

September/October 2008

AgriSuccess

JOURNAL

Cutting your diesel fuel bill

Easy ways to save energy

Finding food that flips
your switch

Drive away hunger

Back to basics

Brown Creek Ranch – a showcase
cattle operation winning
environmental stewardship awards





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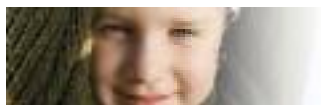
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On the cover:

The Lane family of Brown Creek Ranch west of Claresholm, Alta.

Cette publication est également offerte en français.

AgriSuccess Journal has been honoured with industry and trade publication awards, including:

- The Felix Schmaltz Award for General Periodical; Bronze 2006, 2007
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Letter from the editors



FROM KEVIN HURSH AND ALLISON FINNAMORE

All too often, the line between information and advertising is blurred. Companies pay for product placements within television shows and movies. Magazine articles are sometimes thinly veiled advertorials.

AgriSuccess Journal is a publication of Farm Credit Canada, but we've tried to establish clear boundaries between the stories of journalists and the messages from FCC. As you page through the Journal, it should be easy to distinguish one from the other.

All the stories coming from agriculture journalists across the country carry a byline – the name of the author. There are no ghost writers.

The theme of each edition and the story ideas are determined by the FCC editorial board with direction from the Vision panel, made up of producers from across the country. Themes and stories are chosen for how useful and interesting they will be for readers.

There's no hidden sales pitch or ulterior motive. The mission statement is at the bottom of this page.

Since this is an FCC publication, you won't typically find other farm lending institutions quoted in the stories. As well, the Journal must remain non-political. Occasionally, FCC officials are quoted in stories, but only when they are appropriate sources.

The theme of this edition is energy conservation. We've done previous stories on alternate energy, everything from biofuels to wind farming, but we had never devoted much ink to ways of cutting energy consumption. Our two feature stories delve into this topic.

You'll note that the feature on diesel fuel does not promote buying new tractors, combines and high clearance sprayers as a way to save significant amounts of fuel. And the feature on easy ways to save energy doesn't extol the virtues of complete retrofits for existing barns.

FCC relationship managers would be happy to talk to you about your financing needs for equipment and facility upgrades, but Journal stories are not used as promotional tools. That's the way it should be.

If you'd like to pass along comments or future story ideas, please e-mail info@AgriSuccess.ca or call 1-888-332-3301.

AgriSuccess Journal is a magazine dedicated to helping producers advance their management practices by providing practical information, real-life examples and innovative ideas that foster personal solutions.

AgriSuccess JOURNAL

This month's contributors

Kevin Hursh, Editor

Kevin is a Saskatoon-based consulting agrologist specializing in communications. He has been an agricultural journalist and broadcaster for more than 25 years. Kevin also operates a grain farm near Cabri in southwestern Saskatchewan growing a wide array of crops.

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The editors and journalists who contribute to AgriSuccess Journal attempt to provide accurate and useful information and analysis. However, the editors and FCC/AgriSuccess cannot and do not guarantee the accuracy of the information contained in this journal and the editors and FCC/AgriSuccess assume no responsibility for any actions or decisions taken by any reader of this journal based on the information provided.

The views expressed in this journal are those of the authors and do not necessarily reflect the opinion of the editor or FCC/AgriSuccess.

Manitoba producers look to grass-fed beef

BY RAE GROENEVELD

A handful of cattle producers in Manitoba are trying their hand at producing grass-fed beef.

“The protocol is to not feed any grain,” explains Glenn Friesen, forage business development specialist with Manitoba Agriculture. “We also eliminate the growth hormones and antibiotics.”

The eight producers who are part of the Manitoba Grass-Fed Beef Association think they have good reason to price their beef at a premium. The Omega-3 fatty acids and conjugated linoleic acids (CLAs) found in grass-finished

beef may have advantages relating to heart attack, stroke and cancer reductions. The CLAs are of particular interest as they are only available in ruminant grass-fed animals.

“There are definite health benefits of grass-fed beef over conventional grain-fed beef,” says Jim Lintott, chairman of the association. The increasing cost of feed grain makes raising grass-fed beef even more attractive to producers.

The big challenge is getting consistency of product. It isn't easy to produce the high-energy forage needed for the finishing stage so the animals develop as consumers have come to expect.

Time to lock up next year's fertilizer supply?

BY KEVIN HURSH

There were sharp increases in fertilizer prices heading into this spring. In most years, producers can save money by booking their fertilizer requirements well in advance.

The George Morris Centre, based in Guelph, Ont., prepared a report for the Canadian Fertilizer Institute entitled “Fertilizer Price Volatility, Risk, and Risk Management Strategies.”

