Common'Tater Interview with:

Don Hamerski

by Tamas Houlihan, Managing Editor

Name: Don Hamerski
Title: President
Farm Name: Hamerski Farms, Inc.
Location: Plover, WI
Current Residence: Plover, WI
Hometown: Plover, WI
Years Farming: Over 50
Crops grown/Acreage: Potatoes - 1000; Sweet Corn - 600; Snap Beans - 500; Field Corn - 200.
Schooling: 1957 Graduate of P.J. Jacobs High School, Stevens Point
Activities/Organizations: WPVGA member; Chairman of the Portage County Drainage Commission; Elks Club member; St. Bronislava Church member; Former Chairman of the Planning & Zoning Committee of the Town of Plover; served on various committees with the Town of Plover from 1980-2006.
Awards/Honors: Outstanding Contribution to Agriculture Award, Portage County Business Council, 1987.
Family: Wife, Mary (40 years); Son, Jon; Daughter, Lori; Five grandchildren.
Hobbies: NASCAR, Bowling, Attending Green Bay Packer Games (season ticket holder), Farming and Farm Equipment.

Hamerski Farms, Inc. has come a long way since Don Hamerski's grandfather, Paul, came to Plover, Wisconsin in 1889 and started farming. According to Don, his grandfather raised "a little bit of everything, cows, potatoes, corn, you name it." Don's father, Joe, took over the farm in 1940 and Don formed a partnership with his father in 1961. Don took over the farm in 1964, and now farms with his son, Jon, and his nephew, Dale O'Brien.

Today, Hamerski Farms raises 1000 acres of fresh market potatoes, primarily Goldrush and Silvertons, with 50 acres of Superiors. The farm also raises 600 acres of sweet corn, 500 acres of snap beans and 200 acres of field corn.

Although he attended a one-room school just down the road from the farm as a youngster, Don is not an old-fashioned farmer. He readily embraces change, and is constantly looking to improve his farming operation with the latest, state-of-the-art technology and equipment. Among his 13 tractors are the ultra-modern John Deere 9520 and 9400 series, equipped with Auto-Farm automatic steering. His irrigation systems are all operated remotely with control panels at the farm's headquarters. He uses an 8-row Spudnik cup potato planter, and has a Lenco Self-Propelled harvester as well as 4-row Double L, to go with several self-unloading bulk boxes. His packing shed utilizes a Lectro-Tek automatic sizer and an x-ray machine for hollow heart detection.

But the latest "toy" at Hamerski Farms is the first of its kind in Wisconsin (as well as the entire Midwest): a Fuji-Ace EC-201 Robotic Palletizer, which is used in conjunction with a Volmpack Auto-Baler in the farm's packing shed. This high-speed, technologically advanced robot can handle as much as 20 bags per minute and can lift up to 400 pounds.

In the following interview, Hamerski talks about how he's using the robotic palletizer on his farm and where he sees potato packaging headed in the future.

What are your plans for the Fuji Ace Robotic Palletizer?

We're using it to place baler bags on pallets right now. We're using it on bales that contain 10 five-pound bags of potatoes, five 10-pound bags, six eight-pound bags and four 15-pound bags.

How many hours a day to you plan to use it (and which months)?

We're using it 11 hours a day, five days a week. We'll be using it in our potato packaging operation which runs from August through March.

What made you decide to purchase it?

We supply a lot of potatoes to Wal-Mart, and they now want 100% of their potatoes in bales. So I decided to go with the Volmpack automatic baler machine and the robot. It has really saved a lot of

Don Hamerski's son, Jon, is pictured in the farm's packing shed.

labor—we can run our shed with a lot fewer people. And labor is probably the biggest problem we have in farming. This robot never calls in sick and it's here before I am in the morning. It never complains about how many hours it has to work, or asks when it's going to be done. It never goes to the bathroom or takes a break. It never shows up with a hangover or has to leave work early. It's never had an injury claim. I've never paid workman's compensation or unemployment to it. And it never gets tired. It just sits here and does its work. We can't find people who will bale and stack potatoes all day long. People just don't want to do it. In the short time we've had it (just over two weeks at the time of this interview), we've put up over 35,000 bales of potatoes.

Also, I've always worked with Volm Companies of Antigo and they're a dealer for the robot. They've always provided me with good equipment and excellent service.

How many people can it replace?

The automatic baler and the robot are replacing about eight to ten people in our packing shed. And when you calculate rough numbers, ten people at $10/hour, 50 hours per week, we're saving $5,000 a week on labor costs. So if we run our packing shed 30 weeks a year, we're saving $150,000 a year. We have right around $300,000 invested in the automatic baler and the robot, so we figure to have them paid for within two years. Add in the reliability and the ease of the machines, and to me it's a good investment.

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How is the robotic palletizer working thus far?

It does an excellent job. It piles every pallet identically so they fit much nicer into the trucks. The pallets are so evenly stacked we don't need to shrink-wrap them. Right now, on a scale of 1-10, it's probably a 9. We're working on a couple of minor issues, but once we tweak them, I'd say it's going to be an 11. You have to remember that this is the first one in the world that is set up the way we set it up. We changed the original design and customized it so it takes up half the space it normally would. We presented some major challenges to the guys at the Volm Companies, but Tom Novak, Dave Manney and Scott Erickson have worked hard and have done an outstanding job. You always have some bugs to work out of new machinery, especially when you customize it. But I have full confidence that these machines will soon be working perfectly.

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What are some of the challenges involved in getting the robot up and running smoothly?

