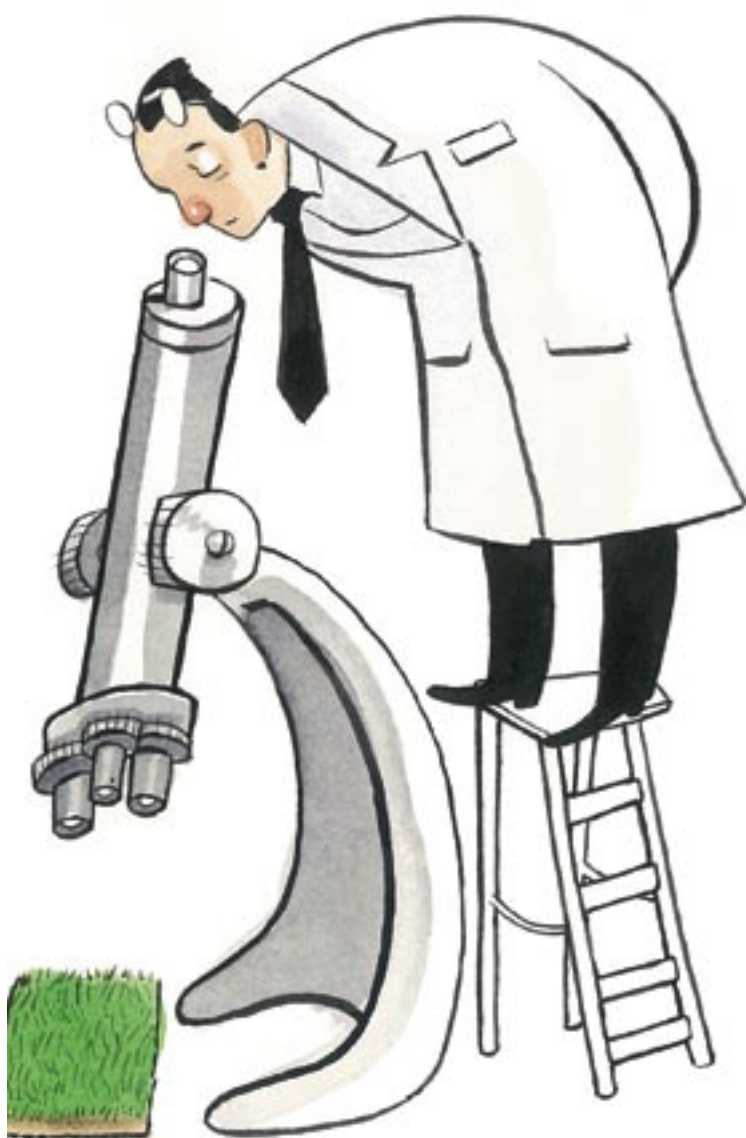


Forget the rugby, the America's Cup and our no-brag policy – for all New Zealand's "tyranny of distance" and puny population, we earn the world's admiration and gratitude in numerous fields. Stacey Anyan and Sarah Lang catch 15 of our brightest stars.

# The Sweet Smell of Success



## Agricultural Research

Braeburn, royal gala, Pacific rose – how'd you like them apples? The world likes them very much, it seems, given the premiums New Zealand apples attract at market. Newbies "jazz" and "envy" are next to be let loose internationally, according to HortResearch, which has a proud history of horticultural hybridisation, which involves developing novel fruits by taking existing varieties and breeding in positive attributes.

HortResearch also partners our kiwifruit industry to manage the world's leading kiwifruit-breeding programme. Since its launch in 2000, Zespri's golden kiwifruit has been marketed throughout Asia, the US and Europe and has grown to represent a quarter of the returns for New Zealand kiwifruit. Through Zespri, New Zealand claims 27 per cent of the world's commercial supply (although Italy is the No 1 producer of kiwifruit).

Bruce Campbell, general manager of science operations at HortResearch, puts our apple and kiwifruit successes down to world-class breeders, genetic material and growers and, with Zespri and Enza, a well-oiled marketing and distribution network.

Campbell believes New Zealand's new opportunities lie in breeding "superfruits", the next generation of functional foods. Kiwifruit, apples, pears and berryfruit are being bred with attributes that boost gastro-

# **Bruce Campbell believes New Zealand's new wave of opportunity lies in breeding "superfruits", the next generation of functional foods that have positive effects on gastro-intestinal wellbeing and immune defences.**

intestinal wellbeing and immune defences. While other countries are doing similar research, Campbell believes HortResearch has the advantage given "our strength and knowledge as an organisation and the wide range of scientific skills we bring to the plate".

AgResearch CEO Andrew West reckons New Zealand's agricultural research is "almost unique" as it takes in every single aspect of the industry from soil, plants, animals, farmers, food and textiles through to the supermarket. He rates highly our research in several areas: forage (rye grass and clover), transgenic animals (those with human genes), cloning, reproduction (trying to find ways to make animals more fertile), bio-control, and humans – that is, studying how and why farmers make their decisions.

A recent breakthrough was the discovery that a parasitic wasp from Ireland can combat clover root weevil (clover's importance to New Zealand cannot be underestimated). No one else in the world is doing such research, says West.

Another breakthrough is the development of a series of genetic markers in sheep so people who breed rams can use these markers to develop desirable properties in the animals, such as greater loin muscling (think rack of lamb). This technology is now being touted to Australia and the UK.

In October, AgResearch launched a new marker that identifies worms that live inside sheep guts. It has also woven a world-first wool: an easy-care fabric that is light, abrasion-resistant, flexible and can be washed and tumble-dried easily.