The report, available at www.georgemorris.org, examines ways that producers may be able to cut their price and availability risk.

While hedging and cross-hedging strategies for fertilizer have serious limitations, the report notes that fertilizer prices can typically be locked in six to 10 months in advance of delivery either through agri-retailers, buying groups or co-operatives.

Think twice before removing old farm buildings

BY OWEN ROBERTS

A few years ago in Britain, low prices prompted Birmingham-area farmer Gordon Davies to sell off his herd. And that made his dairy equipment obsolete, including his 250-year-old red-brick and oak-beam milking sheds.

But rather than tear down these classic farm buildings, Davies used some of the herd sale proceeds to convert the milking sheds into unique pastoral offices. After all, he was just 14 miles from downtown Birmingham and its one million people. Surely someone, he thought, would like to live in the city and work in a classic country setting.

He was right. With refinishing and paint, as well as a high-speed internet service (which was crucial), he attracted five businesses, including food analysts, landscapers and safety and hygiene specialists.

Now, the family is realizing \$200,000 in rental income every year from those sheds.

How about your old outbuildings?

Avoid the pitfalls in energy analysis



BY KEVIN HURSH

Wanting to reduce energy costs is a natural inclination. Unfortunately, for various reasons, it can be tough to get a good handle on your current energy consumption. Without knowing where you're at, how do you know if changes are paying off?

Field crop producers probably know or can readily calculate their overall fuel cost per acre. However, knowing how much fuel each field operation uses requires some diligent documentation.

Does that new combine you leased really use fewer litres per acre or are the conditions just different?

More farms have meters on their fuel dispensers these days and that can be a great investment. Still, in order to have meaningful numbers, you have to diligently record how much fuel goes into each engine and how many acres are done on that fuel.

Unfortunately, there are variables you can't control. One year may be wet and another dry, which affects implement draft. A heavy, wet crop will require more fuel per acre for combining than a crop that's lighter and drier.

Does that new combine you leased really use fewer litres per acre or are the conditions just different?

Some ballpark estimates are available for farm implement fuel consumption. These figures may be useful for budgeting purposes and comparisons, but it's always preferable to have your own numbers.

Alberta Agriculture and Rural Development has a Farm Machinery Cost Calculator that includes built-in fuel consumption estimates. You can change the price of fuel in the calculator to keep up with market changes. Just go to www.agric.gov.ab.ca and look under Decision Making Tools.

Saskatchewan Agriculture publishes a Farm Machinery Custom and Rental Rate Guide each year. The guide

is also available at www.agriculture.gov.sk.ca. Look under Management and then Financial Planning.

A 350- to 399-horsepower four-wheel-drive tractor has a suggested fuel consumption of 50 litres per hour in the Saskatchewan Agriculture publication. Tractors of 500-plus horsepower are listed at 68 litres per hour. While these may be good starting points for analysis, your numbers may be quite different.

The same weather variability that complicates field crop analysis creates the same difficulty with everything from greenhouses to dairy farms. One winter is likely to be colder or warmer than the last, and that will affect heating and ventilation requirements. Humidity, sunshine and wind speeds also play a big role.

We're all worried about the bottom line, but for accurate comparisons, it's important to know the actual energy consumption. Rising costs can increase energy bills even if consumption is being reduced. If the natural gas bill is \$5,000 one year and \$7,000 the next, that may or may not mean that consumption increased.

Here's another complicating factor. On many farms, it's tough to separate the energy consumption of the farm business or businesses from the farm homes. Everything is on the same bill.

As costs continue to escalate, it's going to be more important than ever to have a handle on actual energy consumption numbers for all aspects of the farm business.

That means plotting a course through the minefields that threaten your data collection and analysis. ❖



Cattle producers go back to basics

BY D. LARRAINE ANDREWS

When Shaunere and Brian Lane acquired Brown Creek Ranch in 1997, they had no idea that 10 years later they would win both the Alberta and the National Environmental Stewardship Awards.

The awards recognize the impressive accomplishments in grassland and riparian management on their

The goal is to ensure no field is grazed more than once a year and never at the same time each year.

160-head cow-calf operation located deep in Alberta's Porcupine Hills south of Calgary. In fact, it was the remarkable turnaround in such a relatively short period of time that impressed many of the judges.

Shaunere recalls that the ranch was in such rough shape when they took it over, "it couldn't even sustain a family." The operation was effectively "one big field" with no grazing management plan and creek banks badly eroded by cattle with direct access to the water. Brian says at least 70 per cent of the total grazing land was so overused it could not properly support livestock.

