

The sheep, the scientist & the entrepreneur

How nature, AgResearch and two determined business people created one of the world's most exciting new fabrics.

Where do you think the world's most innovative fabrics come from? Milan? Manchester? Paris? How about Otago?

Gimono is an innovative, Dunedin-based company founded by judo black belt (and instructor) Grant Scott and business partner Lavinia Calvert. Five years ago, sick of sweltering inside hot, heavy cotton uniforms, Grant decided enough was enough. He and Lavinia spent months searching the world for a better alternative. There was none. So, armed with a design brief, they approached AgResearch.

"We want to develop a performance textile that outperforms cotton in every respect," they said. The list of requirements was long and, in Lavinia's words, "unreasonable". It had to be lighter when wet, stronger, cooler, more comfortable and less smelly after a vigorous workout.

"The AgResearch team not only listened to everything we said," says Lavinia, "they also got excited. The combination of us knowing what we wanted, and AgResearch's readiness to look beyond what they already knew, produced the result."

It wasn't easy. "We suggested a knit structure of wool plus a reinforcing material," says Dr. Surinder Tandon, who spearheaded the AgResearch Textile Science and Technology effort. "Wool for comfort, synthetic for strength."

Sounds straightforward, but finding the right wool, the right synthetic, and the right way to combine them out of the infinite possible variations took what Lavinia calls "stickability" – that is, a willingness to methodically work through the various options.

Science isn't always about flashes of insight, but about the hard work of eliminating what doesn't work.

The product that emerged, Fortitude™, is a world first fabric technology combining merino and synthetic yarns to provide an antimicrobial, odour-resistant, machine washable, quick drying and super strong alternative to cotton. Now being used by Gimono in its revolutionary range of performance fight wear, Fortitude™ is living up to its name.

You don't have to be a judo exponent to see the possibilities. Grant and Lavinia are now exploring ways of commercialising Fortitude in a variety of other uses, including fashion, corporate wear (think flight attendants and others who need robust yet stylish clothing), active wear and light industry. Their company was recently ranked #2 in the National Business Review's (NBR) Exciting Companies Index for the Sporting Goods manufacturing sector in New Zealand and is poised for great things.

All from a partnership that refused to accept that unreasonable equals impossible.

Whether such a partnership could happen anywhere else is an interesting question.

Lavinia's view is clear: "We're very fortunate in New Zealand in being able to tap into world class expertise," she says. "It's never easy to do what we did, but it's easier here than in many countries. We got everything we expected from AgResearch, and more."

Merino the Miraculous

Science is full of paradoxes. For example, merino wool is two to five times finer than human hair, which gives it an exceptionally soft feel. Yet it's also phenomenally strong and can be flexed up to 30,000 times before breaking (that's a lot of judo throws, tomodachi).

It's also hygroscopic, which means it can absorb a lot of moisture vapour yet its surface repels liquid. So if you're active, it'll suck up the sweat that evaporates off your skin, leaving you cool and dry. It also adapts to variations in temperature, keeping you warm in the cold and cool in the heat or after a heavy workout.

Finally, merino's unique physical and chemical structure makes it resistant to bad smells and soiling.

That made merino a natural choice for Gimono. But finding the right material to blend with the merino, and getting the structure and proportions of each material right, was another matter. A sheep is just a sheep, even if it is a merino. But add good science and entrepreneurial flair, and you have a fabric that is not only turning the martial arts world on its head, but also set to turn heads throughout the fashion and apparel worlds.

"IT WAS A WORLD-CLASS EXPERIENCE WORKING WITH AGRESEARCH DEVELOPING THE REVOLUTIONARY MARTIAL ARTS MATERIAL IN THIS GARMENT."

LAVINIA CALVERT
CO-FOUNDER, GIMONO