Other notable research centres include community-owned Cawthron, a world leader in the protection and restoration of coastal and freshwater ecosystems, and Scion (formerly the NZ Forest Research Institute), which has been recognised as a leader in forestry science, including studying what genotypes to plant, the optimal time to prune or harvest and the likely value of the harvest.

## **Extreme Sports**

It's a phenomenon New Zealand has embraced to the, er, extreme. The genesis of our extreme-sports reputation springs from AJ Hackett's elasticised cords. The modern-day bungy was developed by Hackett and fellow speed-skier Henry van Asch, who took inspiration from the "land diving" tradition on Pentecost Island in Vanuatu. They then bungied from the Eiffel Tower in 1987 to prove to the world it was safe. Bungy spinoffs include vertical bungy and the "Sky Screamer" reverse bungy ride.

The world's first commercial jetboat operation, Kawarau Jet, owes much to the innovation of Sir William Hamilton, who founded HamiltonJet in 1939. By the 1950s, with the help of colleagues, the self-taught engineer and farmer had his third prototype reaching 80km/h in the shallow rivers of the Mackenzie Country. The company continues to be at the forefront of waterjet technological evolution.

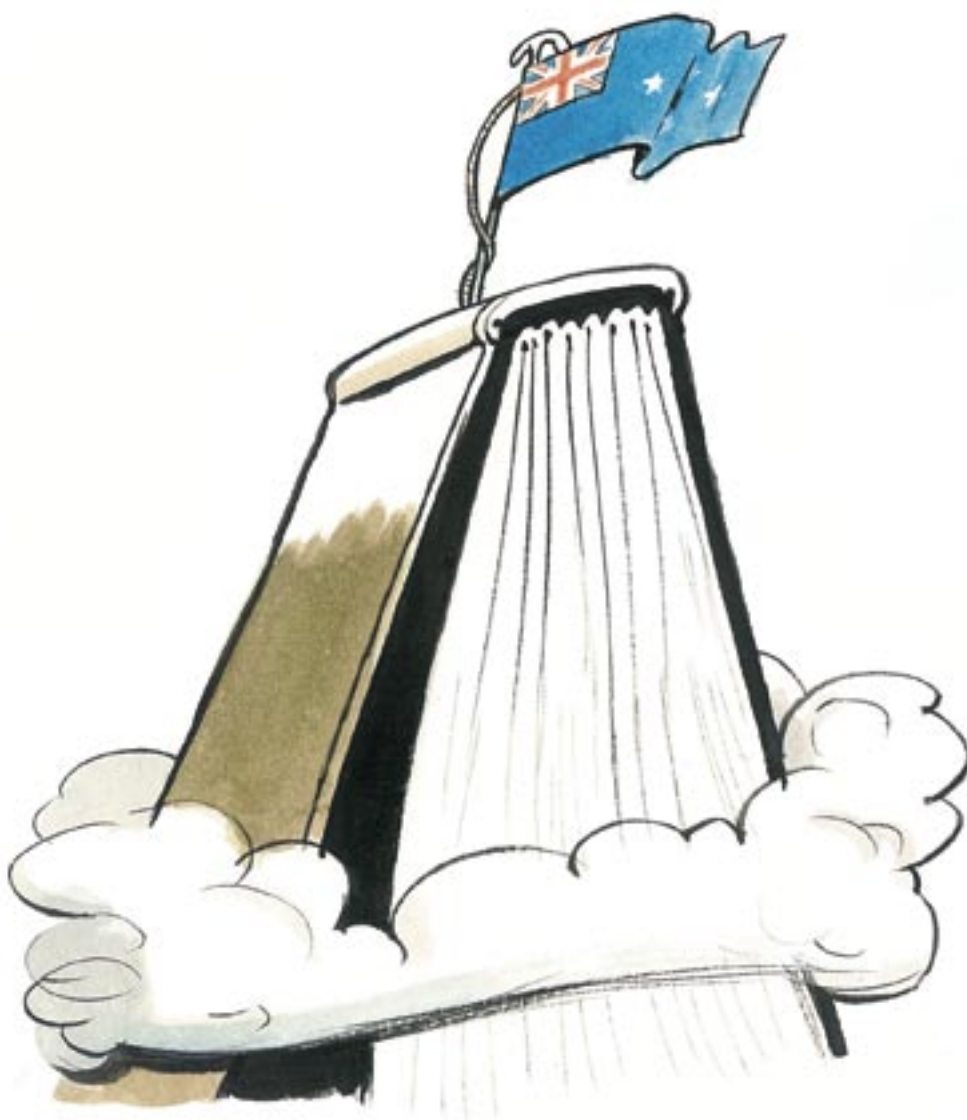
The art of Zorbing – tumbling downhill inside a giant inflatable ball – has given creators Dwane van der Sluis and Andrew Akers the kudos of coining a word that's been included in the *Concise Oxford English Dictionary* since 2002. The Rotorua-made product has gone global; you can Zorb in 10 other countries, including Japan.

In Central Otago's Shotover Canyon, avid rock climbers Hamish Emerson and Chris Russell have created the world's highest swing. They initially trialled their rope technology using a car parked at the top of a bridge as a hauling winch (there were a few hasty retreats to dodge authorities). Design and construction of the swing took three years – with parts and more than 1.5 tonnes of concrete and 1.2 tonnes of wire cable carried by hand, dragged or wheelbarrowed from the carpark.

Further north, in Waitomo's underground rivers, you can don a wetsuit, helmet and a rubber inner tube and go "black water rafting".

On a less extreme note, New Zealand





**New Zealand has the best hut and track network in the world. Our backcountry boasts around 1400 huts. Italy and Norway — countries of similar size and geographic complexity — have less than half that.**

arguably has the best hut and track network in the world. Our back-country boasts around 1400 huts. Italy and Norway — countries of similar size and geographic complexity — have less than half that number.

