

OMAFRA Virtual Beef

VOLUME NO. 10 ISSUE NO. 30 June 2011

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An online survey of our subscribers and a review of activity on the Virtual Beef web pages give insight into the value of this publication. Check out our report card and see what our readers think

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Performance Testing OMAFRA Virtual Beef

Online Survey and Usage Stats for this Electronic Newsletter

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Online Satisfaction Review

A recent online survey of OMAFRA Virtual Beef (VB) subscribers gave valuable feedback on the value of this e-magazine, and suggestions for improvements. Thanks to all who participated in the survey!

Respondents were asked to rate VB in several categories. The results are shown in Table 1. For Overall Satisfaction, 85% of respondents said that they were “Satisfied” or “Very Satisfied” (the top two categories). The Relevance of the Information in the e-zine was rated as “Satisfactory or Very Satisfactory” by 87%. Likewise, the Quality of Information received an 87% rating of “Satisfactory” or “Very Satisfactory”. The information impact of Virtual Beef is multiplied, with 68% of respondents indicating that they forward content on to others.

Table 1. Satisfaction Ratings for OMAFRA Virtual Beef

Category	% Rated Satisfactory or Very Satisfactory
Overall Satisfaction	85 %
Relevance of Information	87 %
Quality of Information	87 %
Forward Content to Others	68 %

OMAFRA Virtual Beef is a technology transfer vehicle of the Ontario Ministry of Agriculture, Food and Rural Affairs.

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Readers also took the time to give us ideas about the types of topics they would like to see covered in the future, and other constructive comments. These results are very encouraging, and empower the OMAFRA Beef Team to continue to strive to provide the very best in technology transfer via this virtual presence!

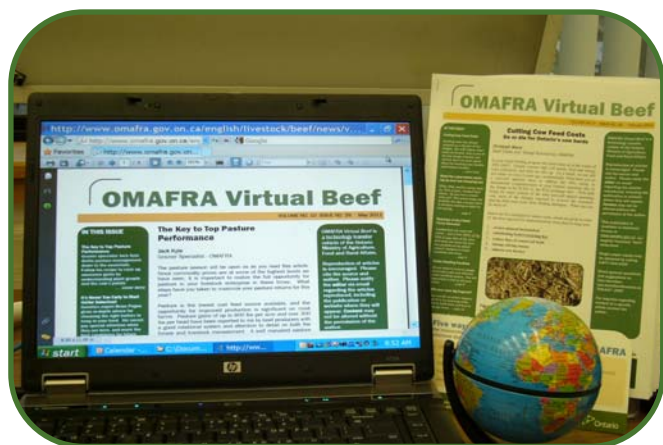


Figure 1. 85% of respondents satisfied or very satisfied

Virtual Beef Website Usage

An analysis of the amount of web viewing which Virtual Beef articles had received was conducted as part of the overall review of the newsletter. The number of online page views of the articles published in Virtual Beef was tracked from 2007 to early 2011, using Google Analytics™. The results (Fig. 1) show that Virtual Beef page view numbers have increased dramatically over this time. From just over 1400 page views in 2007, usage increased to over 37,000 page views in 2010/11. During this period, the cumulative number of page views was over 110,000. This shows that OMAFRA Virtual Beef has become one of the prime sources of online technical information for beef production.

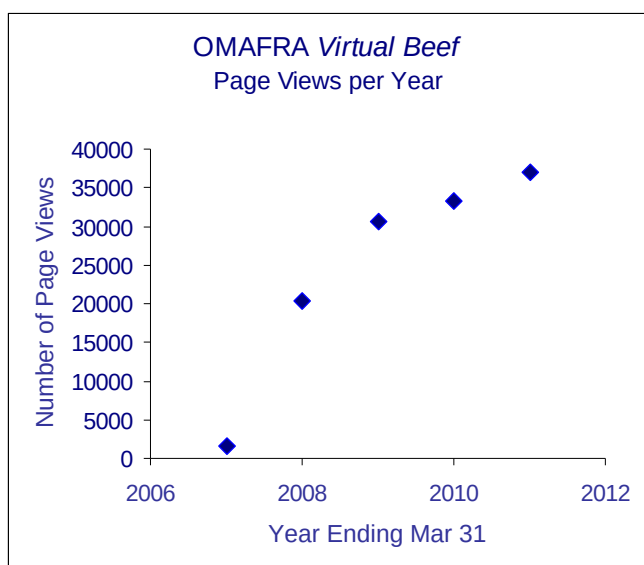


Figure 2. Virtual Beef Page Views per Year

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You and Your Mixer: Mixing Properly?

