



At the 2013 GIS, John Deere Golf took just about everyone out to the ballgame. OK, so the San Diego Padres were still a few weeks away from Spring Training, but GIS attendees got to 'touch 'em all' just like the big leaguers at this special event.

last two shows, this year's show saw 13,192 attendees. Qualified buyers were down from 7,068 in 2012 to 6,018 this year. Exhibitors and the size of the show itself were fairly constant — 517 exhibitors and 172,900 square feet in San Diego compared to 540 exhibitors and 177,300 square feet last year in Las Vegas.

Count Turfco's Scott Kinkead in that group of people who liked what they saw at the show despite the final numbers.

"We've been slammed with people the entire show. There have been tons of guys here to see our new topdresser and new seeder," Kinkead, executive vice president, Turfco, said. "This has been a really good show. There's a different level of energy and excitement."

Here's some quick-hit coverage of what we saw this year. We'll have a thorough report on products we saw in next month's issue.

The Golf Industry Show returns to its most heavily attended location in 2014 when it heads back to Orlando on Feb. 5th and 6th. We'll see you there.

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PHOTO COURTESY JOHN DEERE

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Deere donates \$1 million

John Deere will donate \$1 million over five years to The First Tee, further emphasizing Deere's active commitment to the game of golf and the career development of professionals in the golf maintenance industry.

Besides supporting The First Tee network, funds will be used to create and launch a golf maintenance career-oriented youth development program, in conjunction with the PGA TOUR. Local chapters of The First Tee will partner with the Tour's Tournament Player Courses to provide the opportunity for high school-aged participants to learn about topics in agronomy and golf course maintenance careers.

"This donation will continue to help those kids enrich their lives throughout



"At The First Tee, we rely on strong partners like John Deere Golf to help us carry out our ambitious efforts to reach 10 million additional young people between 2011 and 2017," said Joe Louis Barrow, chief executive, The First Tee.

the U.S. in the game of golf and enlighten them on the opportunities within our industry," Steve Vincent, John Deere Golf's North American sales manager, said. "The intent of this is to reach out to over

10 million youth and help them learn the lesson of life."

"We're going beyond the game of golf to behind-the-scenes," Mark Ford, John Deere's strategic marketing manager, told *Golfdom*.



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PHOTO COURTESY JOHN DEERE; BY BETH GERACI

On the water front

One USGA agronomist puts reclaimed water debate front and center.

Brian Whitlark, agronomist with the USGA Green Section Southwest Region, took the stage at the 2013 USGA Education Conference in San Diego, Calif., to talk about alternative water sources for golf course irrigation. And he shined the spotlight most on recycled water.

"Recycled water is a seriously underutilized resource in the golf industry," Whitlark said, citing a 2009 GCSAA survey that found 12 percent of U.S. golf courses are using recycled water for irrigation. "Clearly, there's a huge potential for us to embrace the use of recycled water and reduce our demand on potable water sources."

Formerly known as effluent water, recycled water is treated and cleaned at a sewage treatment plant then pumped through a pipeline to a golf course, where it's used for irrigation.

There are a few reasons why courses don't use recycled water, some of which are viable and some of which aren't, Whitlark said. He rebuffed those who don't use it just because they already have an available water source.

"I'm afraid that doesn't fly," he said. "That's too short-term thinking. We need to be forward thinking. We have to assume that 10, 20, 30 years from now that drinking water source is not going to be available at our golf course."

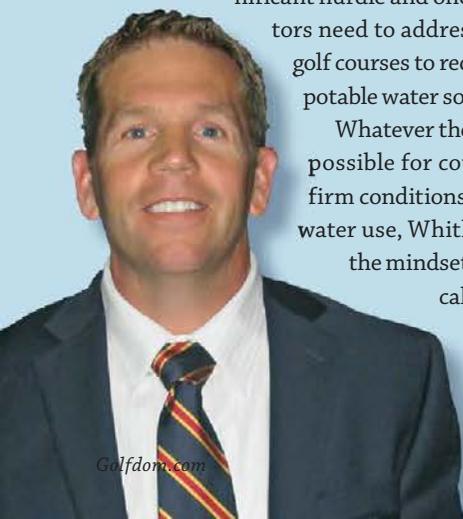
Even the saline content of reclaimed water is a surmountable hurdle, Whitlark said, and one he's seen courses in his Southwest territory overcome.

