THICK AND THIN

New Zealand's economy was built on 'the back of a sheep', but in recent decades, the fortunes of wool have been largely eclipsed by the dairy industry. The twin strands of the fine- and coarse-wool industries have taken diverging paths, focusing on the economic challenge of adding value in New Zealand, rather than exporting the raw material. Will wool rebound?

WRITTEN AND PHOTOGRAPHED BY **AARON SMALE**

Shepherd Kahil McQueen is dwarfed by the landscape during an autumn muster. Otematata Station covers 40,000 hectares with the highest part of the property running along the Hawkdun Range. During the summer months, the merinos are left to their own devices in the tussock and rock of the high country. In autumn they are mustered down into the lower country to avoid the worst of the harsh winters.

HUGH CAMERON WINDS up his two-seater chopper and starts to bump along the high-country tussock trying to get lift-off. Weighed down with shepherd Kahil McQueen and four dogs, he skids along, heading towards one of the few fences on the property.

Shepherds John Cochrane and Gandy Burrows watch with mild amusement as the helicopter gains about six inches of altitude as the fence approaches.

"Maybe I should go and open the gate," quips Cochrane, prompting a guffaw from Burrows.

The chopper heaves into the air, its downdraft sweeping the grasses beneath as it soars aloft, dwarfed by the Hawkdun Range it is scaling.

The range forms the upper edge of Otematata Station and is where large numbers of Cameron's merino flock have been foraging in the summer months, before being mustered down to the lowlands each autumn. Alongside the adjacent Aviemore Station—also owned by the Camerons—the properties total around 40,000 hectares, running 30,000 merino sheep and 400 Hereford cattle.

Cameron's family have farmed the property in North Otago for over four generations. Their story echoes the pastoral history of the nation—the arrival of farmers from the British Isles, the sheep they brought with them, and the industry they established here that would underwrite the young economy. Though they could not have known it at the time, the breed chosen by those pioneer high-country farmers would also lead the way for the marketing of the natural fibre internationally in the 21st century.

ORIGINATING IN NORTH Africa, the merino breed found its way to the high plateaux of Spain before the 12th century. The fine wool was so highly prized that the royal family maintained a substantial stake in the industry, and until the 18th century exporting the animals was a crime punishable by death. Eventually the Spaniards gifted animals to other monarchies in Europe, including in Saxony, Holland and England, from where the breed followed colonists around the globe to Cape Town, Australia and New Zealand.

Merino sheep were the first domesticated animals to arrive in New Zealand. In 1779, Captain James Cook brought a ram and ewe ashore in Queen Charlotte Sound. Two days later, they were both dead, poisoned after eating one of the native plants—possibly tutu.

It was an inauspicious start, but later settlers were not discouraged. Missionary Samuel Marsden brought merinos with him in 1814 and 1819, and although it is impossible to identify the first commercial flock, the credit usually goes to John Bell, who established a flock in 1834 on Mana Island, off the west coast of Wellington, which he leased from the chief Te Rangihaeata. Bell sent his first wool clip to Sydney in June the following year, and media reports commented favourably on the quality. A small amount of wool had been shipped from the Bay of Islands a few months before. Grown on Māori land, shipped by

Hugh Cameron uses a helicopter to spot merinos on Otematata Station. While the chopper can speed things up, the bulk of the work is still done the way it has been for generations with shepherds, dogs and horses. Much of the property hasn't changed since his great-grandfather and namesake Hugh Cameron arrived in the Waitaki Valley at the end of the 19th century.

whalers across the Ditch, wool was off to a modest but hopeful start as a New Zealand industry.

Much of the industrial revolution in Britain and other parts of Western Europe had its origins in textiles, and at the heart of that industry was wool, which also shaped the land-tenure traditions in the English countryside as the aristocracy increasingly forced peasants off their small holdings. Many were forced to emigrate to British colonies, and one of the skills they took with them was their knowledge of sheep farming.

For New Zealand, that meant a rapid expansion of sheep farming across the Wairarapa, Canterbury Plains and other regions of extensive pastoralism, then later into the high country. In areas such as these, the large expanses of native grasses provided an ideal beachhead for sheep to get established. Government purchasing agents targeted these areas for the same reasons. The clearing of forest and the introduction of imported pasture varieties followed.