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Mix Quality is Important!

Serious consideration must be given to determining the **quality** of the **feed mixture** provided to cattle, especially if medications or urea are to be used. Maintaining this mix quality ensures proper dosing, which is important to ensure effective treatment and to avoid toxicity in different pockets of the same batch. This applies to any producers using **TMR** (Total Mixed Rations), quasi-TMR or farm-mixed concentrates.

In February of 2000, the Canadian Food Inspection Agency (CFIA) proposed new regulations, under the authority of the Health of Animals Act - Regulations Respecting the Making of Medicated Feed, that would have required licensing and upgraded control measures for manufacturers of medicated animal feeds in Canada. Since that time, CFIA has consulted with stakeholders and carried out pilot projects in Ontario and Canada, and has replaced that earlier regulatory plan with on-farm audits under a different authority.

Regardless of the regulatory aspects, it is in the **best interests** of the cattle producer to ensure that TMR or volumetric mixing technology is being used properly. This will ensure equal nutrition and medication levels across the group of animals being fed. Proper mixing will produce a homogeneous mixture which **maximizes** the **benefits** associated with purchased feed additives and ingredients while **minimizing** the **risks**.

Indicators of Mixing Performance

There are a number of ways of testing a ration for proper mixing. All are estimates of whether the ration fed at individual sample points along the bunk is equivalent to the theoretical, or intended ration. The following are required to make this determination:

- **verification of equipment**
This includes the metering devices, scales, and mixers used. When purchasing new equipment, including

TMR mixers, ask for mixing performance specifications on the models you are considering. Determine the **accuracy** of all scales by using a known test weight of material, appropriate for the size of the scale.

- **sequential feed analysis**

This estimates the amount of variation among samples of the mixed feed (coefficient of variation, or C.V.). Several samples are taken and then analyzed as follows.

1. Concentration of actual medicating ingredients in completed feed (expensive); OR
2. Use of tracers to estimate vitamin/mineral/medication or feed fraction mixing. These tracers can include added salt, starch from concentrate sources and trace minerals from the mineral package (low cost).

Speak to your nutritionist, feed provider, or laboratory service provider to determine if mixer verification is needed in your situation, and what method and package is most appropriate.

What is a medicating ingredient?

According to the CFIA, a “medicating ingredient”:

- includes ionophores and other common feed additives such as MGA
- is a substance intended for use in the prevention or treatment of disease in livestock
- a substance, other than a feed, intended to affect the structure or any function of the body of livestock, and that has an assigned drug identification number (DIN) under the *Food and Drugs Act*

What is acceptable mixing?

The CFIA had proposed the **acceptable** coefficient of variation (C.V.) for mixers to be set at:

- 5% for **premises** (e.g. commercial mineral premix)
- 10% for **supplements** (e.g. commercial supplements)
- 15% for **complete feeds** (e.g. TMR, on-farm concentrates)

Based on my experience, I would suggest that producers using proper mixing equipment including TMR mixers should easily be able to achieve 10% or better on-farm.

Protocol for Mixing Verification

The following is a protocol that I have used on-farm for TMR mixers, and I have found to be effective in giving excellent information to assess mixing times and the effectiveness of premix and medication inclusion throughout the ration. It can be adapted for volumetric mills as well.

Steps:

1. Prepare the (TMR) ration as normal. (Note: the inclusion order and rates of feeds and their dry matter)

2. Include **salt** at a level higher than normal for ease of analysis and to distinguish from back-ground mineral levels in the forages and mineral package. Successful levels used to date range from 1 to 4.5% of dry matter as sodium chloride, depending on the purpose.
3. Allow final mix to proceed as normal.
4. Dispense feed, taking 3-12 random samples by one of the flowing methods:
 - a. Pans placed randomly in the bunk, sampling feed as it is placed as shown in Figure 1.
 - b. Samples harvested as they leave the mixer, auger or conveyor outlet.
 - c. Note: sample should not be taken as a grab sample from the bunk or a pile after dispensing, as the ‘randomness’ will be questionable.
5. Submit for sodium analysis to be reported as one report, including the C.V. for the mixer (calculated by laboratory)
 - A similar protocol may be used to test for medications, trace minerals or starch.
6. If the laboratory does not provide the C.V., you can do it yourself. The CV is calculated by taking the sample set and then performing the following calculation, which can be conveniently done in a spreadsheet program:

$$\text{C.V. \%} = [\text{S.D.} / \text{Mean}] \times 100$$

Where ‘S.D.’ is standard deviation of the tracer concentration in the sample set and ‘Mean’ is the average tracer concentration in the sample set.