Now, after a decade of hard work, the land reflects their efforts to bring it back to a self-sustaining, productive unit where native grasses thrive. Riparian areas have recovered to the point that shrubs and trees once again line the banks, songbirds flourish and fish may soon return.

Brian maintains that his greatest asset is his grass – without it he doesn't have a sustainable cow herd. So over the years, the Lanes have implemented a

system of cross-fencing, combined with rotational and swath grazing.

The goal is to ensure no field is grazed more than once a year and never at the same time each year. Cattle are moved each spring to leased Crown land west of the home place, allowing the ranch lands to rest and rejuvenate during the growing season.

Natural springs have been developed using the elevation of the hills to feed a gravity-driven system where water flows year-round, diverting cattle from the creek.

With impeccable timing, Shaunere launched her bed and breakfast business the same week that BSE shut the U.S. border to Canadian beef imports in May 2003. She originally saw the venture as an opportunity to remain at home and raise her four children while earning additional cash flow for the ranch.

But the bed and breakfast quickly became an important asset when BSE struck the entire industry and has steadily developed into a valuable component of the overall operation. Not only does it allow her to indulge her keen interest in welcoming people from all parts of the world – some from as far away as China – it also allows her to help visitors gain an appreciation for the Canadian beef industry. "We hope they leave with an understanding of how a well-managed cattle operation can be conducted without damage to the environment while making food safety a priority."

The Lanes want to "see beef raised in a healthy self-sustaining environment." They've certainly come a long way to accomplishing that goal. To find out more about the Lanes and Brown Creek Ranch, check out www.browncreekranchvacations.com. ♦



The incredible purchasing power of kids



BY ALLISON FINNAMORE

There's an estimated US\$18 billion in household spending influenced by those between the ages of three and 11, according to a 2005 study by Marketresearch.com. That age group is nearly 36 million strong in the United States, and spending for those little darlings isn't expected to slow any time soon.

Marketresearch.com estimates the kids' market will experience substantial growth during the next few years, reaching \$21.4 billion in disposable income by 2010.

Spending for those little darlings isn't expected to slow any time soon.

At the same time, families spend about \$115 billion on food, clothing, personal care items, entertainment and reading materials – key kid-consumer areas. Half of that amount, says Marketresearch.com, is

gobbled up by food expenditures.

It's enough to make my bank account ache. And even though these are American figures, similar spending habits can be expected in Canada.

Finding a place in the wallets of our country's parents and the minds of our children can be tricky. Yet for the agriculture industry, the chance to educate our youth about the source of their food, the career of farming and the love of the land could, arguably, skirt the kid-buying-power issue and go directly to agriculture education.

Whatever the intent of agriculture education programs, it's certain that at some level, agriculture producers are connecting with children through these programs. The programs vary – some focusing on environmental stewardship, animal care, bio-energy or even growing a sunflower.

Simple awareness-building and opening the door for children to ask questions about the source of their food can often be effective. During a recent

visit to my children's school, freshly painted artwork of a herd of Holsteins decorated the hall outside a Grade 1 classroom. Imagine the conversation those children had as they planned, painted, snipped and coloured.

Other programs, usually for older children, are more in-depth and hands-on. One New Brunswick hog producer invited students to tour his hog operation, giving them a first-hand view of what goes on inside the bio-secure barn. The students sent a change of clothing in advance of their trip so bio-security was maintained.

For other agricultural organizations, fairs are perfect venues to set up displays for children on field trips.

Judging the effectiveness of these awareness programs is nearly impossible. But our children are indeed little sponges, absorbing messages from television, school and friends. By talking about farming to kids in urban and rural settings, we're building awareness and, yes, hoping they will wield a bit of their buying power the next time they're at the grocery store with a parent. We're also helping set the stage for the next generation of consumers. Now that sounds like money well spent. ❖



How to cut your diesel fuel bill

BY KEVIN HURSH

For field crop production, fertilizer and crop protection products have bigger price tags per acre than diesel fuel. However, there are ways to trim diesel consumption without hurting crop production.

When diesel was less than 40 cents a litre, this may not have seemed as important. At triple that cost, the numbers are significant.

The most obvious way to cut diesel consumption is to reduce the number of field operations.

In many parts of the country, one-pass direct seeding has become the norm. The fertilizer – whether in dry, liquid or anhydrous form, or a combination of forms – is placed in the soil at the same time as the seed.

