

Exhibit unearths mysteries of soil

Smithsonian exhibit conveys importance of humble dirt to public

By Matthew Weaver, Feb. 24, 2012

SPOKANE, Wash. -- Ann Kennedy couldn't help but celebrate when she first saw the new Smithsonian exhibit, "Dig It! The Secrets of Soil."

Kennedy, a USDA Agricultural Research Service soil scientist, picked up Spokane Conservation District operations director Vicki Carter and swung her around when she saw the exhibit for the first time.

"Soil is so much a part of our life -- soils are alive, we build homes out of soil, on soil, everything we eat comes from soil," Kennedy said. "All this stuff about soils that we've been preaching about forever is on all these beautiful pictures and beautiful examples. It's so neat to see it all out for everybody to see."

Sponsors hope the exhibit will generate as much excitement for the thousands of visitors who will see it in coming months. The exhibit, from the Smithsonian Institution's National Museum of Natural History, opened this month at the Northwest Museum of Arts and Culture in Spokane and runs through September.

Lynn Bahrych, project manager for the exhibit and Washington State Conservation commissioner, pushed for the exhibit to come to Spokane because of the importance of agriculture to the state. "We have soils here that are literally more valuable than gold," she said. "You can live without oil, gold or diamonds, but you can't live without soil. This is the lifeblood of this region."

Kennedy believes today's society doesn't understand soil. The more agriculture can help the public understand science and nutrition, and soil science in particular, the more the public can make better decisions about farm-related issues, she said. Even on the exhibit's first day, that message hit home.

Ryan Parriman, 8, worked as a "soil ambassador" on opening day, taking participants on a guided tour of the display. "I never cared about soil until I heard about this," Parriman said. "I just know a lot about it now because of this exhibit. Without soil, we couldn't live."

Is it important for farmers? "It is, because they plant stuff and we eat that stuff," Parriman said.

Bahrych hopes the exhibit helps the public appreciate good stewardship. "I think it will make people appreciate more the good stewardship of our farming and ranching community," she said. "On the whole, they are marvelous stewards of their land; they don't want to diminish the value of their soil, they work hard to keep it healthy."

Some old-fashioned practices deplete the soil, Bahrych said. "As generations of new farmers understand those don't work in the long-run, they're changing over to sustainable practices," she said. "We want to celebrate the farmers and ranchers that are doing it right already, and we also want to help and inspire the next generation of farmers."

Nearly 5,000 students are booked to attend the exhibit on school field trips, with a waiting list for more. "We are reimbursing the schools, because they have no budgets for the transportation costs," Bahrych said. "Every teacher who wants to bring his or her students, we want to make it possible."

Cara Spink, a representative of the museum, said each school group costs \$80 per 30 students. The exhibit can accommodate two groups per day. The museum is paid directly from a grant set up through the conservation district.

Bahrych expects at least 50,000 people to attend the exhibit while it is in Spokane. It was so popular in Washington, D.C., it was open for a year and a half, she said. Patrick Megonigal, senior scientist for the Smithsonian Environmental Research Center in Edgewater, Md., is curator and lead scientist for the exhibit. He said 2 million people viewed the exhibit during its initial run.

Megonigal believes the exhibit's popularity is due to the public's limited experience with soil. "(The goal was) for people to react to the word 'soil,' the way they do to the words 'air' and 'water,'" he said. "Soil is one of the three fundamental features of life on earth, and no matter how much they think they understand about it, they are going to be surprised about the vastness of it."

Agriculture serves as one of many ecosystems supported by soil, Megonigal said. The exhibit emphasizes its importance in feeding the world and that the number of people to be fed is rapidly growing. "We are facing a huge challenge to feed the world, but secondly, to do it in an environmentally sustainable way," Megonigal said.

One of several interactive kiosks in the exhibit enables students to play the role of a farmer, making decisions about whether to till or add fertilizer and which crops to plant. "Depending on their choices, they may find out they made a lot of money but damaged the environment, or they may find they've done very well for the environment, but not made enough money to stay in business," Megonigal said. "We've tried to be balanced and recognize both the economic side of farming practices and the environmental sustainability side."

Transporting the exhibit to Spokane cost \$20,000, provided by the Soil Science Society of America. Installation costs were covered by the Spokane Conservation District. State, local and private sources raised \$68,000 to support public education. The Washington State Conservation Commission donated to pay for Bahrych's work as a full-time exhibit manager for the duration of the exhibit in Spokane.

Susan Schultz, stewardship and education project manager for the National Association of Conservation Districts, based in Greenfield, Ind., developed the educational material in cooperation with the Smithsonian and the Soil Science Society of America.

The goals were to build students' basic awareness of the importance of soil and how it affects their lives each day, Schultz said. There's even a soil component to cell phones, she said, noting the metallic ore coltan is mined from soil and refined into a heat-resistant powder that helps hold the electric charge in battery-powered electronic devices.

Online: Dig It!: <http://forces.si.edu/soils/>

Northwest Museum of Arts and Culture: www.northwestmuseum.org

Dig It! The Secrets of Soil is an exhibit from the Smithsonian's National Museum of Natural History. It runs through Sept. 22 at the Northwest Museum of Arts and Culture in Spokane.

The museum is at 2316 W. First Ave., in Spokane.