But that doesn't mean reclaimed water isn't problematic. It can be expensive, Whitlark acknowledged, and some courses — especially older ones — simply don't have access to a recycled water source.

"In many cases it may cost millions of dollars to get that plumbing to their golf course," Whitlark said. "This is a significant hurdle and one I think state legislators need to address if they really want golf courses to reduce their demand on potable water sources."

Whatever the challenges, it's quite possible for courses to have green, firm conditions while reducing their water use, Whitlark asserted. "I'm of the mindset that we can have our cake and eat it too."

Brian Whitlark says act now to save water for the future.



Toro and Rounds 4 Research get exclusive

The Toro Company presented the Environmental Institute for Golf with a check for \$50,000 at the GIS, creating an exclusive partnership with the program. Rounds 4 Research is an industry initiative specifically aimed at increasing funding for turfgrass research.

"Research is the lifeblood of both environmental and economic advancements in turf management," says Darren Redetzke, vice president for Toro's Commercial Business. "Toro's commitment to Rounds 4 Research will complement our past and current support for the EIFG and GCSAA, and aligns with our philosophy that investing in research ultimately improves the customer experience. This is a vital program for all sectors of the golf industry."

Rounds 4 Research allows GCSAA chapters to participate as fundraising partners on a national level. Golf facilities can support the effort by donating rounds of golf that will be auctioned online to generate funds.

As the exclusive partner for Rounds 4 Research, Toro's commitment will allow the EIFG to bolster its research efforts. Since 1988, Toro has invested well over \$1 million to support scientific research, advancement in education, and scholarships for future turfgrass professionals.

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Orange everywhere

On pedi-cabs. On muscle cars parked in a line across from the convention center. On T-shirts being handed out to passers-by.

There was “orange everywhere” at the

GIS, thanks to a guerilla marketing effort made by Jacobsen. The company, debuting six new or enhanced products, including the LF510 fairway mower, was visible all over the Gaslamp Quarter of San Diego.

“Our goal for this year’s Golf Industry Show was to blanket San Diego in Jacobsen orange,” said Chris Vernon, vice president of product management and market-

There were orange Dodge Chargers all over the Gaslamp in San Diego. But we didn’t see Bo or Luke Duke anywhere.

ing for Jacobsen. “Based on the increased booth traffic, heightened interest and level of engagement with customers, our efforts exceeded all expectations.”

Petco Park VIP tour

Though it was off-season for the San Diego Padres, GIS attendees streamed steadily into the ballpark.

They didn’t have club seats, or even bleacher seats. They had something better — field access. As in, all access.

John Deere Golf hosted a VIP night on Feb. 5. And two days later, Luke Yoder, director, field operations, opened the gates for GCSAA members who wanted to learn more about how Yoder and his crew maintained the field.

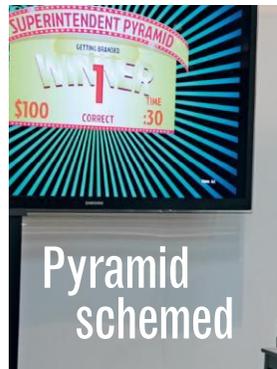
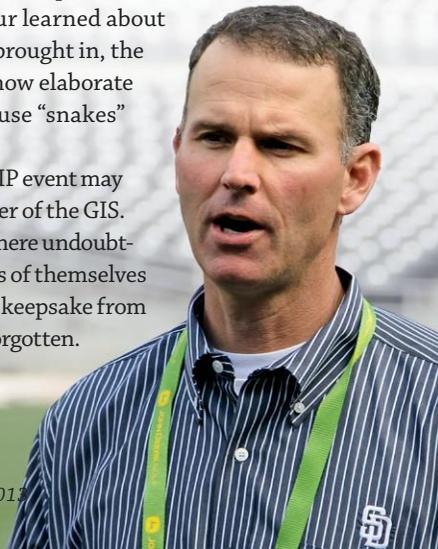
“For the GCSAA we did a couple things, we timed a calcium nitrate application with the rain we had a week ago,” Yoder told visitors to the field. “It’s been fun to get it ready for the big show.”

During the Deere event, visitors were treated to ballpark snacks, live music and plenty of photo ops on the field.

