

People & Places

Invention cleans air in spud cellars

Garry Isaacs finds a method to add humidity, take particles out of air

By JOHN O'CONNELL
Capital Press

CHUBBUCK, Idaho — Reed Searle says he's found a cost-effective way to rid potatoes in storage of diseases without using additional chemicals.

The Shelley, Idaho, farmer has installed machines called humigators — invented by businessman Garry Isaacs and manufactured in a small, local shop — in all seven of his potato cellars.

Isaacs' invention continuously recirculates the air, removing pathogens and particulates while boosting humidity, which also reduces losses to tuber shrinkage.

Searle, who raises red and yellow potatoes, once struggled to protect spuds in long-term storage from silver scurf and black dot.

"Since I've used (humigation), I have not had that problem," Searle said. "This is about the only thing that really gives you season-long control."

Invented in 1985

Isaacs, founder of Isaacs Hydropermutation Technologies, developed the prototype of his invention in 1985, initially planning to use it for industrial emissions control.

"I put it on a (power plant) smoke stack, and it turned the water into ink, which indicated I was onto something," said Isaacs, a self-educated inventor who previously built and managed sawmills.

For several years, he licensed humigation to a Pennsylvania hazardous waste incineration business, which



John O'Connell/Capital Press

Garry Isaacs stands inside his Chubbuck, Idaho, shop with a humigation machine. The machine, popular in potato storages, rids the air of particulates while increasing humidity.

never took it to market. He also entered discussions with a Missouri coal-fired power plant.

Isaacs, who holds two patents on the technology, ultimately found his niche within the potato industry.

Growing market

His son, Blake Isaacs, said about 50 units have been sold to potato growers in seven states and two Canadian provinces. The machines sell for \$9,000 to \$25,000 each, depending on the size. A couple of carrot growers have expressed interest in humigation recently, and Blake sees potential markets within greenhouses and urban agriculture. Humigation has also proven effective at removing powdery mildew spores in testing at a Colorado marijuana grow house.

Western Innovator

Garry Isaacs

Age: 75

Education: Self-educated

Business: Isaacs Hydropermutation Technologies in Chubbuck, Idaho

Hometown: Pocatello, Idaho

Innovation: Humigation machines that remove pathogens and particulates from the air while adding humidity

Family: Wife, Linda, and children: Brandon, Blake, Darren, Heath, Merritt, Kyle, Seve and Ben



"Almost two years ago, Dad approached me about joining the business and taking it over because he felt like it had a lot of potential to grow," said Blake, an electrical engineer who worked for several years in consumer electronics but now holds a controlling interest in the business his father started. "I agreed with him that the

technology has huge potential in multiple markets — certainly starting with agriculture."

How it works

Isaacs explained his invention mimics the natural process by which rain droplets form, cleaning the atmosphere of spores, bacteria and particulates.

His machine uses an impeller to suck in the air, blending it with fine water droplets. He relies on the Venturi effect — a reduction in fluid pressure that occurs when liquid flows through a pipe with a constriction — to form several low-pressure zones where water vapor can merge with particles.

The moisture accumulates in a tank for disposal, while the remaining humidified air is cleaned of 99.65 percent of particulates down to 0.4 microns.

They plan to market their invention at trade shows beginning next year.

The company and Idaho State University microbiologist Pete Sheridan have applied for an Idaho Global Entrepreneurial Mission grant to further research the efficacy of humigation.

Washington rancher Richard 'Dick' Yoder dies

March 16, 1934-Oct. 29, 2016

Dick Yoder, 82, of Custer, Wash., passed away on Saturday, Oct. 29, 2016. Dick was born in Los Angeles County, Calif., on March 16, 1934, to Lester and Vivian (Strain) Yoder.

After graduating from Hemet High School in Hemet, Calif., he joined the Navy in 1952.

He married Karen Bounds in 1956 in Hemet, Calif. He was a salesman for Ford Tractor in Hemet and later, after moving his parents to Custer, Wash., he and Karen



decided to move their family to Blaine, Wash., where he worked for Intalco.