Cameron's ancestors were among those first migrants to New Zealand, and it was the native grasses of the hill country that gave them a place to start. But they had no idea what to expect when they boarded the boat in Scotland.

"To say that it was a punt is an understatement," he says. "It would have been like going to the other side of the moon. That probably showed how little choice they had or how few opportunities they had where they were."

It took a while for them to get established in New Zealand, with the boys working as shepherds before buying a property at Aviemore in 1892. Later, two of the sons bought Otematata, and the family have been there ever since—more than a century running the same breed on the same block.

Like many high-country stations, Otematata is in three bands—the highest is nothing but jagged rock and native tussock. While the British breeds, such as Romney, did well on the lowlands because of their resistance to foot rot, merinos were uniquely >

suited to the mountainous terrain and the harsh conditions.

The different qualities of the breeds also meant the New Zealand sheep industry developed on two distinct lines, based on the thickness of the wool—a thickness measured in thousandths of a millimetre, or microns. Merino is typically less than 20 microns and as fine as 12, while the coarser wool of Romneys and other breeds—which make up the majority of New Zealand's flock—is in the region of 30 to 40 microns.

"There's two sorts of wool," says Cameron. "There's wool that you wear and there's wool that you walk on. Merino is obviously the fibre that you wear. It was this soft fibre you could be comfortable in. It had huge value compared to other coarser fibres that have been used for coverings or textiles."

The story of wool in New Zealand can be usefully reduced to the 100-year commercial trajectory of those two fibres. Wool for walking on, wool for wearing—thick and thin. It's the tale of an industry that would dominate New Zealand, define New Zealand, decline, then rise again. Sort of.

THE SHEARING MACHINE has gone quiet for lunch. It's a scorching day in Feilding, and Richard Brown's Romney ram lambs are loosing their fleeces to the shears of David Hunt.

Over toasted sandwiches, Brown grimaces when the price of wool is mentioned. After a bit of rumination, he comes up with a back-of-the-envelope calculation that paints a stark picture.

"Three bales of wool would buy a Holden car when I started farming. Now it would buy you the same Holden car second-hand. Although it probably wouldn't even do that—they're probably collectors' items now...

"I can still remember in the 90s sitting in the back of Wool House in Wellington. There was a guy sitting up there with a graph. Prices

John Cochrane droves a mob of merinos during the autumn muster on Otematata Station in North Otago. While it was the Romney—alongside other British breeds—that underpinned the New Zealand wool industry for decades, the national flock has dwindled from 70 million in the early 1980s to just under 30 million today. Merino numbers, however, have stayed relatively constant.

PRICES FLAT-LINED AND HAVEN'T SHIFTED SIGNIFICANTLY SINCE, WHILE COSTS HAVE GONE THE WAY OF INFLATION. ADDED UP, THE TRUE VALUE OF COARSE WOOL HAS BEEN STEADILY DECLINING.

fluctuated and he said we were in just another one of these dips and it was going to go up. Well, the dip has never come back up again," says Brown.

The subject of the Wool Board is a bit of a sore point for sheep farmers. While there was a general agreement about dismantling the government agency that had held sway from 1944 to 2003, there was little agreement on what to replace it with. While the likes of the Dairy Board were absorbed into Fonterra, the wool industry fragmented in a leadership vacuum. Not only that, money and intellectual property that had been built up for wool promotion were gradually frittered away. A focus on meat was touted as the way forward to make money.

"We had oodles of field days over that time telling us that wool was no good," says Brown. "So the thing was, more lambs. A lot of that wool money that had been put in the coffers was used up promoting other ways of making farming viable."

A dual-income animal became a single-income animal, with wool reduced to something that barely covered the costs of harvesting it. Prices flat-lined and haven't shifted significantly since, while costs have gone the way of inflation. Added up, the true value of coarse wool has been steadily declining.

Concurrently, the aggressive growth of the dairy industry meant that sheep farms were converted to dairy, and the national flock fell from 70 million in the early 1980s to around 30 million today.

Brown, like Hugh Cameron, is descended from Scottish immigrants, although his forebears arrived later. His grandfather had found his way to New Zealand, working on farms in the lower North Island before buying swampy country north of Feilding in 1914 that no one else was much interested in. Once drained, it proved highly productive.

Brown is one of the most respected Romney breeders in the region, if not the country. But it's not hard to detect some frustration that an industry he loves is in the doldrums. What bothers him most is that he can't do much about it.