First off, you have to have six inches of solid concrete to mount the base of the robot. When the arm pivots and lifts objects, there are up to two tons of twisting force on the base of the unit. You also have to have an area free of overhead objects so the arm won't hit them. You need at least ten feet of height clearance. You also need a rotating radius of 20 feet around the robot so it can work without hitting anything. We also customized the hand (or claw) of the robot to perfectly fit the 50-pound paper bag bales that we use. It also works well with cartons. The final issues we're working on involve computer software and things like sensors so the arm knows when to pick up the bales.

"Within two years I think every packing shed will have one or two robots. Automatic graders are coming too."

Don Hamerski is shown with his robotic palletizer that he's using 11 hours a day, five days a week.

The Fuji-Ace Robotic Palletizer lifts a 50-pound bale of potatoes and stacks it on a pallet at Hamerski Farms, Inc., Plover.

If anyone wants to see how the robot is working on our farm, they can feel free to give me a call. I'd be happy to have them come and take a look.

How has potato packaging changed in the last 10-15 years and what does the future hold?

We're seeing more and more high-speed potato packaging machines—everything is automated. We used to see a lot more bigger-volume packages, but now we're seeing more and more demand for consumer-size packs. Five-pound bags are very popular now. Also, the bags themselves have more ventilation in them to allow the potatoes to breathe better and last longer with better quality. As for the future, I really believe these robots are going to revolutionize the potato industry. Within two years I think every packing shed will have one or two robots. Automatic graders are coming too. They're going to be able to not only size the potatoes, but they'll eliminate cull potatoes, green potatoes, rocks, dirt, etc. They're currently in development and we're looking at them. I believe you have to take risks and you have to have a vision for the future. If you don't move forward, you'll get left behind. ◆

The Badger Beat

Zebra Chip: A Serious Threat to Potato Production

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Pest management constraints to fruit and vegetable production in the U.S. are very dynamic and are often seen as an ever increasing threat to both processing and fresh market production. In particular, we have observed significant increases in the incidence of plant pathogenic diseases, many of which are transmitted by insects. Plant pathologists have categorized these vector-borne pathogens into four primary categories. First are pathogens documented as '*new*,' or those detected within the last five years. Next are pathogens listed as '*emerging*' where the frequency of occurrence or incidence has increased within the past 20 years. Pathogens which have either acquired resistance to chemical control or become prevalent as a result of changes in management or selected cultivars which previously controlled infections are termed as '*re-emerging*.' And finally, pathogens not previously reported or considered very limited in their distribution in the U.S. are categorized as '*threatening*.'

In Wisconsin, we unfortunately have no shortage of insect transmitted disease problems classified in the aforementioned categories. The aphid-borne, non-persistently transmitted Cucumber mosaic virus (CMV) is truly an emerging viral disease which annually impacts snap beans, pumpkins, peppers, and cucumbers. While this virus had previously been noted to occur in the environment, its prevalence was considered only intermittent and infrequent. Beginning in 2000, significant increases in CMV infections arose coincident with the first detection of soybean aphid (*Aphis glycines* Matsumura), also first documented in Wisconsin in July of 2000. Populations of this insect rapidly dispersed across several North Central states and have infested millions of soybean acres in the region.

In addition, our ability to certify virus-free seed potato crops in Wisconsin continues to be a significant challenge in select varieties. In particular, PVY has re-emerged as a serious, insect-transmitted disease problem largely as a result of recently introduced and widely planted cultivars including Russet Norkotah, Shepody and Silverton Russet, which express mild or no symptoms when infected with PVY. Furthermore, recent investigations into the diversity of PVY isolates prevalent in these production areas have revealed a significant increase in the proportion of PVY_N and PVY_O recombinants ($PVY_{N:O}$). The lack of symptoms often associated with these cultivars and recombinant viruses prevents accurate field identification and rouging of infected plants resulting in higher levels of virus inoculum and greater disease pressure.

In recent years, a new disease condition known as Zebra Chip (ZC) (Texas Defect or Dark Chip) of potato has become prevalent as a serious threat to potato production in areas of Mexico and the southern US (TX, NM, CA). Symptoms of the disease first appear on leaves of affected plants as leaf cupping with general chlorosis, and leaf purpling, somewhat resembling purple top of potato. Later in disease development, more severe symptoms become apparent including vascular wilt, leaf necrosis, aerial tubers, loss of apical dominance, and vascular necrosis (**Fig. 1**). While ZC has been present in the mid-South and portions of Latin America since 1995, the incidence and distribution of the disease appears to have recently increased

Figure 1.

as a significant disease threat in numerous locations throughout many potato producing regions in the southwestern US (NM & CA) and in the central states (CO, KS, & NE). In particular, notable increases in the proportion of ZC symptomatic tubers were first observed in TX in 2000-01 with a subsequent decline in total defects from 2002-04. However, in the 2005-06 growing seasons, the occurrence of ZC symptoms has again increased in these and other areas in the southern and central US.

On July 11 of this year, the Animal and Plant Health Inspection Service (APHIS) confirmed the presence and identity of ZC as a new bacteria-like organism (BLO) and it has been termed, *Candidatus* Liberibacter spp. in potato tubers from Texas field samples. Using a polymerase chain reaction (PCR) amplification combined with sequencing of the PCR product, APHIS researchers determined that samples of ZC-affected Russet Norkotah tubers tested positive for DNA sequences from *Ca*. Liberibacter spp. At the present time, this species is not described in the current literature and appears to be different from a *Ca*. Liberibacter spp. which causes citrus

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