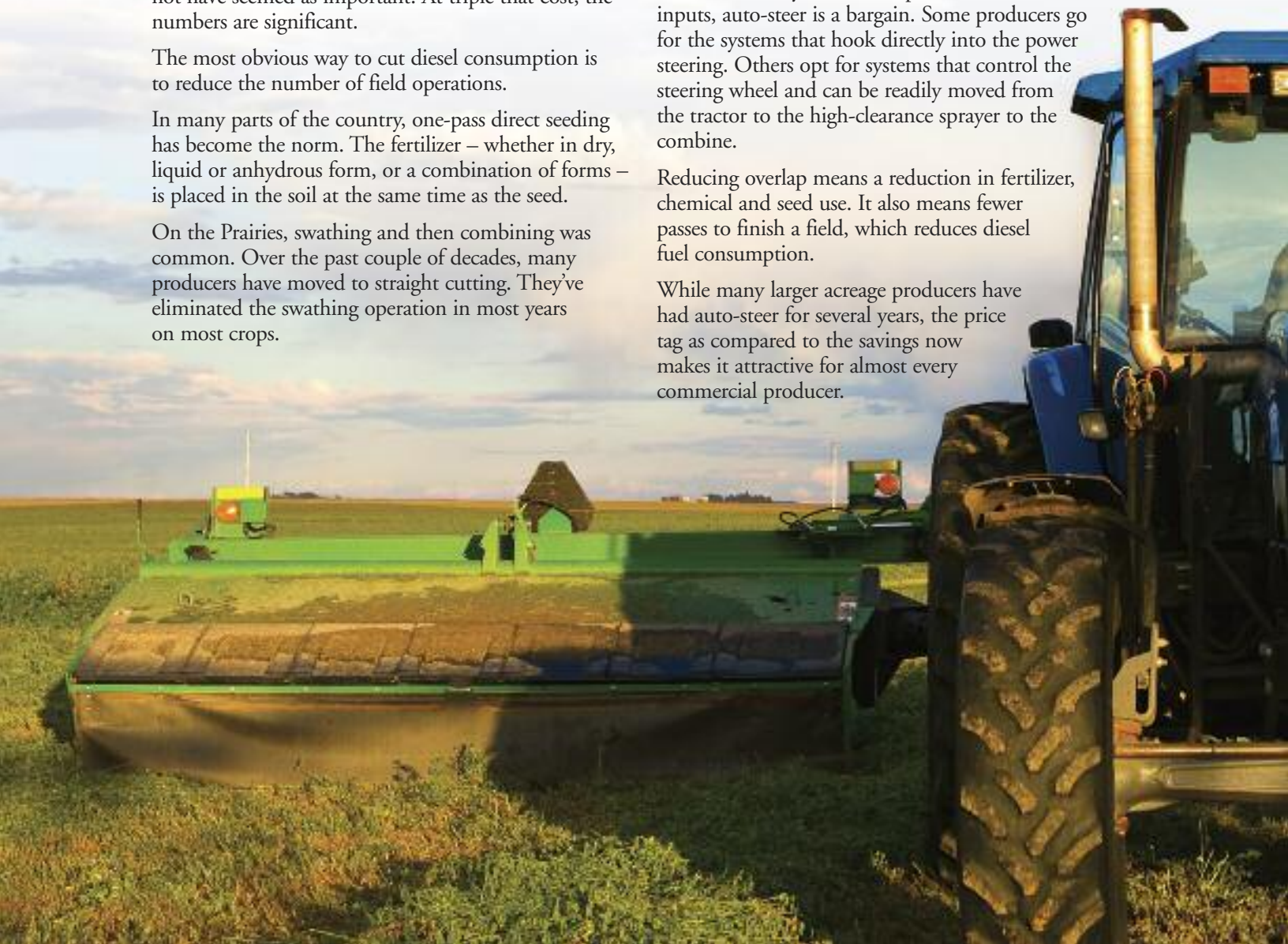
On the Prairies, swathing and then combining was common. Over the past couple of decades, many producers have moved to straight cutting. They've eliminated the swathing operation in most years on most crops.

Canola is a notable exception. While various mechanisms are being tried to facilitate straight combining, the vast majority of canola acreage is still swathed to avoid shattering losses from the ripe pods breaking open and spilling the seeds.

Recent years have seen a revolution in the use of GPS and auto-steer systems. Compared to the cost of inputs, auto-steer is a bargain. Some producers go for the systems that hook directly into the power steering. Others opt for systems that control the steering wheel and can be readily moved from the tractor to the high-clearance sprayer to the combine.

Reducing overlap means a reduction in fertilizer, chemical and seed use. It also means fewer passes to finish a field, which reduces diesel fuel consumption.

