

“It was during the work with kokako that I became interested in the development of bait stations for predator control,” he says. “I saw lots of bait wasted due to poorly designed stations, where rain would turn baits into unusable green porridge. It seemed to me well worth putting some effort into improving bait stations and reducing that waste.”

Once he'd decided there had to be a better way, the rookie inventor started thinking and constructing bait stations in his mind. They needed to be stackable, rain-proof, easy to fill and with a lid that possums couldn't remove.

Late one night, lying in bed he thought: “Why not turn the bait station upside down and have the opening at the bottom?”

Susan, and daughters Catherine and Sarah, woke up to find all the lights on in the house, with loud noises coming from downstairs. Fearing burglars, they instead found Phil working on his first bait station.

“He'd worked on it all night and by 7am he was ready to show me his new invention,” Susan recalls. “I was speechless – it was an odd-looking, tin contraption held together with pop rivets.”

The Philproof bait station had been born, but hundreds of hours were to pass before it reached maturity. “I always seemed to be sketching angles on paper, making prototypes (more than 70), field testing them and trying to choose the best models. The next stage was making a wooden mould, sanding it, painting it and sanding it again until I had something smooth enough to set a fibreglass mould over the top,” Phil says.

It takes a long time to develop a good idea, he explains, because while you can picture it in your mind, you have to build it and test it in field conditions to see if it really works. While perfecting the design, Phil would wake up at least five times a night and scratch ideas onto a pad kept beside the bed. So that he wouldn't wake Susan, he slept with a headlamp strapped to his head.

“The only time I got to talk with him was in his sleep, and then all he would talk about was his inventions,” Susan reveals.

For the family, it was a long 18 months as Phil, still working fulltime for DoC during the day, became absorbed by the inventing bug. “Once you start designing things you can't stop,” he says. “I got so involved in the whole process I almost missed the birth of our third daughter.” Baby Laura arrived while Phil was displaying and winning an award for his bait stations at the Mystery Creek Fieldays.

The inventions also took over the



Family production line: Phil, Susan, Sarah and Catherine trim the edges of the Philproof bait stations.

Thomson family's basement. “I can't get the car in the garage any more and the farm shed is pretty full too. And I have to use a three-metre pole to reach the light switch in the basement.”

Turning the fibreglass moulds into aluminium moulds and then making plastic bait stations became the expensive part of the Philproof production line. Once the plastic bait stations came on stream, Phil and Susan's two eldest daughters became adept with potato peelers, tidying up the edges.

“Catherine and Sarah would charge me 10 cents a station and they can clean 100 stations in half a day. The kids have a mercenary streak which is eating into my profit margins!”

While Phil had all the family working hard, he had an option of selling out to a bigger firm capable of taking over all the production hassles and selling the stations at a higher price. But he wanted to make his bait station the best one available at the lowest possible price. A conservationist in theory and practice, Phil makes the injection-moulded bait stations with raw materials from recycled plastic milk bottles. He has now produced 40,000 stations – the equivalent of 1.2 million milk bottles and enough to protect 50,000 hectares of forest.

Phil hopes to make ground control of possums more practical and cost effective for farmers, regional councils and DoC. He says the bait stations are versatile and can use any type of bait from flour/cyanide mixes, to wax blocks or cereal baits. As well as possums, they can be used against rats, rabbits and wallabies.

Phil also hopes groups of keen conservationists will adopt local reserves and, using his “recipe for restoration”, get rid of resident rats and possums. “The

improvement in forest health is almost immediate and in a year or two, an increase in the numbers of native birds is also obvious.”

Phil says several conservation groups in the Waikato have combined with local farmers and deerstalkers to rid local reserves of rats and possums. “One group on Mt Kakepuku has achieved a 92 per cent reduction in possum numbers and fresh, new forest growth is everywhere.”

Phil has sold several thousand stations and has had no complaints. He says people just keep coming back for more. “My most successful selling tactic is to jump on the bait station to show it is indestructible. I seem to have a well-known and deadly reputation for breaking equipment, so “Philproof” stations are well-named.”

With the success of Phil's bait stations, has come the desire to continue inventing. All his inventions aim to protect native wildlife and on his drawing board lie ideas for possum trap sets (to prevent kiwi injuries), new rat-monitoring tunnels and stackable stoat tunnels – all aimed at reducing the number of wildlife predators. His enthusiasm is as strong now as it was years ago when he met his first kea.

And as he talks enthusiastically about his ideas, his hand reaches for a pen and another piece of paper. ♦

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