FRED COLGAN TRAINS COOKS AT DISPLACED PERSON CAMPS IN DARFUR ON HOW TO USE ISS STOVES

PHOTO COURTESY ISS

PROBLEM-SOLVING STOVES

Cottage Grove sends stoves to the world

BY TED SHORACK

On Colgan's Island there are roses and a vegetable garden to attend to. There's music blaring from a stereo in a workshop barn. There's a gang of chickens and a tail-wagging black Labrador. There's a former slaughterhouse and there's a bright blue cottage. At the moment, this equally peaceful and industrious setting is the scene of many ongoing changes, and they all have to do with stoves.

The four-acre lot is tucked between a rusted railroad trestle and the Coast Fork Willamette River just north of Cottage Grove on Highway 99, and it has been the home of Aprovecho Research Center (ARC) since 2004. Fred Colgan has been warmly calling it his "island" since he moved here from California to retire with his wife. He spent years as a building contractor, but he also invested his time as a community organizer with a passion for social justice. Instead of retiring to fish and golf, he was excited that a nonprofit organization was going to build and test cooking stoves on his property after mutual acquaintances put them in touch. Colgan will now be the director of a split-off organization: Institutional Stove Solutions (ISS).

ARC is part of the Willamette Valley-based nonprofit known simply as Aprovecho (meaning to use, utilize and embrace in Spanish), which specializes in developing sustainable agricultural practices. For 29 years, an enclosed green stove with an aluminum chimney has been the center's weapon of choice for combating pollution and health problems commonly attributed to use of open-fire cooking stoves in the developing world. Designed by ARC engineer Larry Winiarski, its cylindrical shape and internal combustion make its "rocket-stove" designation more than apt. A 60-liter stainless steel pot fits snugly in the top, and the heat down below is insulated, making the shell cool to the touch. Wood is fed through a slot at the bottom. On July 1, manufacturing this stove became the objective of ISS.

STOVES FOR THE WORLD

On a back wall of the main office, the shelves are filled with stoves from around the world — both of clay and of metal. Since its infancy, ARC has worked at testing stoves from around the world in an effort to make them more fuel-efficient. According to Colgan, separating testing from manufacturing is a reason for making ISS and ARC two different organizations in an effort to promote credibility and neutrality.

Colgan has a large gray mustache, a short and sturdy build and is friendlier than his gruff-sounding voice would lead you to believe. On a tour through the testing-center, he points out new innovations that will come to fruition with ISS. One of them is a stainless steel pot with a pressure gauge sprouting from the top. He places it inside the green stove shell. "It's like a sophisticated pressure cooker," he says. "It forces the steam through everything that's in there."

This type of sterilization pot is known in the medical world as an autoclave, which forces heat in the form of steam through enclosed items. There are trials under way to implement the sterilization of medical equipment and waste, and a system to purify water by using the stoves' capability to generate heat from within at up to 2,000 degrees Fahrenheit.

Autoclaves are already used in hospitals in the developing world. Colgan believes Aprovecho/ISS stove's autoclave capability will be utilized in areas where there is spotty electricity as a backup. He sees it being used predominantly in rural clinics that have little or no access to electrical outlets. "This is a really inexpensive, super-efficient way to bring medical-grade sterilization to hospitals and clinics," he says.

If sterilization of equipment is an issue that needs rectifying in the developing world, then so is medical waste. ISS expects the stove's autoclave to be used in the same capacity before disposing of bloody bandages, culture dishes, latex gloves and, of course, needles, since HIV is prevalent in many developing countries. "Stuff coming out of hospitals isn't being properly treated," Colgan says of medical waste. "It goes into the waste stream." He says that if the waste is burned in the open, it can release chemicals such as dioxin. According to the World Health Organization, exposure to such chemical compounds is "highly toxic and can cause reproductive and developmental problems, damage the immune system, interfere with hormones and also cause cancer." The stove's autoclave would apply hot steam to the waste in order to thoroughly sterilize it. "If they run it through an autoclave first it's completely sterile," Colgan says, "then it doesn't matter how they dispose of it."

FRED COLGAN AND AN ISS STOVE

PHOTO BY TODD COOPER