While many larger acreage producers have had auto-steer for several years, the price tag as compared to the savings now makes it attractive for almost every commercial producer.



What about the differences in diesel fuel consumption between different tractors, combines and high-clearance sprayers? Are there diesel fuel savings from picking the right makes and models or from trading up to newer power units?

The short answer is yes, there may be savings. Practically, though, there are many other considerations that are more likely to govern the kind of tractor or combine you use.

There are no independent published test results for makes and models of combines and high-clearance sprayers, but the Nebraska Tractor Test Laboratory has a long history dating back to 1920.

Power take off (PTO) horsepower is measured. On tractors over 100 horsepower, drawbar pulling power is measured. Three-point hitch lift capacity is evaluated, as is remote hydraulic performance. The power performance and fuel consumption is evaluated at varying engine speeds.

David Morgan, assistant director of the Nebraska Tractor Test Laboratory, says it's the power stats rather than the fuel consumption numbers that interest producers the most.

Morgan cites factors such as brand loyalty, dealer loyalty, service availability, purchase price and expected trade-in value as bigger factors than fuel consumption when most producers make their tractor-buying decisions.

"More attention is being paid to fuel costs, and you can compare fuel costs from our test reports on tractors of comparable horsepower," Morgan explains. However, he says the differences between tractors aren't usually significant enough to override all the other factors that go into buying decisions.

"The test reports can show the advantages of shifting up and throttling back," Morgan notes. "Some tractors do better at reduced engine speeds than others."

All the test reports prepared by the lab since 1998 can be accessed free of charge from the lab's website at tractortestlab.unl.edu. Older tests are available in hard copy for a small fee. The lab is working on getting older reports available electronically.



Gordon Kent, assistant professor of Agriculture and Bioresource Engineering at the University of Saskatchewan, agrees with Morgan's assessments. In addition to teaching students about farm equipment management, Kent farms near Riverhurst, Sask.

"Fuel economy isn't usually a good reason to trade for a new tractor," Kent explains. There aren't usually large differences in fuel efficiency between older and newer tractors as long as older tractors are in good repair.

"If a tractor smokes, there's usually a major fuel issue. Modern tractors shouldn't smoke, even under full load."

While most tractors should be in the same range for fuel consumption at a particular horsepower rating, Kent notes that there are large differences in the draft requirements of various implements – in other words, how much power it takes to pull them. This is especially true for seeding outfits.

Unfortunately, useful information can be difficult to obtain and analyze.

Different ground openers can have dramatically different draft. This is often masked by the power requirements of pulling the implement, pulling the air cart filled with seed and fertilizer, and running the hydraulic fan that delivers the seed and fertilizer.

Combine that with different soil types, varying soil moisture conditions and varying terrain from one field to the next, and it can be difficult for producers to know whether or not one seeding outfit requires more horsepower than another.

That brings us back to the surest ways to cut your diesel fuel bill. Select, properly adjust and maintain field equipment to minimize draft. Reduce the number of field operations whenever possible. And use auto-steer systems to reduce overlap and keep outfits running in a straight line. ❖

Finding the optimal pattern

BY LORNE McCLINTON

For generations, having straight, parallel furrows was the hallmark of a good farmer. Using a GPS-based auto-steering system can largely eliminate lateral overlaps, which costs producers time and wastes inputs.

Taking time to pre-plan how to work a field can save even more according to guidance system expert Ron Palmer, head of the electronic engineering program at the University of Regina.

"Farmers instinctively are doing the obvious things right," Palmer says. "They choose the longest paths to make as few turns as possible in the headlands. They don't do as good a job planning how to work a field. A classic example is having to make a full 60-foot pass with your air drill to finish off the last six-foot wide strip. With a bit of pre-planning, you could finish up right on the mark."

It is theoretically possible to cover a 160-acre field (one-half mile by one-half mile, or 2,640 by 2,640 feet) in exactly 44 passes with a 60-foot implement. This means that the baseline travel distance for this field should be 22 miles.

"The question is how much further do you actually need to travel to cover that field due to overlap and turning," Palmer says. "Studies show farmers typically drive 20 to 25 per cent further to cover a field.

Using auto-steering could cut this by eight per cent, but that still leaves us with 15 to 16 per cent inefficiency. I'm not sure we can fix everything, but there are some mitigating actions we can take to reduce that significantly."

Palmer says a good place to start is by taking a field outline from either your yield monitor data or one captured with a handheld GPS and loading it into your computer. The outline should accurately show where all obstacles, like brush, sloughs, creeks, yard sites and power lines, are located. The next step is to sketch out the most efficient way to drive a field. The trick is to avoid as many turns and overlaps as possible. This means choosing the longest paths and avoid seeding on the diagonal and preplanning the best ways to work around any obstacles.