Although international tourists keep the industry afloat, it was perhaps Kiwis' rather cavalier attitude to safety that bred the extreme-sport industry. Maybe it's also because the Accident Compensation Corporation has us covered. ACC was globally groundbreaking when launched in 1974 and is still the world's only personal injury compensation and rehabilitation scheme that covers all people — even foreign tourists — at home, work and play and doesn't search for fault.

## Film-making

When *The Lord of the Rings: The Fellowship of the Ring* scooped four Oscars in 2002, it was proof New Zealand film had attained world-class standing. Director Peter Jackson had kudos heaped upon him for setting benchmarks in epic film-making, for doing it outside Hollywood and for raising the profile of New Zealand films (not to mention our country's beauty as a filming location).

The other leading light of "Wellywood" is Oscar-winning special-effects company Weta Workshop & Digital. Led by Richard Taylor, Weta has firmly positioned itself at the international forefront of computer-generated film graphics, most recently creating sci-fi effects for *Avatar*, due for release this year and tipped to be a blockbuster.

Taylor and Jackson are but two Kiwis who have made it on the world movie stage. Others include Academy Award-winning Jane Campion (*The Piano*), Roger Donaldson (*Thirteen Days*, *Cocktail*, *Cadillac Man*), Andrew Niccol (*Gattaca*), Andrew Adamson (*Shrek*, *The Lion, the Witch and the Wardrobe*), Vincent Ward (*What Dreams May Come*), Sam Pillsbury (*The Scarecrow*) and Martin Campbell (*Casino Royale*). Also hot in Hollywood is Lee Tamahori who directed *Once Were Warriors*, New Zealand's biggest critical and commercial success with sales to 60-plus countries.

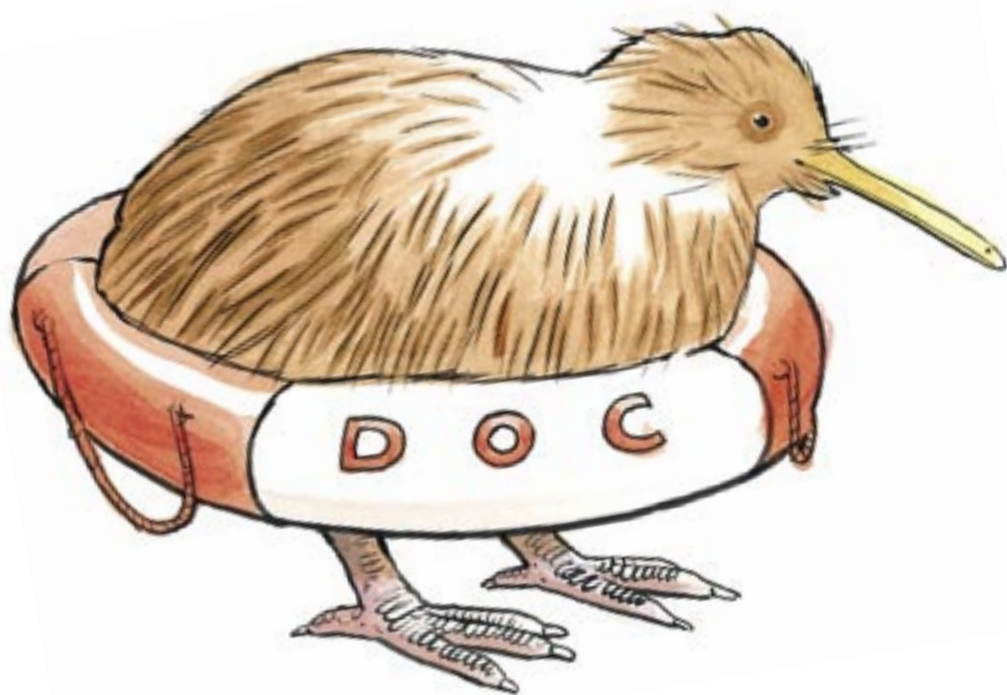
Big-name directors are also taking New Zealand stories to the world. Donaldson, for example, turned down a Harrison Ford movie offer to tell the story of Invercargill motorcycle speedster Burt Munro in *The World's Fastest Indian*, and Niki Caro's *Whale Rider* propelled Keisha Castle-Hughes on to the Academy Awards red carpet with a Best Actress nomination.

And who'd expect to find a world-leading documentary production company in Dunedin? Natural History New Zealand has some of the best equipment and post-production facilities anywhere, has filmed below every ocean and above every continent, regularly collaborates with the likes of Discovery Channel, Animal Planet and National Geographic Channel and has won more than 200 international awards.

## Literacy

A world-class intervention for children struggling to keep up with their peers in literacy had humble beginnings at the back





## Offshore islands are perhaps New Zealand's greatest conservation success story. Painstakingly freed of pests, they've been transformed into "arks" for critically threatened species at risk on the mainland.

Presley of kindergarteners on account of the rapture caused by her appearances: "The children and teachers came pouring out of the school screaming, jumping up and down wanting autographs," reported the *San Diego Tribune*. As a girl Cowley adored storytelling but struggled with reading and writing until her teens. Her involvement in the Story Box Reading programme led to fame; the books, published by Wendy Pye, filled a gap for relevant reading materials in schools here as well as in Australia and the US. Twenty years and more than 600 titles later, her books are a mainstay of New Zealand's school literacy programme and are in 70 per cent of US schools. Her biggest-selling book, *Mrs Wishy Washy* (1980), has sold more than 40 million copies worldwide.