Attendees on Yoder’s tour learned about the outfield fence being brought in, the field’s height of cut and how elaborate mowing patterns can cause “snakes” in the turf.

The John Deere Golf VIP event may have been the show-stealer of the GIS. The hundreds who were there undoubtedly got a few good photos of themselves on the pitcher’s mound, a keepsake from a GIS that won’t soon be forgotten.

Yoder hates snakes. Not reptiles, but field snakes, that create bad hops.



Seth seems to be saying, “Not following” as Craig MacGregor struggles to give clues.



We’re both thrilled and ashamed at the same time.

Golfdom EIC Seth Jones, along with sales manager Craig MacGregor, took the stage at the BASF booth in San Diego to play “Superintendent Pyramid” — based on the TV game show “\$100,000 Pyramid” — to win some money for Disabled American Veterans.

The train derailed when MacGregor failed to get Jones to guess “Taylor Made.” As the clock wound down to zero, Jones suggested MacGregor pass to a new word. “Dude, I already passed to a new word,” MacGregor groaned. Talk about not being on the same page, these guys weren’t even in the same book.

Their grand total of one — *one!* — correct answer got them \$100. But, thanks to BASF’s generosity, an additional \$1,000 was thrown in and the team still got to say they won \$1,100 for charity. Not bad for a parting gift!

PHOTO CREDIT: RYAN BOCKMULLER

UMass tops in Turf Bowl

Students from the University of Massachusetts-Amherst were the grand champs at the 19th Annual GCSAA Collegiate Turf Bowl.

The team was awarded \$4,000 cash and the opportunity to volunteer at The Players Championship this May, courtesy of John Deere Golf.

UMass topped nearly 70 other teams from 35 universities across the country, scoring highest in a written and hands-on competition covering every aspect of turf management.

The Turf Bowl is more than a test of knowledge, however. It also builds teamwork, inspires school spirit, and in the words of test preparer Leah Brilman, “drives what students are doing and where they’re going.”



Identifying insects and plant diseases was just part of the Turf Bowl challenge, which covered everything from business skills to practical knowledge.

// COOL PRODUCTS //

A Rain Bird's eye view

A long-trusted provider of efficient irrigation products, Rain Bird is now offering golf courses yet another environmentally-conscious solution: the WT-M 50 kW wind turbine.

“We know that courses using significant amounts of power to operate irrigation pumps and other electrical fixtures and appliances need a way to reduce their energy costs. By offering irrigation products and wind turbines, Rain Bird will be able to help these golf courses save both water and energy,” says Mason Sorenson, Rain Bird's wind turbine senior sales manager.

Specifically designed for golf course environments, these turbines help courses decrease both their energy costs and their dependence on local utilities. The smallest turbine is similar in size to a mature oak tree, standing approximately 100 feet tall with blades that spin in a 63-foot diameter.

“This is a totally new direction for Rain Bird, but it makes sense from a sustainability standpoint,” says Dave Johnson, Rain Bird's director of corporate marketing. 



Toro partners with GreensPerfection

The Toro Company has entered into an agreement with GreensPerfection to manufacture and market greensmower brushes developed by Rod Lingle, CGCS, for Toro's complete lineup of Greensmaster walk and riding greensmowers. Under this agreement, Toro is the only original equipment manufacturer to offer Lingle's GreensPerfection brushes on its equipment.

The Toro/GreensPerfection brush offerings combine mowing and brushing into one single step. The brushes work in concert with the rotating design, which causes less damage to the turf and provides more lift to the grass blades than traditional groomers, the company says. In addition to lifting leaf blades to a vertical position for a superior cut, it also throws sand and debris to the front of the mower instead of into the reel to help maintain reel sharpness. The brushes leave a dramatic striping pattern for enhanced aesthetics.

“Partnering with Toro just makes sense,” Lingle says. “Our brushes have been used with great success on greens, tees, fairways and approaches. Now, with Toro's manufacturing expertise and market reach, they will be available to many more golf courses that could benefit from the technology.”

PHOTO CREDIT: BETH GERACI

Golfdom

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The beauty is a

BEAST

What does a *Playboy* bunny have in common with golf on TV? Far too much, argues one superintendent.

Television golf is to the game what *Playboy* magazine is to women. Hear me out.