The headlands are another major area for waste, and big equipment just makes the problem worse. Large equipment takes more room to turn around; this means driving deeper into the headland to turn and often driving large teardrop patterns to get lined up again. John Deere and other companies are perfecting systems that will make an optimized U-turn at the headlands, Palmer explains.

He says large equipment is ultimately limiting farm efficiency. Palmer believes that one day farmers will abandon large equipment in favour of fleets of small, driverless tractors and fully automated field equipment. ❖

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Some easy ways to save energy

BY OWEN ROBERTS

Experts point to a plethora of approaches to reduce energy use on the farm. Some are new and technology driven while others are tried and true, generated over time as a result of the energy crisis of the 1970s.

But while saving energy may have been seen as an eco-measure in the past, now it's a matter of economics.

Start with a common sense approach rather than a complete makeover.

Getting started is easy. A multitude of energy-saving tips are available from power companies, governments, manufacturers and farm associations. Advice is also plentiful from the likes of eco-warriors. But for the most part, revolutionary approaches

to energy savings are not necessary.

Instead, start with regularly scheduled maintenance, adjustments and replacements, as necessary – in other words, a measured, common-sense approach rather than a complete makeover. That begins with a day-to-day look at existing energy use to see where you stand.

That manner of review quickly shows that energy savings can begin even before you roll out of bed in the morning. For example, the temperature on the water heater can often be dialed back a bit without

sacrificing the luxury of a hot shower. It requires some experimenting to get it just right, but usually the heat can be dropped a few degrees with little effect. Any gains in efficiency might be lost, though, if the water heater is hampered by sediment build-up in the tank. Simple, regular flushing can remedy that.

On a bigger level, a farm house – not to mention the barn – will be a lot more comfortable in the morning (and afternoon, and evening) if it's properly insulated. Tight-fitting windows and doors, caulked and weather stripped, are the place to start. Rodents appreciate comfortable buildings too, so look for their entry points, because they've likely compromised your sealing and caulking efforts. The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) suggests insulating the outside walls of farm buildings with greater than R20, and ceilings with more than R30.

Lighting is one of the biggest areas of potential savings. Energy specialist Jason Price with Alberta Agriculture and Rural Development says incandescent bulbs should be replaced by compact fluorescent lamps (CFLs), which use two-thirds less energy and last 10 times longer than incandescent bulbs. That means a savings of \$60 over the life of the CFL, or \$2 per lamp replaced per month. Some cheaper, knock-off CFLs can have “disappointing performances,” he says, and suggests looking for EnergyStar CFLs to ensure quality.

Older tubular fluorescents can also be inefficient. Price says to look at the tube diameter: T12 lights, which are older and 1.5 inches in diameter, should be replaced by T8 (one-inch diameter) lights with electronic ballasts. Standard T8s will save 10 to 20 per cent, while high performance T8s will save up to 35 per cent. Price says the fixtures are the same for both, so changing just involves switching out the magnetic ballasts that go with the T12s for the electronic ballasts that go with the T8s.

Barn fans are another source of inefficiency. Like house fans, they attract dust and dirt and need to be cleaned regularly. "Regular maintenance of fans is easy and goes a long way," Price says. "Keep the belts tight, keep the moving parts lubricated."

The difference in efficiency (measured in cubic feet per minute per watt) between a clean and dirty fan is as much as 40 per cent. But it's not as effective as dual ventilation – an Ontario study showed natural summer ventilation and mechanical winter ventilation saved 80 per cent. A followup study of 65 farms showed that by changing lighting, fans and pumps and auditing

energy use, the participating farms collectively saved a total of \$135,500 a year, or on average \$2,000 per farm.

Big efforts are available for those so inclined. For example, in Ontario, Hydro One is offering financial incentives as part of its Electricity Retrofit Incentive program, which covers a portion of the purchase of energy-efficient technology. These include fluorescent lighting systems, three-phase premium efficiency motors, air conditioning units, transformers and ventilation systems.

"Education, training and awareness are key items to improve farmers' understanding of this cost of production," says Steve Clarke, energy and crop engineering specialist with OMAFRA, "and to show that energy-efficient equipment is not of inferior quality to standard equipment."

A retrofit is a huge undertaking compared to simple energy-saving measures, such as turning down the heat on a water tank. But no matter what the approach, producers need to believe it's worthwhile and that the technology is not junk. ❖



Talking yourself into a successful farm transfer



BY HUGH MAYNARD

Succession planning – it’s all about the people, not about the pie and how you’re going to divide it up.