### Back from the Brink

The flightless kiwi that's become New Zealand's national symbol evolved because there were no predatory mammals to kill it. So too did many other endemic species (those found nowhere else in the world) for about 80 million years. But since man first arrived here, the introduction of predators, habitat destruction and other human footprints have been a lethal recipe for our unique biodiversity, described as the

of an old Auckland University house, where the late Professor Dame Marie Clay spent three years in the 1960s developing the Reading Recovery programme as part of her doctorate. The idea was to deal with literacy difficulties at an early stage before they interfered with educational progress.

Reading Recovery, which provides extra, one-on-one assistance to the lowest achievers after one year at school, was implemented nationally in 1983 (now over three-quarters of Kiwi schoolchildren have access to it). It went global the following year and is now offered in Australia, the US, Canada, England, Wales, Ireland and Denmark.

According to the NZ Literacy Taskforce, Reading Recovery is internationally recognised as one of the most successful acceleration and intervention programmes available; it works regardless of language or background. In 2006, it was endorsed by a scientifically rigorous US Department of Education investigation; the same year UK accounting giant KPMG calculated a

national saving of £1.37 billion to the country by introducing Reading Recovery. Clay was created a dame by the Queen and won the International Reading Association's William S. Gray Citation of Merit for her efforts.

New Zealand has also produced two outstanding female authors, Margaret Mahy and Joy Cowley, who have been lauded internationally. Mahy's fantastical world of grandmother pirates and lions in meadows saw her bestowed with the 2006 Hans Christian Andersen Award for her contribution to international children's literature. Mahy started writing at seven. Her stories in the 1969 *School Journals* were picked up by a New York publisher and within a year seven of her picture books were in print there as well as in London. She began to write fulltime a decade later and has since penned more than 100 titles; she's won awards in the US, UK and Canada, including the Carnegie Medal twice (with *The Haunting* and *The Changeover*).

In the US, Joy Cowley is known as the Elvis

closest scientists will get to studying life on another planet.

Threatened species reported in the Department of Conservation's 2007 New Zealand Threat Classification System list totalled 2788, up 416 since 2002. This rise reflects our exigent environment (and more rigorous reporting) rather than our efforts – we are stepping up to the unrelenting challenge of protecting endangered species (hence the NZTCS Serious Decline category reduced by eight rather than rising by 80; as a result of 2006-07 conservation programmes 212 threatened species had improved population numbers).

US-based Conservation International's president Russ Mittermeier, who works with groups globally on restoration projects, tells *North & South*: "New Zealand is without doubt the world leader in saving endangered species. It's the quality and intensity of effort. Eradication programmes are taken to the last rat or other invasive. High-tech methods are also used such as distributing poison baits to cliff faces using helicopter devices that spin the bait into the most difficult-to-access crevices. Then there's intensive follow-up monitoring to avoid recolonisation by invasives, something often lacking elsewhere."

This success owes much to the New Zealand Biodiversity Strategy. Launched in 2000, it charged four government agencies (DOC and the Ministries of Agriculture and Forestry, the Environment, and Fisheries) with a statutory obligation to protect our biodiversity and to try to "turn the tide" on its decline by 2020. The funding package greatly expanded species-recovery work on invertebrate, reptilian, amphibian, bird, freshwater fish and marine mammals – and also provided technical support through means including trap development, wildlife disease screening and database development.

Offshore islands are perhaps New Zealand's greatest conservation success story. Painstakingly freed of pests, they've been transformed into "arks" for critically threatened species too at risk on the mainland. After 200 years of rat occupation, 11,300ha Campbell Island in the sub-Antarctic is now a predator-free native wildlife haven after what was one of the largest and most technically difficult predator eradication programmes attempted anywhere in the world. Sanctuaries on Codfish, Chalky and, more recently, Anchor Islands have been vital to the recovery of the kakapo, the world's only flightless parrot and its rarest, with

## **Despite recent losses in the America's Cup, our country's yachting profile continues to swell... more than 50 per cent of the crew in international sailing events are Kiwi.**

just 86 known surviving birds. And in October two tuatara chicks hatched on Matiu/Somes Island in Wellington. Just a snippet of happy moments from our 48 biodiversity sanctuaries.

Pest eradication's near impossible on the mainland so it's all about pest control. In South Island beech forests, predator plagues had decimated threatened parakeet, blue duck, yellowhead and bat species. Enter DOC's Operation Ark in 2003. Employing innovative methods to control rats, stoats and possums – and egg-hatching and rearing chicks in captivity – Ark has achieved major recoveries in species numbers.

New Zealand's strong cohort of non-governmental conservation groups acts as fierce protectors of endangered species. For instance, Forest & Bird's brief extends to marine conservation and one of its charges is the Hector's dolphin – the world's smallest and rarest, found only off New Zealand and decimated by set-net fishing. Forest & Bird has achieved a marine mammal sanctuary around Banks Peninsula and set-net restrictions on the north-west coast of the North Island.

Certain cute endangered animals have themselves become the pulling power behind the save-species message. DOC ambassadors include Sirocco the kakapo, and in 2007 Sparky the kiwi, travelling the country to educate adults and children about protecting native species. What with New Zealand's five devoted kiwi sanctuaries and 60 community-based kiwi protection initiatives, Sparky is living proof that Kiwis are saving kiwis.

## **Boating**

Sir Peter Blake was arguably the world's best-known sailor. The red-sock trendsetter helped to put New Zealand yachting on the map with his legendary determination in the gruelling 1989-90 Whitbread Round the World race, a 1987 win in the Admiral's Cup in Britain, and the America's Cup successes in 1995 and 2000. In 1997, he was appointed leader of the prestigious Cousteau Society to promote international awareness of marine ecosystems.