The connection to *Playboy* and TV golf may not seem obvious at first, but the similarities are scary. Let's reflect for a minute on what the core of *Playboy's* business plan is. It takes a natural beauty, puts her through hair and makeup, augments parts of her body, sprays her, then snaps countless pictures of her.

But even with her natural beauty and all of that work, the photos still aren't good enough to be published. *Playboy* asks its Photoshop experts to clean up the images and make this beauty somehow sparkle even more.

Is that process all that different from what the professional tours do to a golf course for

a tournament? They take a nice golf course, spend months (if not years) preparing it for a tournament, bring in dozens of volunteers to help maintain it, haul in plenty of equipment to mow it, and spend thousands of dollars to make it perfect for a five-day event.

But that level of beauty still isn't good enough, so the TV cameras install green filters to make it look even better!

A golf course — just like a 5'10" 23-year-old who enjoys long walks on the beach and likes a good sense of humor — is a living, breathing organism. Living things are subject to weaknesses and illnesses. Golf courses get diseased, are subject to environmental stress, deteriorate from lack of care, and age. They're also each remarkably different from one another, just like people. When golfers compare their



course to the one down the street, it's about as fair a comparison as sizing up Tiger Woods to Seth Jones! This quest for perfection doesn't end following the *Playboy* photo shoot, nor does it end when the final putt is dropped. Young women all over America strive to be as "perfect" as women in magazines. Likewise, the "perfect" conditions that golfers see on TV spark questions about the condition of their home clubs, but without the benefit of an unlimited budget, volunteer force and handy camera filters.

We might like to admire what we see on TV and what we see in the magazine. But let's be clear: What we're seeing isn't perfect and it's far from real.

Keep it real

Don't get me wrong, I understand that professional golf (and golfers) drive interest in our business, generate funds and are a critical piece of our industry. I also understand that competing for a prize in the hundreds of thousands of dollars is much different than partaking in the Friday pot game at the local course.

But there are countless examples of how TV golf has unnecessarily, and often negatively, affected everyday golf. Where did the concept of painting edges on cups come from? It was done so that viewers could better see the hole on TV while the player is putting. Now painting cups has become an everyday standard on clubs all over the country. Why?

Green divot sand was used so divots wouldn't stand out as much in aerial shots on TV. Laying green divot sand is expensive, time consuming and has no impact on playing conditions. Yet how common is green divot sand on courses that don't ever see a single TV camera?

I'm not saying that a desire to improve is a bad thing. My point is, we need to show Mr. Smith that Tiger gets a bad lie in the fairway every now and then. If the course is dried out to make it firmer and faster for the golfers, don't alter the picture on the TV to hide that from the viewers. Here's another suggestion: Within reason, keep the rounds to 4.5 hours. How do we as an industry convince golfers to play in 4 hours when the guys on TV take 6?

There are more questions than answers at this point, but unless we commit to re-educating golfers about expectations, clubs will continue to experience the same self-esteem problems that women do when sizing themselves up to the "perfect female body" in magazines. We don't need to convince our customers that playing on dirt fairways is acceptable, but can we convince them that bunkers don't have to be "consistent" every day?

Let's keep golf real. Let's put the focus back on what the game's all about — having fun. **G**

Our author, a superintendent on the West Coast, asked to remain anonymous. He said it was because he didn't want to damage his career, but we also think part of it was because he didn't want his wife to know he never cancelled that subscription to *Playboy*.

Love it? Hate it? Let us know! Send your feedback to sjones@northcoastmedia.net. If you're OK with us publishing your reaction, state "OK to print" in the email.



Super Science



// IN CONTROL

The experimental site to examine annual bluegrass reduction using flurprimidol, nitrogen regime and a soil surfactant

PURDUE STUDIES ANNUAL BLUEGRASS CONTROL

By William Tudor

Creeping bentgrass greens often are invaded by annual bluegrass. Management tools have potential to minimize annual bluegrass encroachment, but their interactions are not well understood. These include root-absorbed plant growth regulators such as flurprimidol (Cutless), fertility source (46-0-0 vs. 20-20-20), nitrogen application rate (0.15 vs. 0.30 lbs. N/1000 ft²) and soil surfactants.