Dick and Karen started and continued to dairy and row crop farm for many years

while raising their family.

Over time Dick, Karen, and son Dale started a small Registered Polled Hereford ranch, as that herd got bigger the dairy herd got smaller and smaller until the dairy cows were gone.

Dick was a member of the American Polled Hereford Association, American Hereford Association, Whatcom County Agricultural Advisory Committee, Whatcom Conservation District board, Whatcom County Cattlemen's Association, and the Washington State

Cattlemen's Association.

Dick is preceded in death by parents, Lester and Vivian Yoder; brother, Charles Yoder; and daughter, Sharin Yoder.

Dick is survived by his wife of 60 years, Karen Yoder; children, Alan (Joan) Yoder, Renetta (Patrick) Pollock, Dale (Tammy) Yoder, Deborah (Jay) Johnson, and Nadine Weatherby; grandchildren, Jeff Yoder, Chris Yoder, Victoria Pollock, Cabel Pollock, Katie Yoder, Clark Yoder, and Megan Weatherby; and sister, Betty (George)

Borlace. He will be missed by his entire family and many friends.

A celebration of his life was planned for Friday, Nov. 11, at 3 p.m. at Hope Lutheran Church, 900 East Grover St., Lynden, Wash.

In lieu of flowers, if desired, please make donations in his honor to the Washington Cattlemen's Endowment Fund, P.O. Box 96, Ellensburg, WA 98926.

Please share memories at www.molesfarewelltributes.com

Calendar

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To submit an event go to the Community Events calendar on the home page of our website at www.capitalpress.com and click on "Submit an Event." Calendar items can also be mailed to Capital Press, 1400 Broadway St. NE, Salem, OR 97301.

Through Saturday

Nov. 12
Tri-State Grain Growers Convention, Coeur d'Alene Resort, 100 Sunrise Blvd., Coeur d'Alene, Idaho. www.wawg.org/convention/

Friday-Sunday

Nov. 11-13
Tilth Conference, Wenatchee, Wash., Convention Center, 121 N. Wenatchee Ave. The Tilth Conference brings together hundreds of farmers, producers, researchers and food system professionals to network and learn. This is a great way to meet others in your field, enjoy locally sourced meals and participate in fun evening events around Wenatchee. <http://www.seattletilth.org/>

Friday, Nov. 11

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. Fort Jones Library, 11960 East St., Fort Jones, Calif. The essential relationship between stockmanship and stewardship will steer discussions about people, wolves and livestock in Northern California and Southern Oregon. Sponsored by the California Wolf Center.

Saturday, Nov. 12

Molalla FFA Alumni Annual Auction and Dinner. 4:30-9 p.m. Molalla High School, 357 Frances St., Molalla, Ore. The silent auction begins at 4:30 p.m. It will be followed at 6 with a full tri-tip dinner and an oral auction at 7 p.m. Tickets are \$20. 503-651-3302

California Women for Ag Dinner, 5-8 p.m. On Broadway with Two Guys, 153 S. Broadway, Turlock, Calif. Keynote speakers will be John Duarte of Duarte's Nursery, and the Pacific Legal Foundation. (916) 441-2910 or stacewa@gmail.com

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. Holiday Inn Express, 707 Montague Road, Yreka, Calif. Sponsored by the California Wolf Center.

Monday, Nov. 14

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. Holiday Inn Express, 565 Clover Lane, Ashland, Ore. Sponsored by the California Wolf Center.

Tuesday, Nov. 15

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. Bonanza, Ore., Community Center. Sponsored by the California Wolf Center.