Despite recent losses in the America's Cup, our country's yachting profile continues to swell. Kiwis are sought-after as race sailors and cruising skippers; according to Marine Industry Association Peter Busfield, more than 50 per cent of the crew in international sailing events are Kiwi; Swiss-based reigning America's Cup champ Alinghi had six.

The \$1.5-billion marine industry employs 10,000 and has export earnings of \$560 million a year. A decade earlier, they totalled just \$70 million, and they're predicted to hit \$1.5 billion by 2020.

The big bucks are partly due to our flourishing crop of superyacht builders. There are barely enough companies and workers (550 boatbuilding apprentices spread across 170 companies) to fill the orders for the 30-metre-plus behemoths. The world's only superyacht race, the Millennium Cup, is a New Zealand creation, held this year between the Louis Vuitton challenger series final and the America's Cup. Sensation Yachts in Henderson, Waitakere City, built Australasia's largest motor yacht in 2000: the 46-metre *Aria* took two years to complete and involved 400 staff.

Also from West Auckland, Alloy Yachts' *Ad Lib* was voted best superyacht last year at the Boat International awards.

Busfield also claims that our Boating Industry Training Organisation is the world's best and biggest.

In response to the growing demand for these lavish yachts, Warkworth's Mahurangi Technical Institute offers a certificate in Superyacht Crew, the only of its kind in Australasia. Subjects include navigation, boat driving, wine appreciation, silver-service, helicopter safety, sail repair, radio and radar, fire-fighting, and floral arrangements.

Our marine equipment is tops, too; Navman, the home-grown global positioning satellite systems company, caught the eye of US corporate Brunswick in 2003 for its world-leading design and manufacture of



marine electronics, in-car and personal navigation, fleet tracking and sport electronic solutions.

## Exporting Nature

As global demand for natural and organic products shoots up, New Zealand's "clean green" and "100% Pure" brandings – deserved or not – are a handy platform to grab our slice of the natural products pie.

More than 250 natural products companies – mainly nutraceuticals and cosmetics – dot New Zealand. (Canada, with 10 times our population, has the same number.) Our natural products exports contribute \$300 million to the New Zealand economy, with major markets in Asia, North America and increasingly Europe.

Nutraceuticals (ingredients for "functional food" products with medicinal benefits) are the sector's biggest foreign exchange earners, with many companies cashing in on uniquely New Zealand ingredients. Healtneries New Zealand's green-lipped mussel extract has spawned the development of a marine nutraceutical industry, includ-

ing companies such as Sea Dragon Marine Oils, which manufactures bioactive fish oil ingredients.

New Zealand Extracts' unique grape-seed extraction process produces cold-pressed oil for capsules, functional foods and personal care products (trials are under way on other fruits).

## Wine

In October, when New Zealand sauvignon blanc (Vavasour Sauvignon Blanc 2006) and pinot noir (Villa Maria Cellar Selection Marlborough Pinot Noir 2005) took top honours for the second year running at the International Wine and Spirit Competition in London, it confirmed what sippers worldwide already knew – New Zealand pours a darned good drop.

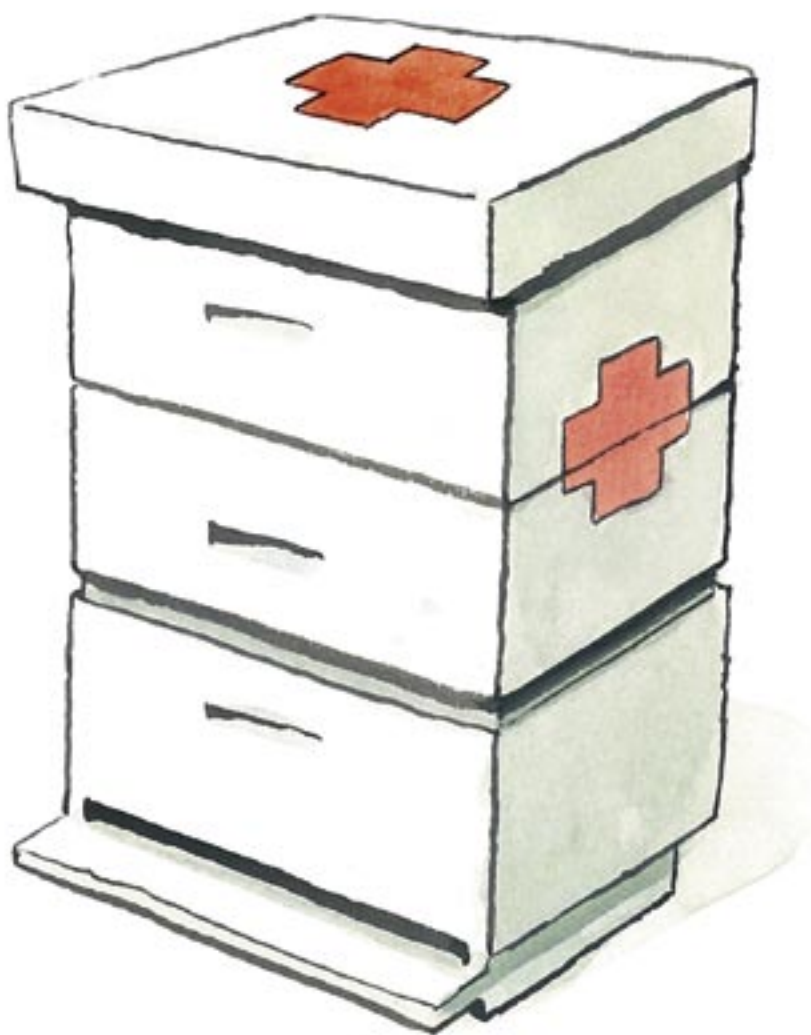
We're still tiny but an international success story. More than one billion glasses of New Zealand wine were sold in 95 countries around the world in the past year for excellent prices (New Zealand wine boasts higher export prices than any other country except France, and commands the highest

**As global demand for natural and organic products shoots up, New Zealand's "clean green" and "100% Pure" brandings are a handy platform to grab our slice of the natural products pie.**

price per litre of any imported into the UK). In the year ending June 2007, exports rose by more than a third to \$700 million, on track for a projected \$1 billion by 2010.