"The problem is beyond the farm gate. Farmers are good at adapting. You tell farmers, 'We want heavier lambs,' they'll have them within 12 months. You want more milk, we'll get more milk for you. They can do it. The farmer can handle that," says Brown. "But the people who are handling it from there on in, marketing it overseas, that seems to be where we're coming unstuck."

IN ANY CONVERSATION about recent developments in the merino industry, there's a name that pops up with unfailing regularity—Brackenridge.

John Brackenridge is CEO of the New Zealand Merino Company, and comes from a family with a long connection to high-country stock.

The dissolution of the Wool Board was a long time coming for merino growers, who felt they were always playing second fiddle to their more numerous cousins on the coarse-wool side of the industry. The levies that had been charged for years by the Wool Board were often spent on activities that had little or no benefit for merino growers.

"The merino growers knew that they had a great product, and it was largely being treated as a commodity," says Brackenridge.

For many years, that commodity was sold to buyers in places such as Bradford in the United Kingdom, a city that proclaimed itself as the 'wool capital of the world' because of its 19th-century prominence in wool textile manufacturing. But as that sector declined over the second half of the 20th century, New Zealand's merino growers knew they had some decisions to make.

As the Wool Board wound down, the >

Ram lambs at Richard Brown's farm in Feilding are in varying stages of undress. Brown once had visitors from overseas who believed that sheep had to be killed to remove their wool, and were pleasantly surprised to find otherwise. Shearing is done in the heat of summer for a number of reasons—the warmth makes the skin of the sheep more relaxed making the shearing easier, and it also relieves the sheep of their winter jersey so they are cooler during the hottest part of the year.

Karajma Twomey fluffs up a fleece to blend differing lengths of wool while shearer Dave Hunt shears another ram. Wool handlers play a key role in the first stage of quality control, removing parts of the fleece that have stains and plant matter. Over a long chain of processes—human and mechanical—these short lengths will be spun into yarns hundreds of metres long and then made into different textile forms.

merino growers set up what would become the New Zealand Merino Company. One of the key focuses was to move away from the business model of auctions, which treated the product like a low-value commodity and was prone to volatility. Instead, the company began to establish relationships with clients—such as Italian suit manufacturers—who were willing to enter into supply contracts at set prices. This gave farmers certainty of income and also meant they could offer clients a higher level of quality and wool that met specific criteria.

"We've gone from 98 per cent auction to now something like 62 per cent contract," says Brackenridge. "We spent all of that time moving away from auctions."

The business model is also about more than just finding customers for high-quality wool. It's about spending money on research and development and building marketing and branding infrastructure around the product.

"In our team we've got people who've got fine arts degrees who are building digital content for stories," says Brackenridge. "We've got marketing people, we've got environmental scientists, we've got a guy with a production science PhD, so you've got this whole diversity of skill. Of course you've got the grower like Hugh, but it's also about being able to increase our value proposition through to the end market to help them sell their product so we can bring more value on a consistent basis back to the grower.

"With the end customers you only get a few seconds to capture their attention. The attributes and the benefits of a natural fibre are really important—comfort and breathability and all of those sorts of things. But for a lot of them it's more in the messaging.

"There are a lot of countries in the world that have majestic landscapes and can take photographs and connect that through to what they do. It's how you take that intellectual property and wrap it up."

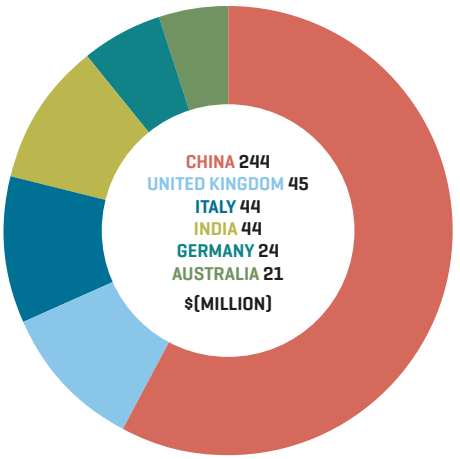
NAPIER'S SUMMER HUMIDITY has given way to a torrential downpour. Bevan Abraham guesses he won't be able to nip off to the cricket test match this afternoon, and instead leads me through the scouring plant to where the bales of wool arrive.

