinois Golf Course Superintendents Association. Call J.W. Turf at 847-683-4653 to sign your team up.

The GCSAA has announced that July 1 is the deadline for submitting nominations for the 2006 Board of Directors. To nominate someone, a letter format must be sent to Jon D. Maddern, CGCS, Nominating Committee Chairman, c/o GCSAA Headquarters, 1421 Research Park Drive, Lawrence, KS 66049-3859.

Some people just do retirement right. We recently received an update from **Fred Opperman** (MAGCS member and former editor of this magazine), who—as most of you know—lives in Bozeman, Montana. Fred has traveled extensively throughout his life, and spends most of his retirement time enjoying his hobbies of hiking and fishing, and volunteering with Habitat for Humanity and Habitat International building homes for needy people. Fred's latest experience was in New Zealand (his third time there), where he and his friends at HI built a home in Nelson, which is at the top of the south island. After their work was finished, Fred remained on the island to sea kayak in the Tasman Sea for two days and then spent five more days traveling the island by car and hiking a different trekking track (trail) each day. "Quite different hiking there with totally different bush (forests) and nothing there to eat, bite, or poison you. Nothing like hiking in Montana with grizzly and

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As you read this, another of our longtime (and age-old) members has gone out to the retirement pasture. **Jim McNair**, CGCS of Orchard Valley Golf Course is officially off the hook (**Harry Lovero** having taken the hook right out of his maw) and will now be able to



The "First Foursome" of Lynn Wesson, John Lebedevs, Gilberto Velazquez and Jim McNair.

devote all of his time and energy to his new profession (retiree). In honor of this momentous achievement, a few of Jim's friends put together a little golf gathering at the site on which he cut his teeth—Fox Bend Golf Course (**Bob Kohlstedt**) in Oswego. A brisk April day (one of those days when it was forecast for rain but didn't—like all of April) kept the scores high and the hands cold, but a trip to Orchard Valley for dinner and refreshments warmed everyone up. All in all, it was a great event paying tribute to a great guy (one whom I envy extremely). Congratulations, Jim!



The participants (in some kind of left-to-right/front-to-back order): Steve Stewart, Bob Kohlstedt, Paul Yerkes, Dave Nadler, Tom Tierney, Dan Sterr, Sam Wineinger, Chuck Anfield, Lynn Wesson, Jim Shone, John Gurke, Harry Lovero, Brett Parcher, John Lebedevs, Jim McNair, Ken Shepherd, Bob Vaughan, Gilberto Velazquez, Kevin DeRoo, Dan Stahl, Luke Cella, Bob Fraley, Leon McNair, Tim Keating, Carl Hopphan, Lee Miller, Randy Kane, Wally Fuchs and Ed Lee.