New Zealand sauvignon blanc is heralded worldwide as the benchmark style for the varietal. In recent years our pinot noir's star has risen, and international accolades have





followed. At September's *Decanter* World Wine Awards, Central Otago's Bald Hills trumped Burgundy, France, to take out the International Pinot Noir Trophy, and the following week won the International Wine Challenge's Champion Red and five other trophies. The IWC also chose Villa Maria's Alistair Mailing as White Winemaker of the Year; and in October the British *Observer* ranked Montana's Jeff Clarke as one of the world's six top winemakers.

Research in Australia, Britain and the US showed New Zealand wines are perceived as exceptionally high quality and value for money, grown in an ideal unspoilt environment.

## Medical Manuka

Biochemist Peter Molan wasn't too worried when the molten manuka honey he'd applied to a relative's persistent boil burned her. "Fortunately, manuka is effective in treating

burns as well as boils," he says cheerfully.

For the past two decades, the co-director of Waikato University's honey research unit has promoted manuka's medicinal properties to the world, particularly as an antimicrobial in wound care, but also with regard to its potential in the treatment of wounds infected with especially challenging bacteria (such as hospital superbug methicillin-resistant staphylococcus aureus – MRSA).

Manuka hasn't always been in favour. Clover honey used to be the preferred blend; beekeepers fed the darker, less palatable manuka to their bees – or chucked it out. Molan's apitherapy research began at the suggestion of a colleague (he'd already examined the possible antibacterial properties of other natural substances such as milk, yeast and bull semen). His studies on piglets and rats show that active manuka honey from the manuka bush (*Leptospermum scoparium*) has anti-inflammatory properties, stimulating skin to grow into

a wound, advancing its closure, and that it can stop bacterial growth even when diluted up to 56 times.

Last year, Molan's unit signed a multi-million-dollar contract with Kiwi health-care products company Comvita; its wound dressing is the first honey-based product to receive marketing clearance from the US Food and Drug Administration (it has already been approved in Europe, Canada, Australia and New Zealand).

The wound-care market is worth more than you'd think: chronic wounds are on the rise, especially diabetic foot ulcers (an estimated three million Americans suffer pressure ulcers or bedsores); the global market is worth \$US4 billion. Comvita expects annual sales of \$100 million by 2010.

Further research needs to be done to ensure a clinical seal of approval but, as Molan says, "manuka is catching on fast".

## Medical Research

From fetal health through to new hope for Alzheimer's sufferers, New Zealand has delivered world-class breakthroughs in many medical areas. Our average of citations in international medical research journals towers above most other countries – we trounce "research superpowers" North America and UK in genetics, neuroscience, immunology and medical physiology.

New Zealand invests \$270 million in medical research; the government, via the Health Research Council, directly dripfeeds \$70 million to fund research projects. (Both sums are meagre amounts by international standards.) HRC chairman Graeme Fraser says it's a pity 83 per cent of applications to the HRC – most well worth funding – miss out, "but New Zealand gets a phenomenal return on its investment thanks to our highly motivated, gifted health researchers".

Cancer kills one in three New Zealanders. One team determined to alter this statistic is the Auckland Cancer Society Research Centre, led by Bruce Baguley. It's brought eight world-class – some world-first – cancer chemotherapies to trial and that's a world-leading hit rate. A less-heralded world leader – in studying the genetic basis of cancer – is Otago University's Cancer Genetics Laboratory, headed by Tony Reeve. Successes include discovering the gene that leads to inherited stomach cancer and, in 2007, how deadly gastric cancer develops. And cancer's one of five diseases investigated by the Wellington-

based Malaghan Institute, an independent biomedical research facility searching for immune-reaction-focused treatments. One discovery is the development of a dendritic cell-based cancer vaccine, with clinical trials under way for both melanoma and brain cancer.

You've likely heard of the Liggins Institute, a biomedical and clinical research facility led by Peter Gluckman at the University of Auckland. Its "cooling caps" save babies' lives and prevent the development of disabilities and are now used by clinicians around the world. At the other end of the lifespan, Matt Doring's breakthrough work on Parkinson's disease has led to a current study on halting memory decline; and University of Auckland's Richard Faull, latest winner of the Rutherford Medal, discovered in 2006 how new cells migrate throughout the brain, opening the way for damage-repair treatments in Parkinson's, Alzheimer's and Huntington's sufferers. Fellow University of Auckland luminary Margaret Brimble was named by the UN in 2007 as one of the world's five outstanding women scientists for her work on new treatments for pain, epilepsy, strokes and hypertension – she's now conducting trials for traumatic brain injury and for Parkinson's.

What about heart disease, the biggest killer not only in New Zealand but also the world? The University of Otago's Christchurch Cardioendocrine Research Group, headed by Professor Mark Richards, is a world leader in cardiovascular research and has been praised by British medical journal *The Lancet*. One major discovery – that the level of certain heart hormones in the blood are very accurate heart-failure predictors – has been included in international treatment guidelines.

