RESEARCH NEWSFLASH

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Dr. Henry Wetzel recently joined Jacklin Seed's Research department at their headquarters in Post Falls, ID. Henry has a rich background in turfgrass science and is a specialist in disease management. Henry can be reached at henry.wetzel@simplot.com.

Henry Wetzel, Ph.D. Joins Jacklin Research Department

Q: What attracted you to the position at Jacklin Seed?

Wetzel: I have always had an interest in working for a turfgrass seed company because the foundation of a sound turfgrass management program starts with high quality turfgrass varieties. I felt that my training in turfgrass agronomy and pathology would be a perfect match for the position.

Q: What types of projects are you already involved in at Jacklin Seed?

Wetzel: I recently completed a screen of our creeping bentgrass, perennial ryegrass, and Kentucky bluegrass varieties to salt. I am also working with Dr. Brede on management practices that influence interseeding *Poa annua* putting greens with Alpha and T-1 creeping bentgrasses.

Any more, Jacklin Seed doesn't just sell grass seed – we sell "solutions." — Henry Wetzel, Ph.D.

Q: How did you first get interested in turf research?

Wetzel: My first exposure to turfgrass research was when I was 10 years old. I assisted Dr. Paul Heller and his technician assess the number of white grub larvae per square foot on the fairways at St. David's Golf Club in Wayne, PA. *page 2*

Wetzel, in the usual plant pathologist prone position, looking for disease symptoms on a green in Missoula, MT.

Results of New Hydroponic Salt Study on Tall Fescues

This spring, we initiated a hydroponic salt tolerance study on tall fescue varieties. We used a salt formula recommended by Dr. David Kopec of the University of Arizona which more closely simulates environmental salts, rather than relying on straight NaCl as some researchers do. This salt contains 40% sodium chloride (table salt), 34% calcium chloride (road deicer) and 26% magnesium sulfate (Epsom salt) by weight. We diluted the solution to get the desired electrical conductivity (EC) rating (a lab measure of saltiness).

Twenty-eight days prior to salt testing, 3 replicates of each variety were seeded in 2-inch cells in styrofoam flats at a seeding rate similar to a home lawn seeding. This was not just one plant per cell but many. Plants were maintained and clipped to encourage tillering. A week before emersion in salt solution, the plants were removed from the flats, roots washed, and replanted in fresh potting mix. Then the flat was immersed in fresh water for a week to get acclimated. Seeing no signs of stress on the plants, a week later we changed the solution with salt solution. Each solution test bin had an aquarium stone bubbler to keep the water oxygenated.

Dead (necrotic) tiller counts and turf quality ratings were taken usually on Monday, Wednesday and Friday. At the same time the EC readings were taken using the Spectrum Field Scout Soil & Water EC Meter; measurements were converted to parts per million (ppm) of salt. *Continued page 2*

New researcher, continued

The summer following my sophomore year at Penn State University, I worked at the Landscape Management Research Center under the late Dr. George Hamilton and Dr. Thomas Watschke. I then spent the summer following my junior year working with Michael Soika and Patricia Sanders as a research assistant for the turfgrass pathology field program. My experience with Mike and Pat lead me to pursue a career in turfgrass pathology research.

Q: Where was your schooling?

Wetzel: B.S. Agronomy, The Pennsylvania State University, (Advisor, Dr. Donald Waddington); M.S. Agronomy, The University of Maryland, (Advisor, Dr. Peter H. Dernoeden); and Ph.D. Plant Pathology, Kansas State University, (Advisors Drs. Ned A. Tisserat & Jack Fry).

Q: What other jobs have you held in the turf profession?

Wetzel: I worked at Merion Golf Club (Ardmore, PA) and St. David's G.C. (Wayne, PA) during the summer months of high school. I worked for Shearon Environmental Design (Plymouth Meeting, PA) as part of the full service commercial landscape management team following my freshman year at Penn State. After completing my Ph.D., I spent two years at the North Carolina State University as the Extension Turfgrass Specialist and Assistant Professor in Turfgrass Pathology. Then two years at BASF and just over three years with Syngenta Crop Protection, focusing on the development of fungicides for the turfgrass markets.