Tuesday-Wednesday

Nov. 15-16
North State Precision Ag Expo and Farm Business Forum. 8 a.m.-6 p.m. Glenn County Fairgrounds, 221 E Yolo St., Orland, Calif. Sem-

inars will focus on such topics as the best way to use soil monitors, drones for spraying and other applications and agriculture-related phone and tablet applications. Topics at the business forum will include succession planning, family consulting, financial planning, leadership development and creating a successful business culture. <http://bit.ly/2fkj0A>

Tuesday-Thursday

Nov. 15-17
Willamette Valley Ag Expo. 9 a.m.-6 p.m. Tuesday, 10 a.m.-9 p.m. Wednesday, 10 a.m.-5 p.m. Thursday. Linn County Fair and Expo Center, 3700 Knox Butte Road E, Albany, Ore. <http://wvaexpo.com>

2016 Washington Farm Bureau 96th Annual Meeting & Trade Show, Yakima, Wash., Convention Center. <http://wsfb.com/2016-wfb-96th-annual-meeting-trade-show/>

Wednesday, Nov. 16

Yamhill Soil & Water Conservation District annual meeting. 5:30-9 p.m. McMinnville Community Center, 600 NE Evans St., McMinnville, Ore. The annual meeting will include the annual report, honor community members for their accomplishments and include a silent auction. www.yamhillswcd.org

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. McCloud River Mercantile Hotel, 241 Main St., McCloud, Calif. Sponsored by the California Wolf Center.

Wednesday-Thursday

Nov. 16-17
Pacific Northwest Vegetable Association meeting. Three Rivers Convention Center, 7016 W Grandridge Blvd., Kennewick, Wash. Sessions on onions, vegetables, pest management and organic will be featured. The keynote speaker will be Eric Olson on the "Current State of Beekeeping." www.pnva.org

Oregon Water Law Conference, 8 a.m.-5 p.m., Downtown Portland Embassy Suites. www.theseminar-group.net

Thursday, Nov. 17

Oregon Tall Fescue Commission meeting. 6-8 p.m. Cascade Grill restaurant, 110 Opal St. NE, Albany, Ore. www.oregontallfescue.org

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. Heritage Room, Inter-Mountain Fair, 44218 A St., McArthur, Calif. Sponsored by the California Wolf Center.

Thursday-Saturday

Nov. 17-19
West Central States Wool Growers Convention. Sun Valley Lodge, Sun Valley, Idaho. The annual Wool Growers convention for Idaho, Nevada, Utah and Wyoming.

Friday, Nov. 18

Denim and Diamonds Dinner and Auction, 5-10 p.m. Oregon Convention Center, 777 NE Martin Luther King Jr. Blvd., Portland.

Oregon Aglink presents its annual celebration of agriculture. www.aglink.org

Wolves, Livestock and People meeting. 9 a.m.-4 p.m. Serpilio Hall, Plumas-Sierra County Fair, 204 Fairground Road, Quincy, Calif. Sponsored by the California Wolf Center.

Saturday, Nov. 19

Forest Insect & Disease Field Day. 8 a.m.-5 p.m. North Idaho College Parking Lot "A" near Hubbard Street, Coeur d'Alene, Idaho. Participants will get first-hand exposure to a wide range of organisms that impair the growth of trees and forests in North Idaho. Those wishing to participate should pre-register at the University of Idaho Extension Office in Kootenai County by Friday, Nov. 11. Cost: \$15. <http://www.uidaho.edu/extension/forestry>

Friday-Saturday

Nov. 25-26
Open Alpaca Barn. 10 a.m.-4 p.m. Alpacas of Oregon, 21345 SW Aebischer Road, Sherwood. In Washington County's wine country, just off Highway 99. Meet the summer's alpaca babies and their mothers. www.easygofarm.net/AOThanksgiving

Tuesday, Nov. 29

Hearing on proposed changes to agricultural worker protection standards. 11 a.m.-1 p.m. Pine Grove Grange, 2900 Van Dorn Drive, Hood River, Ore. www.oro-sha.org

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To Reach Us

Toll free 800-882-6789
Main line 503-364-4431
Fax 503-370-4383
Advertising Fax 503-364-2692

News Staff

N. California
Tim Hearden 530-605-3072
E Idaho
John O'Connell 208-421-4347

Idaho
Carol Ryan Dumas 208-860-3898

Boise
Sean Ellis 208-914-8264

Central Washington
Dan Wheat 509-699-9099

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Matthew Weaver 509-688-9923

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