Meanwhile University of Auckland's Garth Cooper, who discovered a treatment that appears to reverse heart disease in diabetes sufferers, has secured major funding to continue developing the drug trientine.

While our solo efforts are highly impressive, international collaborations (about a third of our research) are important given New Zealand's small size. To encourage collaborative research, the government funds seven Centres of Research Excellence. One, the Maurice Wilkins Centre for Molecular Biodiscovery, led by the 2006 Rutherford Medal winner Ted Baker, uses x-ray crystallography to unlock molecular mysteries that cause cancer, diabetes and infectious

disease. One 2007 development (in tandem with Australian scientists) ascertained how "superbugs" evade the immune system. And a New Zealand-established international collaboration, the International Study of Asthma and Allergies in Childhood, has grown into the largest health research project in the world, adding enormously to asthma knowledge.

## Fitness

How's this for irony: global industry insiders lauding fitness gurus Les Mills International as "doing for group exercise what McDonald's did for hamburgers".

The recognition (in the International Health, Racquet and Sportsclub Association's magazine *Club Business International* in 2003) is genuinely deserved: four million participants weekly power, puff and perspire their way through Les Mills exercise-to-music programmes in more than 11,500 fitness clubs in 70 countries.

Phillip Mills (son of Les, a Commonwealth Games gold medallist) bought back the family gym from an investment company. Inspired by the aerobics boom he'd seen while living overseas, Phillip (a former Commonwealth Games athlete himself) created his own brand of fitness classes.

The comprehensive range now includes weight lifting, martial arts, yoga, indoor cycling, dance, step classes and high-impact and low-impact aerobics. Programmes are updated with new music and choreography every three months and delivered to instructors trained and certified in the Les Mills system and working in clubs licensed to offer its programmes.

In 2004 Phillip was named the Ernst & Young New Zealand Entrepreneur of the Year and Les Mills International was named Services Exporter of the Year in the 2005 NZ Trade and Enterprise Export Awards. Not afraid to punch above its weight, the company plans to have its "exertainment" products in 25,000 clubs by 2015.

## Longitudinal Study

It took a longitudinal study conducted on more than a thousand babies born at Dunedin's Queen Mary Hospital in the early 1970s to prove what parents world-wide have long suspected; too much TV can be bad for you.

That's just one of many gems gleaned from the comprehensive development study conducted by the Dunedin Multidisciplinary Health and Development Research Unit. To

**While our solo efforts in medical research are highly impressive, international collaborations (about a third of our research) are important given New Zealand's small size.**

date almost 1000 publications and reports have been generated from this ongoing study (that's one every 13 days), which has influenced family, child and public health policies in NZ and overseas (such as safety standards for children's nightwear, playgrounds, hot water temperatures and cycle helmets). Funding comes primarily from the Health Research Council; the British and US governments chip in too.

The project is the brainchild of former primary school teacher Phil Silva, who observed that "we just don't know enough about our most important resource, our young people".

We know more now. Assessments of the study members (11 times since birth at varying intervals) have confirmed that the first three years of children's lives are the most critical in terms of brain development, and that love and affection are vitally important to brain growth. Other findings: teens who suffered glue ear in infancy can lag as much as two years behind their peers in crucial reading; the stress maltreated children feel can stay with them and cause physical health problems when they're adults (before this research, there was no scientific evidence of the link between stress and poor health); people who smoke cannabis regularly are almost 2.5 times more likely to have advanced gum disease by age 32.

Current director Associate Professor Richie Poulton says of the study: "We're not just a leader, but arguably the best



**The World of Wearable Arts concept is a distinctly New Zealand one, and it has sure caught on. WOW continues to attract worldwide entries, media attention and acclaim.**

study of its kind in the world in certain areas.”

That’s because the project can boast high retention rates (96 per cent of study members at the recent Age 32 Assessment, compared to 50-70 per cent for similar research) as well as a multidisciplinary focus (confidential assessments cover most aspects of mental and physical health).

The assessment period lasts one and a half years; logistics involve rounding up study members (a quarter now live overseas) for a full day of tests at Otago University.

Professor David Fergusson has conducted

the Christchurch Health & Development study since 1977. The methodology differs slightly from the Otago study as the former is not as in-depth, relying on phone and postal interviews to track the health, education and life progress of the 1265 study members.

Nevertheless, publications have been just as prolific and significant, having broken new ground in many social areas, including the mental health effects of alcohol and cannabis use in young adults, suicidal behaviour in young adults and the effects of smoking.



## WOW Factor

What makes a World of Wearable Arts show so spectacular? Cirque du Soleil-meets-Fashion Week, it's a theatrical montage of costume, dance, music, sound and light in which human canvases become moving works. The concept is a distinctly New Zealand one – the garment is ornamental but need not be commercially viable. And it has sure caught on. Just turned 20, and outdoing itself every year, WOW continues to attract worldwide entries, media attention and acclaim (intellectual property law protects it from attempted copycat events).

WOW's also inspired smaller-scale wearable art shows and competitions countrywide: national shearing competition the Golden Shears has a "shearable arts" contest; there's edible art (Hawke's Bay's Edible Arts Festival); and we've even got "hairable" arts. Plus of course recycled couture: in September, the International Festival and Events Association named Waitakere's trademark event Trash to Fashion a supreme award finalist in the prestigious 2007 Pinnacle Awards Competition.

## Coffee Culture

Recently some surprisingly similar emails popped up from European-dwelling friends: bemoaning the near impossibility of buying a decent coffee and venerating the Kiwi espresso. "The prospect of a flat white at Fidel's [on Wellington's Cuba St] has brought me to the verge of booking my flight home," declares Richard in London. Other UK-resident Kiwis got so desperate for a decent coffee they set up their own cafes: in September the London magazine and food and beverage authority *Time Out* named three Kiwi cafes among its five "Best Coffee Bar" nominees. It's a similarly dire situation in the US, report expats, where Starbucks' "coffee-flavoured milk" is the best of a bad bunch.