Figure 1. Pans placed in a bunk for sequential analysis of Manganese to determine a mixer CV

So What?

Ensuring proper mixing is important to the farmer to **maximize return on investment** for medications, premixes and ingredients used in the ration, and to **prevent toxicity** from poorly mixed ingredients. Having simple and low-cost data such as this C.V. calculation allows mixing times and ingredient loading order to be evaluated. Also, having some baseline data may also be very helpful to demonstrate due diligence in the use of medicating ingredients, should you ever need to show it.

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Summer Prep = Fall Pay Off

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Prep time refers to the time it takes to do the background work to create a successful outcome. In teaching, it would be called lesson planning. In sports, it would be the hours of practice. Both scenarios are looking for the pay off, in a well understood lesson or in a winning game in the finals. In the world of calf sales, the **payoff** will be the **price** your calves will command in relation to the market this fall. However, this will also be dependant on the prep work you do between now and then!

So come fall your ideal would be for your calves to command a lot of attention, active bidding and top price in the sale, or whatever venue you market them through.

But in order for your buyer to pay top price, they will want a well built, even group of healthy calves that are all prepped (>castrated/ dehorned/vaccinated<), to come off the truck orderly, ready to hit the bunk and start gaining without incident and without getting sick.

You set the **genetics** last year for the well built and ready to gain part. However, you need to make sure your potential buyers are aware of that information, whether you get it printed in the catalogue or send it out via mail or email, or on posters. If you have gain and feed efficiency information on last year's calves or the bull – promote it.

The **even group** is something you can work on long term by genetics and a tight calving season. In the short term, for this year's market look at your calves and decide: can they all go on the same day? Are there a few outliers that should stay home for the freezer trade or background over the winter? How many sorts will you need? Can they be evened up by implanting some or all? Where does creep feeding fit into this? How about weaning for a month or six weeks prior to sale?

The castrated (preferably cut) and dehorned part goes without saying. If you want top dollars they are a must! If they were done early, don't forget to check prior to sale for any misses or late horn buds.

Vaccinations fall into two areas

I. Cow Herd. If your herd is on a Modified Live (ML) Vaccination program prior to these calves being conceived, then that needs to be noted and advertised. If not, then you need to be talking with your Veterinarian about implementing it as prep work for the future calf crops.

II. Calves. The second part of vaccination is making sure the **calves** themselves are vaccinated according to label directions. Make sure this is done with lots of time prior to sale, so they have time to develop a good immunity

Ensuring that the calves come off the truck in an orderly manner and head right up to the feed bunk means doing some prep work in how the calves are handled, and possibly weaning prior to sale. If we are careful when we **handle** and process the calves, doing it **gently, calmly** and **quietly**, we can make the calves less frantic about going through a chute system. In fact, if they can be moved through a handling facility or chute without doing any painful procedures we can make them a more calm, orderly group for the feedlot. Even taking the time to walk quietly through the calves now and then prior to the sale or especially after weaning will also help to lower the calves' anxiety level around people.

If we **bunk adjust** the calves with their mothers, or wean the calves then they won't go off feed in the marketing process, unlike bawling calves. The calf that doesn't eat short changes its immune system just when it needs the extra energy to combat challenges. A side note; however, is that if you are planning on weaning, make sure it is at least a month prior to sale date. This allows the calf to move through the stress of weaning in a familiar environment and then move on to gain extra sale weight and look the part of "ready to go" calves. But that weaning can't be into a stuffy, dark, dirty barn. Fence line weaning and two-stage weaning with nose flaps have great potential for cow operation without a lot of facilities. Trials all the way back to Red Meat Program days have all shown that **pre-weaning** is the next most efficient step to **reduce** calf **morbidity** and **mortality** in the feedlot.



Figure 1: A well sorted set of prepared calves will command a premium price.