Unfortunately, that’s not the way most people approach the transfer of the farm from one generation to the next. The approach to those discussions – negotiations, if you will – has a lot to do with a successful outcome.

The first step is to talk and talk and talk – and then talk some more.

A typical approach to succession planning is to follow the tried and true: positional bargaining. This is where the owner states what he wants and the would-be purchaser makes a counter-offer, and so on. It works pretty well in horse trading and when selling a house to a stranger. But it allows a win-lose scenario – a little bit less for you means a little bit more for me. It also sets up a shrinking pie as the bargaining process typically starts high and lessens in value.

That doesn’t work so well with family, where there are longer-term stakes and continuing relationships to deal with. A better strategy in these negotiations is the mutual-gain approach. This method explores interests in a non-committal way and transforms positions (“I want \$1 million for the farm”) into interests (“I need a house and stable income once the farm is sold”). It can form the basis of discussions to see where value can be added rather than taken away.

The first step is to talk and talk and talk – and then talk some more to find out where everybody’s (farmer-owner-parents, young producers in waiting, other children or siblings) true interests lie. The way to do that is to create a space for dialogue where everyone can put all ideas on the table – big and small, even seemingly stupid ones, to see how large that pie can actually grow, and how it’s going to be baked.

Sharing information – ideas, needs, feelings – rather than withholding it becomes the key.

Once the pie is baked, you figure out how to serve it – distributing the value. So, the \$1 million becomes a house paid for with a mortgage through the farm, topped up with a monthly salary payment along with shares in the corporation that pay an annual dividend with a buy-back agreement over time. Or, make up your own combo-pack that responds to your – and everybody else’s – interests in the outcome of the farm succession.

By exploring interests rather than taking positions, the \$1 million can be turned into a variety of options that add value to the cash. The money is still there, just distributed in a different form. The young producers taking over eased their cash flow concerns, mitigated some risk and had some loan money to invest in upgrades. The retiring producers secured their equity while providing stability for their sunset years.

Talk may be cheap in some circumstances, but in farm succession planning, the more you talk, the better the deal. ♦



Put kids' safety first

BY MARK CARDWELL

As dreams in farming go, none have more appeal for parents than working alongside their children in a life cycle that can span generations. Sadly, those dreams turn to tragedy on many Canadian farms with the accidental death of a child.

Why is it appropriate for small children on a farm to have access, often without supervision, to places or machines that pose a real threat to their security and well-being?

It's well known that farming can be a dangerous way to make a living. According to statistics from the Canadian Agricultural Injury Surveillance Program (CAISP), a federally funded program that tracks and identifies agricultural injury problems and designs prevention initiatives, there were 1,682 agricultural fatalities across the country between 1990 and 2004. That makes agriculture one of the most hazardous industries in terms of fatal injury in Canada, and makes our country the third most deadly for farmers in the world.

Another recent analysis by CAISP for the same 14-year period shows that our farms are almost as dangerous and deadly for the kids who live on them. Agricultural injuries led to hospital stays of at least one day for 2,838 children and youth aged one to 19, which is 19 per cent of all farm accident-related hospital visits. Another 274 were killed in what the report calls "agriculture injury events."

That's an average loss of nearly 20 young lives each year, or almost one in five of all farming fatalities in that period.

Much of the data in the report speaks volumes about the scale of human tragedy involved, like the fact that

70 per cent of the kids killed were children or relatives of property owners, or that the one- to four-year-old age group had the most fatalities. It also shows that two-thirds of deaths resulted from kids being run over, rolled on or entangled in farm machinery, and that the majority of those deadly incidents occurred in July and August, when kids are out of school and spend more time at home.

Such recurrent and predictable patterns of injury suggest to the study's supervisor, Dr. Rob Bison, that many Canadian producers with young children need to rethink the setup of their operation.

"The real issue is the fact that small kids are being given access to what is essentially an industrial site," says Bison, an emergency physician, research epidemiologist and professor at Queen's University in Kingston, where he manages CAISP programs and studies agricultural injuries.

As a first step to preventing the injury and death of children on family farms, Bison says producer-parents must see and consider their operation as two distinct units: the farm/home site and the farm/work site. "You can't bring a three-year-old on an industrial site," he says. "So why is it appropriate for small children on a farm to have access, often without supervision, to places or machines that pose a real threat to their security and well-being?"

In addition to recommending the report and other farm injury-related documents on the CAISP website, www.caisp.ca, Bison suggests checking out www.nagcat.org, the website of the North American Guidelines for Children's Agricultural Tasks. There, parents can find age-specific information about the kinds of agricultural jobs that are suitable for kids between seven and 16.