This unscientific email poll ignited our case that New Zealand coffee is among the world's best. It's borne out by Australian Emily Oak, a veteran World Barista Championships judge and the WBC's Asia-Pacific co-ordinator, who says New Zealand's a "top international player known for brilliant espresso, consistent quality and a sophisticated coffee culture."

While many countries have a filter focus, we're all about espresso. New Zealand has the highest number of commercial espresso machines per capita outside

## A veteran World Barista Championships judge says New Zealand is a "top international player known for brilliant espresso, consistent quality and a sophisticated coffee culture."

northern Italy.

And our coffee fixation's has become competitive: we have national coffee and barista awards, a coffee festival, latte art championships and even a national team, the Black Cups, comprising New Zealand's six best baristas. Carl Sara, our Christchurch-based national champ, was third in the World Barista Championships in Tokyo in August from a field of 45. Says WBC chief judge, Kiwi coffee roaster Chris White: "It's telling that since the WBC started, New Zealand has never been placed lower than eighth in the world!"

For great coffee you've got to have good beans: gourmet coffee roasters, including Altura, Allpress, Atomic and Gravity, have been supplying the hospitality industry for over a decade. In fact New Zealand also has the highest number of coffee roasters per capita outside Northern Italy, with 150 from Whangarei to the West Coast.

## Sports Equipment

Kiwis are pretty good at sport, so we're dab hands at making the stuff you use to play it.

In 1973, from his family garage in Christchurch, 19-year-old Bruce McIntyre made backpacks for a local mountaineering group heading to the Andes in exchange for design feedback. The result was New Zealand's first internal-frame climbing pack, whose innovative features (such as the extendable lid and an external bungy cord for crampon attachment) spawned copycats worldwide. The hard-wearing, weatherproof fabric was also a first at the time. Thirty years on, Macpac outdoor equipment and clothing are sold in 20 countries and sales have reached \$20 million.

Orca founder Scott Unsworth also started his business from home when injury forced him out of elite-level triathlons. In the early 90s he tinkered with triathlon wetsuits, marketing them from the boot of his car at race meets and later testing the gear on world-class performers such as Hamish Carter and Australia's Chris McCormack. At the 2004 Olympic Games 60 per cent of the triathlon field wore Orca. The Orca 3.8, the world's first breathable wetsuit, was launched this year (the membrane transfers heat away from the suit, regulating body temperature throughout a swim).

Sir Peter Blake boosted the profile of merino clothing brand Icebreaker following his 1995 round-the-world sailing venture with his comment that he didn't take off his "superior" top for the entire 43-day trip. Within five years, Icebreaker became the largest outdoor clothing brand in Australasia; it went global in 1999 and now the range of more than 1000 items is exported worldwide.

In a similar vein, Snowy Peak has the luxury outdoor knitwear market sewn up. Naming her business after the high-country Canterbury station where her family have farmed fine wool for 150 years, Peri Drysdale knitted the world's first-ever garment in a possum fur-merino blend and forged export markets in Australia, Japan, Canada and Europe in the early 1990s. By 1995, the company had moved into industrial premises and three years later the first Untouched World store – selling high-quality, natural-fibre fashion – was open in Christchurch.

We've conquered a couple of niche markets too. OBO has 60 per cent of the world market for field hockey goalie equipment; at the 2004 Olympics, 77 per cent of hockey goalies wore OBO – and weren't paid to do so.

Former polo player-turned-mallet maven George Wood asserts, "No one else in the world has spent the time I have researching composite mallets." His home-grown Hawke's Bay company, Wood Mallets, has spent more than 18 years focusing on producing lighter, stronger mallets made mainly from fibreglass (as well as the traditional choice, cane); his mallets are used by players in 58 countries.

Auckland's Astrograss Allweather Surfaces pioneered the design and manufacture of all-weather synthetic grass surfaces 24 years ago and now exports (under the new name of TigerTurf) to more than 20 markets around the world.

**New Zealand tied with Finland and Iceland as the world's least corrupt country of 163 scrutinised by the international watchdog group Transparency International.**

## Honourable Mentions

- ✦ Honesty: New Zealand tied with Finland and Iceland as the world's least corrupt country of 163 scrutinised by the international watchdog group Transparency International.
- ✦ Women's rights/female equality: from the first country to allow women to vote in national elections, to having – at the same time – a woman Governor-General (Dame Catherine Tizard), Prime Minister (Jenny Shipley) and Leader of the Opposition (Helen Clark).
- ✦ Taking a stand: Nuclear-free, Iraq war...
- ✦ Plunket.
- ✦ Pies: Visitors rave about New Zealand's gourmet varieties; we have a fiercely fought national pie of the year competition – and we eat about 67

million pies a year.

- ✦ Quality of life: Auckland is fifth and Wellington 12th in Mercer Consulting's worldwide "top cities with best quality of life" survey.
- ✦ Media consumption: New Zealanders have more radio stations per capita than any other country; and we read and buy more magazines per capita than any other country.
- ✦ Shearing: We've had many world champs including, most prolifically, David Fagan.
- ✦ Motorbike making and racing: John Britten, Burt Munro, George Begg, Bruce McLaren, Denny Hulme, Aaron Slight...
- ✦ Dairying: We're the undisputed world experts.
- ✦ Economic freedom/market deregulation.
- ✦ Highest success rate in rugby tests (we couldn't leave it out altogether). +