This three-year field study evaluated the effects of twice monthly applications of the aforementioned products and treatment combinations. Treatments were applied during active growth to a native-soil research green with approximately 30 percent annual bluegrass. The most effective annual bluegrass reductions occurred wherever flurprimidol was applied. When it wasn't applied, a fertilizer source and rate effect were measured. Annual bluegrass decreased roughly 25 percent when 46-0-0 was applied at either rate. By contrast, applying 20-20-20 fertilizer increased annual bluegrass 84 percent at the high application rate.

This study demonstrates the potential for flurprimidol to reduce amounts of annual bluegrass and the potential influence of fertilizer source and rate on annual bluegrass invasion.

William Tudor, an M.S. candidate at Purdue University, can be contacted at wtudor@purdue.edu.

ON THE MOVE

JOSEPH YOUNG, PH.D., JOINS TEXAS TECH FACULTY

Joseph "Joey" Young has joined the faculty at Texas Tech University as an assistant professor of turfgrass science. Young earned his bachelor of science in Golf Course and Sports Turf Management in 2006 and his master of science in Turfgrass Pathology in 2009, both from Mississippi State University. He received his doctorate from the University of Arkansas this past December.



Young's research background is unique, ranging from fungicide resistance evaluations to turfgrass physiology under different mowing, rolling and foot traffic treatments. He plans to focus his research efforts on reducing water use and determining species, cultivars and management practices to maintain quality turfgrass in western Texas.

“DEMAND FROM GOLFERS FOR A MORE COMPETITIVE PLAYING SURFACE, COUPLED WITH MERCURY-BASED PESTICIDE RESTRICTIONS, HAS MADE BENTGRASS PUTTING GREENS IDEAL HABITATS FOR MOSS.”

J. Scott McElroy, Ph.D., and Steven Borst, Ph.D.

(see full story on page 39)

// MOSS ON GREENS

Moss control in creeping bentgrass greens

By J. Scott McElroy, Ph.D., and Steven Borst, Ph.D.

Moss infestations on creeping bentgrass (*Agrostis stolonifera* L.) putting greens have become an increasing problem. Demand from golfers for a more competitive playing surface, coupled with the restriction of mercury-based pesticides, has made bentgrass putting greens ideal habitats for moss (Burnell et al., 2004; Hummel 1994). *Bryum argenteum* (Hedw.) (Silvery-thread moss) is a common moss species found on creeping bentgrass putting greens, however, other species such as *Byrum lisae*, *Amblystegium trichopodium* and *Brachythecium* spp. have also been identified on bentgrass putting greens (Happ 1998). Mosses are a member of the Phylum Bryophyta. They are able to reproduce sexually via spores or from displaced fragments (Nelson 2007; Boesch and Mitkowski 2005; Yelverton 2005). They lack vascular systems and can absorb water and minerals throughout the entire plant (Boesch and Mitkowski 2005). This lack of a vascular system prevents systemic herbicides from translocating throughout the plant, making them useless for control (Yelverton 2005).

Quicksilver (carfentrazone) is a member of the aryl triazolone family of herbicides and is labeled for the control of *Bryum argenteum* (Hedw.) on creeping bentgrass putting greens (Senseman 2007). It was labeled for moss control on creeping bentgrass putting greens in July 2005, and research indicates that carfentrazone provides good to excellent control



Moss growing in the greenhouse as part of the control experiments

of silvery-thread moss over a broad temperature spectrum (Anonymous 2005; Boesch and Mitkowski 2005; Nelson 2007; Settle et al. 2006). Junction (mancozeb + copper hydroxide), a bactericide/fungicide, is also labeled for moss control on bentgrass putting greens (Anonymous 2006). Landschoot et al. (2004) investigated Junction and concluded that summer treatments did

Topdress, topdress, topdress. A light, frequent topdressing program will help reduce moss populations.

not control *Bryum argenteum*, however, fall applications of 5.0 oz./1,000 square feet applied biweekly with 5 applications provided 100 percent moss control. Cook et al. (2002) concluded that five applications of Junction applied at 0.1 to 0.15 lbs. copper/1,000 square feet biweekly controlled *Bryum argenteum* for up to two years. However, copper accumulation in the soil medium could potentially induce iron deficiency in turfgrass plants. (Boesch and Mitkowski 2005; Landschoot et al. 2004) Landschoot et al. (2004) observed creeping bentgrass injury with multiple applications of Junction and attributed it to copper-induced iron chlorosis. *Bryum argenteum* control has also been observed with other chemistries, such as ferrous and ferric sulfates and sodium carbonates. However, control is erratic and appears to be dependent on