One of the final things you need to prep on will be **which sale** you think will do the best job marketing your calves. Shop around, then make a decision, put the date on the calendar and start to work backwards. Take the protocols required for your chosen sale and mark down when they need to be done. Talk to your Vet clinic early and make sure they have the products you need ordered and on the shelf well before the day you need them. Talk to your trucker. If you are age verifying – get the paper work done now! Same thing goes for information for the sale catalogue - do it now. Then send it in so the sale barn or sale operators so they can advertise your calves.

However, the last part of prep work is you doing some **advertising** on your own. Find out where your calves went in the last few years, and who the runner up bidders were. Take some pictures and email or send them to those former buyers/bidders. Let them know when and where your calves will be for sale again.

So forget about those lazy days of summer. You have some prep work ahead of you. However, a little **prep work** now and over the next couple of months will hopefully **pay off** in a big time in a “top of the sale” payday!

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Early Summer Grazing Management Opportunities

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It is early summer, and the grass is growing faster than you can get animals out on the paddocks to use it. Pasture management decisions made today will enhance pay off later this fall.

Planning for the grazing season ahead includes:

- feed budgeting
- seeding
- stockpiling
- fly control
- mineral placement
- rotation scheduling
- weed control
- making hay

Prepare a Feed Budget

Preparing a feed budget for the remainder of the grazing season will assist you in determining whether you need to find extra sources of pasture. A feed budget is simply adding up the quantity of forage you will need for your livestock and comparing that total to the estimated quantity of forage that will be available for the remainder of the season.

To determine the quantity of dry matter required for livestock needs, use 3% of the total animal body weight or 4% for high producing animals. Approximate the quantity of forage based on the density of the stands and estimated yield.

If the above comparison shows that you do not have enough available forage for your livestock’s dry matter requirements, then consider one or more of the following ideas:

Seed Annuals

Annuals seeded in early to mid summer will provide supplemental grazing forage for late summer and into the fall. **Sorghum-sudan** seeded in June will provide a large quantity of high quality grazing in August. **Forage** or **stubble turnips** and **fodder rape** or **kale** offer grazing from late summer to late fall. These brassicas (members of the cabbage family) have good frost tolerance, which allows them to be utilized long after other annuals and perennials have stopped growing for the season. **Cereals** planted in late July or early August mean September and October grazing, and **corn** is another crop which can be effectively grazed during its wide window of opportunity from August to December.

Stockpile Forage

Extend the grazing season with **stockpiled forage**. Pasture fields allowed to re-grow from mid July can accumulate a significant quantity of forage for grazing after the growing season has ended. It is during the early summer that you need to take the first steps to have a successful late fall grazing opportunity. These fields should be allowed to grow from mid to late July to accumulate forage for later use. Apply a high nitrogen fertilizer to achieve optimum growth. Fields with **trefoil** and **clovers** will provide better late season grazing than alfalfa fields. Of the grass species, **tall fescue** is an excellent stockpile grass, as it holds its quality well into the winter. Orchard grass breaks down with frost and will not provide the quantity or quality of grazing as tall fescue or the brome grasses.



Fly

Figure 1: Attention to pasture management early in summer will provide good grass for cattle throughout the grazing season

Control

Livestock that are being irritated by flies are not going to be as productive as those that can focus on grazing undisturbed. Early fly control measures such as back rubbers and ear tags will pay

off later in the season. These are two available options that will reduce the fly population and provide relief for your livestock, resulting in **improved gains**.

Salt and Mineral

Salt and mineral should be provided throughout the grazing season. **Position** salt and mineral **away from** the **water** source to encourage more even pasture utilization. Use a mineral program which meets the needs of your livestock and takes into consideration the type of cattle and the quality of the forage available.

Slow Rotation

As we move into the warmer temperatures of the summer, grass growth will slow and therefore you will need to slow the rate of pasture rotation. Slowing the rotation gives the recently grazed pastures **more time to re-grow**, and this rest and recovery period will keep your pastures productive through the entire grazing season. Overgrazed pastures take much longer to grow back, have lower drought tolerance and are much more susceptible to weed infestations.

Weed Control

Late June is an ideal time to **clip pastures** if there is an accumulation of mature grass plants or evidence of a weed problem. Clipping mature grass will stimulate new growth. At the same time, clipping weeds will remove seed heads and reduce the chance of the plants reseeding themselves. If the weed pressure is very low, consider spot spraying to prevent a further increase in weed pressure.