"We go through about a thousand bales of wool a day," says Abraham, manager of Hawkes Bay Woolscourers. "That's quite a bit of wool however you look at it."

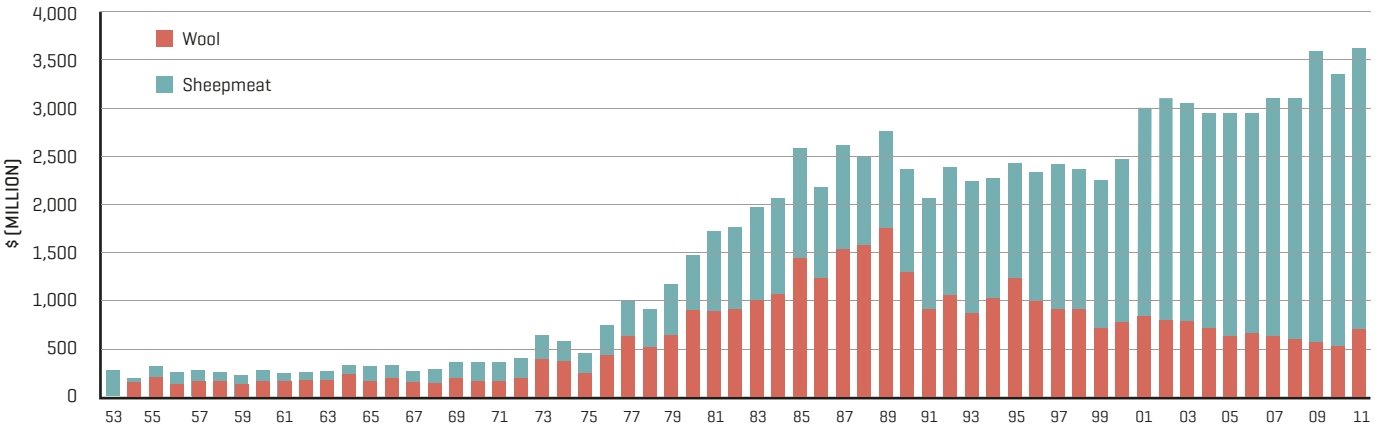
Since 1959, Cavalier Bremworth has transformed sheep's wool into fine carpet, one of the few companies that owns the manufacturing process at every stage—buying from farmers through to distributing the finished product to end users. (Most New Zealand wool is bought from farmers by traders who have little connection with manufacturers.)

A forklift equipped with a claw-like attachment picks up half a dozen bales and scoots along a well-worn path before dropping them

NEW ZEALAND WOOL EXPORTS BY COUNTRY



WOOL AND SHEEPMEAT EXPORT VALUES
1953-2011



SOURCE: STATISTICS NEW ZEALAND

A wool handler throws a merino fleece at the woolshed on Otematata Station. Because of the finer fibres of the merino breed, the fleece is denser and hangs together like a garment. The handling of merino is more labour intensive because of its higher value and the need to sort and grade it into differing specifications. The New Zealand Merino Company has built up a business model based around supply contracts, where end-customers buy at a set price over an agreed period.

in another part of the building. They are then man-handled into position before being opened and emptied into a chute, to be transformed from a raw animal product into a fine textile.

A centrifugal spinner will force out the lanoline—a greasy type of natural oil—which is then funnelled into drums and sold for use in products such as cosmetics. Other by-products and waste are turned into insulation.

The wool then travels through what are effectively giant washing machines before being dried and then repackaged into bales again. Then it's across the road to Cavalier Bremworth's spinning plant, where a long and sophisticated process takes place to create the yarn. Short lengths of fibre are dyed, blended and spun to produce rolls of yarn of varying specification.

Despite this technology, part of what makes yarn production so challenging are the qualities that make wool so sought after. The wool fibre doesn't respond as predictably as synthetic fibres, which are manufactured with petrochemicals and extruded to create smooth continuous filaments.

As a result, explains Cavalier Bremworth site manager John Williams, the process needs human intervention at every step.

"It's all done by eye. The adjustments to the dye recipes are done by eye. It takes a long time to be able to do that consistently. Colour is a very important part of what we do because it's largely what people choose their carpet on. They take a sample home and match it to their curtains and their lounge suite. They expect what we make to be the same as the sample they've looked at."