A quick visit might help keep both a dream and a child alive. ♦

Finding food that flips your switch



BY OWEN ROBERTS

If you thought fine tuning livestock diets was already an exact science, hang on to your hat. Through advancements in a field called nutrigenomics – the study of how nutrition affects gene expression – researchers are looking beyond molecules and micronutrients to understand how, on a genetic level, feed makes animals grow faster, better and healthier.

Nutrigenomics is another example of how the agri-food sector has branched out beyond production agriculture.

They want to know how specific ingredients turn genes on and off in specific animals, and eventually in specific people.

“Based on a person’s or a group’s genetic makeup, nutrigenomics may allow us to identify particular traits or compounds in foods that would have a health-promoting effect on them,” says Dr. Rickey

Yada, scientific director of the Guelph-based Advanced Foods and Materials Network. “It may then be possible to breed for foods that have these traits, then have farmers grow them for a premium.”

Yada says this flip-your-switch exercise may also identify foods that certain people should consume or avoid, depending on whether the food promotes health or contributes to a disease such as Type 2 diabetes.

This spring, Yada’s interest in this science took him to Lexington, Kentucky, where one of the feed industry’s biggest global research sponsors, Alltech Biotechnology, cut the ribbon on a new animal nutrigenomics and applied animal nutrition research centre.

The centre’s focus is on the connection between feed and gene expression. Yada got involved because

the company is discussing and pursuing collaborations with various research-based institutions, organizations and networks such as his.

Alltech believes feeding certain nutrients, such as selenium, will trigger genes that make animals express specific desirable performance traits. To that end, the company is building huge animal genetics databases to better predict gene expression in a given animal.

Predictions are becoming easier all the time with genome mapping, which helps researchers wade through the genetic thicket more quickly. They don’t have to search endlessly for the genes that cause certain traits, or the animals in which the genes are held.

That will allow researchers to base anticipated genetic production and performance on fewer animals rather than a whole herd, making analysis faster, cheaper and more precise. They’re going from a whole herd to a genetic profile. That’s efficiency.

While it sounds great for animals and plants, big ethical questions surround genetic profiling for humans. Debates are raging about the use and misuse of genetic information, particularly for insurance purposes.

Maybe a certain dietary aid could turn on a gene and fix a problem – but who has the right to access your genetic profile, and to know about the problem in the first place? And should you be denied coverage based on genetic hiccups, flaws or shortcomings if science comes up with a nutritional way to address your problem?

Nutrigenomics is another example of how the agri-food sector has branched out beyond production agriculture. Yada says that change can usher in a host of opportunities and discoveries, as the agri-food sector tries to figure out how to bring added value to the continuum from grower to consumer, while benefiting Canadians’ health and Canada’s economy. ❖

Watch for the national tour to fight hunger

Be careful if you're driving on a rural road this October. You may encounter a tractor followed by a trailer full of food. You might also notice a team of Farm Credit Canada volunteers driving away hunger.

Four years ago, Dale Snider, an FCC employee from Ontario, had a great idea. He and his colleagues organized a local tractor tour to collect food donations from businesses. His motivation was to give back to the community and help food banks serve people in need.

His idea grew into Drive Away Hunger, the most important community event of the year for FCC. Since 2004, employees across the country have organized six provincial and four corporate office Drive Away Hunger tours. The cumulative result is the collection of nearly one million pounds of food for hungry families and life-changing experiences for many employees.

"Hunger is an issue right here in our own backyard and raising awareness about it is important to us," says Greg Stewart, FCC President and CEO. "This program helps do that and is a great opportunity for our employees to show they care about the communities where they live and work. It's truly

amazing to see what communities can do when they come together to help citizens in need. For us, it's about raising awareness, showing that we care and making a difference."

Fighting hunger is becoming a greater challenge for various reasons, including higher food prices. Through Drive Away Hunger, FCC works with customers, communities, local businesses and food banks to put food on tables for those who need it most.

Drive Away Hunger 2008 is going national. Official tours are scheduled in Alberta, Manitoba, Nova Scotia and at FCC corporate office in Regina. During this five-week period, each FCC office across the country will also participate and collect food.

You can be part of the effort. From September 15 to October 16, stop by your nearest FCC office with a food donation. Help achieve the goal of collecting over 400,000 pounds of food to help feed rural Canada. You can also make a cash donation at www.DriveAwayHunger.ca. For more information about the tours and donations, call 1-800-387-3232.



FCC helps drive away hunger at P.E.I.'s 2007 tour.

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