Make Hay (if necessary)

By mid June all pastures in a rotational system should have been grazed at least once. If there are several paddocks not yet grazed, consider making hay with one or more of these paddocks. If you decide to make hay consider cutting with a 3-4 inch stubble to promote faster re-growth of the grasses. Early summer is an ideal time to evaluate your pasture management and make any necessary adjustments to your grazing program to ensure productivity into the fall. Now is the time to consider seeding for supplemental grazing; stockpiling forage, slowing rotation and making hay to ensure re-growth later in the season; and assessing your fly control, mineral and weed control programs. July may be too late to make adjustments that will allow you to enhance the productivity of your pasture system, but June is the optimal time to act.

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Price Volatility in Feed Input Costs

World events impact the price of crops and cost of feed

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For some, the word volatility doesn't come close to describing what has happened to corn and wheat prices over the last four months. Last year, prices were on an upward slope due to supply issues such as weather factors in Russia that led to a ban on wheat exports there. The response from speculators was decisive. They wasted no time in buying wheat futures, as well as corn and soybeans. Although supply concerns weighed heavily in the decision to go "long" on grains, it was also a response to a policy adopted by the US Federal Reserve Bank known as Quantitative Easing 2 (QE2). Imbedded in this policy was a decision to purchase \$600 billion of US bonds, also known as US Treasuries. As a result of the massive purchase, investment rates on bonds fell to an historic low. The US dollar was also driven down because the injection of \$600 billion into the money supply diluted its value. Essentially, what happened to the US dollar is what happens to the price of corn when the supply is very high. The US Federal Reserve adopted this measure to help kick-start the US economy by providing low cost financing for businesses to grow, and prevent the US from sinking into another recession.

The result, however, was that in addition to a lacklustre performance by the equities markets (still suffering from the effects of the global downturn) was that Treasuries were also not delivering any significant returns. Speculators began to look at the commodities markets, and grains in particular, to make gains.

This year is much different. Speculators were already "long" coming into this year, meaning that they had already bought grains in the futures markets. A futures market is very similar to a stock exchange. Grain contracts are bought and sold and are settled for cash value. The contracts have a set expiration date meaning that if you bought a grain futures contract, you must sell it before the contract expiry date. The market constantly matches up buyers and sellers. The buyers may place a bid with the exchange to show that they intend to buy a certain number of contracts for a set price. A seller may place an offer with the exchange to show that they intend to sell a certain number of contracts. Buyers may also choose to "lift" the offer, or meet the price of the seller. A seller can "hit" the bid to meet the price of the buyer. A contract remains open until the buyer or seller chooses to close the contract by doing the reverse. Contracts are generally closed before the contract expiration. It is also possible to get physical settlement, meaning that grain gets exchanged for money, but this rarely happens.

Because they were already long, they needed additional reasons to add to their position. One of the reasons prices rose this year was the cold rainy spring we had in North America and Northern Europe (both prime grain exporters). Another reason was the continued devaluation of the US dollar as a result of Quantitative Easing (explained above). India also reported that it was considering banning grain exports to help stave off food inflation, which reached double digits there last year. However, perhaps the biggest reason for price increases was that demand for grain held up despite record prices.

By contrast, there were also a lot of negative pressures on grain prices: the US Federal government announced that it will not be extending Quantitative Easing, which is due to end June 30th. Another negative sign was the European debt crisis, largely because it caused the US dollar to increase in value. Commodities are valued in \$US, so when this dollar goes up, the value of the commodity is diminished (and vice-versa). To illustrate this point, think about how willing you were to pay the publisher's price on books when the Canadian dollar was trading above par? Prices also tumbled when the weather situation improved, and farmers worked around the clock to ensure the crop was planted.

Lately, the bears (or those who believe that grain prices are going lower) are gaining traction, especially with Russia announcing that it will begin wheat exports on July 1. Wheat trading on the July futures contract actually traded below corn, which prompted some of the large US poultry processors like Tyson's to change their feed regimens.

Volatility continues to be a concern, enough to draw the Agriculture Ministers from the G20 nations to address it in a summit. Some, like France's Sarkozy, is proposing the imposition of restrictions on speculators. Others, like the World Bank president, are proposing to beat speculators at their own game by using financial tools such as futures and options to mitigate price volatility.

New Information From OMAFRA

[11-021: Burning Shelled Corn as a Heating Fuel](#)

[11-023W: Barn Hay Drying](#)

[Risk Management Programs for Cattle](#)

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