This is what makes woollen carpets more expensive than the synthetic competitors, with the wool and labour accounting for the majority of the cost of production.

"There's no point in making cheap wool products," says Williams. "The raw product is not cheap and the processing that's involved in turning it into yarn and into carpet is significant compared to sticking a bit of plastic into an extruding machine and running it out the end."

Internationally, customers are seeking many of the natural, sustainable attributes that wool has, but there's a gap between that desire and New Zealand capitalising on it.

The opportunity, says Williams' colleague Tony Waters in Auckland, is about marketing >

this manufacturing practice. "We don't promote the artisan value of it," he says. "What's a Turkish rug made out of nylon worth? Nothing. But hey, you say it's wool and all of a sudden it takes on this art form. It's a craft. Nylon is more like A-plus-B-equals-C-type stuff. But wool is steeped in history."

The sense of history is visible throughout the factory. At the last stage in the process, a staff member in the final quality-control section of the factory sits on a vast mat of white carpet using tweezers and tiny scissors to delicately trim minute dark wool fibres that may have escaped notice, a sight that may not have looked out of place in the old looms of Europe.

Around 45 per cent of Cavalier Bremworth's production is sold in New Zealand; around the same amount goes to Australia. The rest finds its way to other foreign markets, including the United States, Europe and parts of China, each market with its own idiosyncrasies.

The US is completely dominated by synthetics produced by massive domestic companies, which has meant the wool industry has had to work with large retail outlets to get products in front of buyers and to highlight the benefits of the natural material. While Europe has a tradition of woollen carpets, it has its own manufacturers and a lot of hard flooring. Standard widths also differ, meaning changes to the manufacturing process back home.

In Cavalier Bremworth's aircraft-hangar-sized distribution centre in Wiri, South Auckland, the volume of carpet the company manufactures suddenly becomes evident. A swarm of forklifts zip about, mounted with what look like harpoons. They impale rolls of carpet and then whizz off down an aisle to slide them onto a shelf. Wai Jack, the shift supervisor is signing off another delivery. He gestures towards some containers.

"Those are going to Hong Kong. There's a few going to Australia. Christchurch has been good for us."

In 2006, roughly 80 per cent of the carpets

Kurt Kelsey, Ken Turner and Junior Taurima separate out bales of clean wool into vats for dyeing at Cavalier Bremworth's yarning spinning factory in Napier. Even though the manufacturing process is highly mechanised, wool's natural properties mean it needs human intervention at every stage. Victoria Whare works on the final quality-control stage of the carpet manufacturing, looking for dark fibres that may have slipped through the processing which she removes with tweezers.

IF YOU LOOK AT OVERSEAS, ESPECIALLY IN AUSTRALIA, EUROPE, ASIA—PRETTY MUCH EVERYWHERE BUT NEW ZEALAND—IT'S SEEN AS A PREMIUM PRODUCT BECAUSE CONSUMERS UNDERSTAND THE BENEFITS. IN NEW ZEALAND, WE'VE GROWN UP WITH IT, SO IT'S JUST WOOL."

sold in New Zealand were wool, 20 per cent synthetic. However, the past decade has been tumultuous for the natural-fibre industry. Cheaper, synthetic carpets flooded the New Zealand market, aided at one point by a strong New Zealand dollar. Today, just 20 per cent of new carpets are wool. Although Cavalier Bremworth accounts for most of that 20 per cent, the switch has been aggressive.

Garth Clarke, supply chain manager, says that, as a nation, we are both complacent and self-conscious about wool, not helped by sheep jokes from across the Tasman.

"New Zealanders take it for granted, because they've grown up with wool and they see it as a commodity product. But if you look at overseas, especially in Australia, Europe, Asia—pretty much everywhere but New Zealand—it's seen as a premium product because consumers understand the benefits. In New Zealand, we've grown up with it, so it's just wool."

JEREMY MOON OF Icebreaker traces his finger along a tatty map on the wall in a quiet corner of the company's premises on Auckland's Ponsonby Rd—a line from New Zealand then up and across to encircle the United States, Asia and Europe.

"My dream was to live in this triangle... actually it's more like a diamond shape... because that's where I used to live when I was a kid; we travelled a lot. But if you're stuck here," he says, jabbing a finger at New Zealand, "what do you do?"