Q: How can you help out Jacklin customers?

Wetzel: Any more, Jacklin Seed doesn't just sell grass seed – we sell "solutions." With my background in turfgrass pathology and pesticide development, I can assist customers with diseases and making management recommendations. With my background in general turfgrass agronomy, I can also assist in diagnosing environmental, soil structural and fertility problems that may have led to the decline of a turfgrass area.

Q: Where can customers hear you speaking?

Wetzel: I will be speaking at the Ohio Turfgrass Conference to sod growers December 6th. I'll be speaking on general management topics at the Maryland Turfgrass Conference January 17 & 18. And you can find me at the GIS Show, Anaheim, February 21st, where I will be co-teaching a day-long seminar with Dr. Alan Windham (Univ. Tennessee at Nashville) entitled, *Microscopic identification of turfgrass diseases*.

Q: What is something folks would be surprised to know about Henry?

Wetzel: My hobbies include studying the former days of steam railroading as well as HO scale model railroading. I am also a big fan of traditional jazz and play electric bass guitar. I also enjoy driving air cooled VW's. I am pleased that my wife, Denise, located a 1972 Squareback when she was house hunting in Coeur d' Alene, so now this is the 4th VW that I have owned.

Salt, continued

Results

Tar Heel 2 showed symptoms of salt stress well ahead of anything else in two of its three reps. Both of those reps were nearly dead before other varieties showed symptoms. It wasn't until day 15 in salt solution that the other entries showed signs of stress. By day 25 after being subjected to 7040 ppm salt, Tar Heel 2 had 73% necrotic tillers.

Inferno had 17% and Jaguar 4G had 22% necrosis. These were statistically superior to Tar Heel 2 in salt tolerance. The next best tolerance was demonstrated by Endeavor, Quest, Arid 3, and Pixie.

Statistically, there was no significant difference between Inferno and other entries in turf quality except at day 15. However, that was not the object of the study. Endeavor, Olympic Gold, and Tar Heel 2 have been touted as possessing superior salt tolerance. This data shows that Jacklin varieties are equally as tolerant. Further studies may prove that Jacklin varieties are even better.

Results of hydroponic salt trial of tall fescue varieties at Jacklin Seed, initiated March 13, 2006

	% necrotic (dead) tillers					Quality (1=dead, 9=ideal)				
Entry	Day 15 (6400 ppm)	Day 19 (6336 ppm)	Day21 (6912 ppm)	Day 22 (7040 ppm)	Day 25 (6976 ppm)	Day 15 (6400 ppm)	Day 19 (6336 ppm)	Day21 (6912 ppm)	Day 22 (7040 ppm)	Day 25 (6976 ppm)
Inferno	8	8	10	12	**17**	7.0	5.7	5.7	5.3	5.0
Jaguar 4G	6	7	15	18	**22**	7.3	6.3	6.0	5.3	5.3
Endeavor	7	13	20	23	**37**	6.3	6.0	5.7	5.0	4.7
Quest	9	20	28	29	**39**	5.3	5.3	5.3	5.0	4.7
Arid 3	14	14	20	29	**41**	7.0	6.3	6.0	5.7	4.7
Pixie	9	12	22	26	**41**	7.7	5.7	5.7	5.0	4.7
Olympic Gold	15	27	29	37	**43**	6.0	5.0	4.7	4.0	3.7
Rebel Sentry	9	23	30	41	**45**	5.7	5.0	5.0	4.0	4.0
Stonewall	11	24	36	43	**47**	5.3	4.3	4.3	4.3	4.0
Tar Heel 2	54	69	71	73	**73**	3.7	3.3	3.0	3.0	3.0
LSD.05	27	28	30	34	**38**	2.8	3.0	3.0	2.6	2.3