Continued on page 40

TABLE

Percent visual control of three moss species following treatment with Quicksilver and Junction

Treatment	Rate [†]	Timing [‡]	<i>Amblystegium serpens</i>		<i>Bryum argenteum</i>		<i>Entodon seductrix</i>	
			14 DAIT [§]	28 DAIT	14 DAIT	28 DAIT	14 DAIT	28 DAIT
%								
Quicksilver	0.05	0	4	7	21	18	6	14
Quicksilver	0.09	0	11	1	22	19	4	8
Quicksilver	0.05	0 fb 14	13	9	19	33	3	14
Quicksilver	0.09	0 fb 14	13	14	24	39	2	15
Junction	0.8	0	3	1	4	8	2	2
Junction	1.6	0	4	1	2	8	4	1
Junction	0.8	0 fb 14	1	0	1	11	1	4
Junction	1.6	0 fb 14	4	1	2	4	1	7
LSD (P= 0.05)			12	8	8	25	5	11

[†] Rate of application is lbs. ai/acre.

[‡] Timing of applications with 0 being the initial application and 14 being 14 days after the initial application.

[§] Days after initial treatment (DAIT)

Continued from page 39 environment (Boesch and Mitkowski 2005; Landschoot et al. 2004; Turgeon and Vargas 2006).

With this wide range of control observed with moss control products, more superintendents have been utilizing Quicksilver for moss control on creeping bentgrass putting greens. Therefore, research was conducted to evaluate Quicksilver efficacy in comparison to Junction on three different moss species that are commonly found on creeping bentgrass putting greens.

EXPERIMENTAL INFORMATION

A replicated greenhouse study was conducted to evaluate Quicksilver and Junction control of *Bryum argenteum*, *Amblystegium serpens* and *Entodon seductrix* in spring and summer. Moss species were collected from Gettysview CC in Knoxville, Tenn., and Gatlinburg CC in Pigeon Forge, Tenn. Moss samples were taxonomically identified and separated. Separate species were vegetatively propagated in 4-inch diameter pots and grown in 80:20 sand to reed sedge peat mix. Plants were overhead irrigated twice daily and

temperatures were maintained at an average of 77 degrees F.

Treatments were applied with a CO₂ pressurized backpack sprayer calibrated at 30 gals./acre. Moss species were evaluated on a 0 (no control) to 100 percent (complete control) scale 3, 7, 14, 21 and 28 days after initial treatment. All herbicide treatments are listed in Table 1. Sequential applications of treatments were made 14 days after initial treatment. The experiment started February 27th and was repeated April 30th.

Treatments included four Quicksilver treatments (0.05, 0.09 and 0.05 followed by (fb) 0.05, 0.9 fb 0.9 lbs. ai/acre) and four Junction treatments (0.8, 1.6, 0.8 fb 0.8, 1.6 fb 1.6 lbs. ai/acre). All sequential applications were made 14 days after the initial application.

Digital images were taken on each moss evaluation date (0, 3, 7, 14, 21 and 28 days after initial treatment) of each pot. Digital images were downloaded to a personal computer and analyzed to determine percent moss cover.

All data were subject to analysis of variance (P = 0.05). Data were analyzed according to the factorial arrangement.

Each moss species was analyzed separately by date of observation. There was no interaction between the two studies, so data from both studies were combined and presented by observation date.

RESULTS

Visual Moss Control Quicksilver did not provide greater than 39 percent control of any moss species throughout this study (See table). Sequential applications of Quicksilver provided better control than single applications, especially with *Amblystegium serpens*. Junction provided poor control of all moss species for the duration of the experiment. The greatest control observed with Junction was 11 percent with *Bryum argenteum*, which was not statistically different from the untreated pots. Landschoot et al. (2004) observed minimal control of *Bryum argenteum* with Junction. This similar result was observed with Junction when applied sequentially and at two different rates with all three species of moss.

Quicksilver is an effective means of *Bryum argenteum* control, however moss regrowth can occur if multiple