It was while Moon was tramping with friends in the South Island high country that serendipity turned up, in the shape of a T-shirt. >

Forklift driver Stewart Nash moves a roll of carpet at Cavalier Bremworth's distribution centre in Wiri, South Auckland, the final point of departure for the company's finished products. Just under half the carpet will be bought by New Zealand customers, followed closely by Australia and markets in the United States and Asia.

"I'd been on a five-day kayaking trip, and after day one, everyone was so sweaty and stinky. It was all that horrible old polypropylene. So I knew that there was a problem to solve. I met a merino wool grower, Brian Brackenridge [older brother to John], who gave me a merino wool T-shirt that he'd made. Just the feeling of that totally blew me away. This T-shirt wasn't itchy at all, it didn't hold odour at all, it regulated my temperature, it felt nice and lightweight. I thought, maybe there's a natural alternative to all this synthetic junk that's in the market.

"The idea right from the start was to build an international brand from New Zealand. I raised $200,000 and spent half of that working with designers... before we even had a product we worked on the brand story: using a natural fibre to encourage people to go into nature. We call it born and worn—this fibre born in nature and worn in nature."

However, Moon's first small-scale production run was dealt an early blow. It came in the form of a letter from merino grower Mandy Cameron, Hugh Cameron's wife. Her blunt assessment of the product was not flattering. A "disgrace to the industry", she wrote.

"She was upset because she had some garments that were falling apart," says Moon. "They were falling apart because, well... I didn't know why."

Moon spent some time in the woolshed of another high-country farmer, Jim Murray, to try to understand the variation in the fibre that could happen on the farm. While there, he developed a deeper understanding of the qualities of the fibre, of tensile strength and what that meant for the production of the final garment. But it also meant that farmers were brought into a closer conversation with their customers.

"The growers were totally divorced from the whole process. They just put wool in bales and shipped it off and had no idea if they'd done a good job or a bad job or what product was going to be made from it. That's when we started working directly with the growers.

"So I owe Mandy a great debt for standing up for quality and for forcing me to understand how our practices needed to evolve."

Today, growers know the specifications of the wool required, and in return for providing that level of quality, they get a premium price. That kind of feedback loop has echoed through Icebreaker ever since—it's a "holistic system", says Moon.

"We couldn't be successful building an international brand from New Zealand unless we started from the market and worked back," he says. "No one's waiting for stuff from New Zealand. They all love us as a country to visit one day, even though most people never will.

Graphic designer Nikki Mann, creative director Gareth Gardner and digital designer Joris Besamusca at Icebreaker's head office in Ponsonby, Auckland. It might be a long way from the high country stations in the South Island, but the marketing material they create is inextricably linked to the qualities of the fibre. "You start off trying to make a natural product but you end up trying to build a natural company," says CEO Jeremy Moon. At Icebreaker's retail outlet on Ponsonby Road [right] the merino wool at the heart of the company's brand is front and centre.

But they don't know whether products from New Zealand are good or unsophisticated... 'Isn't it a long way away? Does that mean there's high carbon credits? Do you guys know the trends? Is this actually cool?'... New Zealand presents as much of risk as it does an opportunity."

Of a staff of 500, about 100 Icebreaker employees are based in New Zealand, while the rest are in offices in the company's main markets in the northern hemisphere. Their job is to know their customers inside out and feed that information back up the line. While the production now happens in China and Vietnam, these countries are thoroughly vetted so that they meet the standards that their customers expect.

"You start off trying to make a natural product but you end up trying to build a natural company," says Moon.

Icebreaker has transformed the fine-wool industry and created a model for those in the coarse-wool sector to aspire to. It's also changed the way producers like Hugh Cameron think about his own farm and business.

"If you went back 20 or 30 years ago, those unique qualities that merino wool has were its selling points," says Cameron. "Now it's about the brand and how the end user feels about wearing that garment. If you can tell a good story about how it's ecologically grown, it's sustainable, the animals are well treated, all that has a warm feeling for the consumer, which is now probably a bigger thing than the actual qualities of the fibre.

"It's a natural fibre run in a sustainable fashion. That's the nature of the game now." ■

Aaron Smale is a regular contributor to both New Zealand Geographic and its stable-mate Mana magazine. He was formerly the editor of the latter and also Young Country magazine.

FROM THE ARCHIVE
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