



## **Back in the Black - Maximize the Opportunity**

**The following article comes from the VIDO group members as a series of reminders about the important areas of production that may have been compromised over the last two years in necessary attempts to keep costs down.**

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VIDO Swine Technical Group – *Linking knowledge to practical solutions*  
Back in the Black – Maximize the Opportunity – January 2010  
[www.vido.org](http://www.vido.org)



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## **Introduction**

The “perfect storm” of high feed prices, low hog prices, Canadian currency strength and H1N1 flu is gradually receding. 2010 may offer the first opportunity for profit since 2007.

Many of those producers who have survived are now carrying an increased debt burden that will take a number of years to reduce, and this only if significant profits can be maintained.

To maximize profit recovery, producers need to re-examine their protocols with regard to herd health, bio-security and transportation, and their priorities on feed utilization, overall maintenance and labor utilization.

Just as it was vital to find ways of reducing costs during an extended period of financial loss, it is now equally important to ensure that producers position themselves to maximize their efficiency when profits return.

This article has been prepared by the VIDO Swine Technical Group with the insight of Dr. Mike Sheridan. It is designed to assist pork producers to ramp up profitable pork production as the markets improve.

Pork producers are resilient people and the past three years has demonstrated their ability to survive by reducing costs, delaying renovation, repair and altering well-established practices in an effort to conserve cash. During this same period, our intellectual property has disappeared from the industry. One by one individual pork producers have left the industry taking their experience with them; financially better opportunities have attracted our young people into alternate careers, greatly reducing the pool of upcoming talent. Suddenly we find ourselves in an industry foreign to our previous experience and balanced precariously between rising and falling markets.

What should we be doing in 2010 to take advantage of the expected turnaround in pork markets? Our first objective is to repair the damage to facilities, routines, and relationships caused by applying ‘survival strategies’ throughout the past three years.

### **Repairing Facilities**

The ‘Broken Window Theory’ was first developed by Criminologists Wilson and Keely and goes like this – if you are going to buy a building that you plan to renovate then resell; you know that if one window is broken you must fix it immediately. Because if you do not then soon there will be more broken windows from neglect or vandalism, doors will sag from their hinges as small repairs are overlooked because of the attitude that it doesn’t matter; it is just an old building with a broken window.



### **Repairing Routines**

Pig farms have been subject to an erosion of care. Look at the weeds that have grown around the perimeter of the building, the worn out coveralls, the entranceway that hasn't been cleaned and disinfected for months. These simple examples are part of a large group of routines that have been delayed and eventually forgotten as money wasn't available for weed control and labour for all but the absolute basic sanitation practices was forgotten.

### **Repairing Relationships**

Low prices have done more than damage our facilities and routines; they have altered significantly how we interact at a most basic level. Our survival instincts caused by negative margins for months has caused a series of unfortunate situations including switching suppliers, breaking contracts, and eroding relationships.



## **I Feed management**

Feed management is more critical than ever. Feed has to be considered almost like gold to have the proper mindset. More than minimal wastage is very costly. You can't avoid it totally. If you don't see any wastage in a pen, then you probably have 5% wastage. If you can see some wastage then you probably will waste 10%.

How much does this cost?

Example: A pig growing from 25 – 120 kg = 95 kg gain => 95 \* 2.90 feed conversion = 275 kg. An extra 5% wastage is 14 kg of feed. With an average cost of \$200/tonne, this would result in \$2.80 extra cost/pig.

Typically 10% of feeders are not working correctly.

Things to check:

- Check feeders on a daily basis and if needed adjust them to avoid wastage.
- Pay special attention to the pens where pigs have been taken out recently.
- Double check with a flashlight to see if feed has ended up in the pit.

### **Feed delivery equipment**

Maintenance of the equipment is very important, because if it malfunctions it can cost a lot of money.

- Worn feed lines => leaking of expensive feed.
- Breaks in feed line => piles of feed in the pen.
- "Duct tape is not a long term repair".

### **Feed manufacturing**

- If the mixing system is worn, blender efficiency will deteriorate – test for mixing efficiency.
- Particle size is very important. A good screen and proper hammers is important to get the proper particle size. For 100 microns of difference, the feed conversion will be 1.3% higher. Variations of 400 microns are common => 95 kg \* 0.146 feed conversion \* \$200 = \$2.76/pig.

### **Feed formulation**

Understand your objectives with your formulations.

Find a nutritionist you can trust and work with to develop the most cost effective diets for your farm.



## II Labour

In the last two years there has been substantial change in the makeup of the labour pool in hog barns.

There has been an exodus of owner/managers due to barn closure, together with large numbers of experienced staff who have left the industry to join the construction/oilfield expansion. This vacuum has been filled by young, inexperienced workers, many of them from overseas.

Many units have suffered the multiple pressures of having less people than needed, relatively inexperienced staff being put into positions of responsibility that they are not trained for, and new staff who having just arrived in the country may have problems with language, culture and relative isolation, not only from family and friends, but from work colleagues as well.

*Individual producers now need to look at their staffing situation and ask themselves the following questions.*

- Where do my investments in labour result in productivity enhancements that yield the greatest economic benefit? Example: Do we put the extra person in the farrowing barn to reduce farrowing losses, (0.3 pigs per litter at a value of \$12 per litter), or do we put that person in the feeder barn adjusting feeders to save \$30.00 a litter?
- Do inexperienced staff have a clear understanding of their job responsibilities? This is not just a list of their work tasks, but their responsibilities within the barn as a whole and would include areas such as CQA, facility cleanliness, barn biosecurity, animal welfare and safety at work.
- Do your employees have a clear understanding of their rights and obligations with their employer?
- Have the newly promoted section managers or managers had any training on people management skills? It is very difficult to be an experienced technician on a Friday, and to become the manager of a section or unit on Monday. Managing a profitable pig unit is as much about good people management as it is about good pig husbandry. The point here is that people management skills are too often assumed, and without adequate training a genuinely good potential manager can fail, causing problems for the whole unit.



## **Training**

*For those producers considering the need for staff training, there are various options available from college courses to on farm training and external training.*

### **In-house training**

The Green Certificate (Alberta Agriculture and Sask Pork) involves the unit manager carrying out the training with the aid of a training booklet which is provided, and an external examiner testing the employee to ensure that the training has been effective. This provides the trainee with both practical task knowledge, as well as the theory behind the practices.

### **In-house training using an external source**

Some companies offer online training in specific areas of pig production, utilizing videos.

### **External training**

There are companies and individuals who will provide training on or off site on both practical and/or management skills. A number of veterinary practitioners also provide this service.

### **College training**

A number of provinces have college training available on a part time or full time basis.

## **III Biosecurity**

It's tough to keep up enthusiasm during these tough economic times. The reality is if we are going to survive then it's the basics that get us through to the other side and one of the basics is biosecurity.

Front door and back door policies are key to keeping those new bugs out of the herd.

### **People**

- Assume everything and everyone including you is carrying a virus or bacterial hitchhiker.
- People must remove their boots and outerwear at the entrance of the facility and then step into the clean area, usually a board or solid bench that separates the two areas, this keeps the droppings from tracking through.



- At minimum, hands must be scrubbed with a hand sanitizer.
- People may then enter the clean area and put on barn supplied coveralls and footwear. This is the basics of a Danish entry system; it's easy and will give a reasonable amount of biosecurity at almost no cost.
- This entry area must be cleaned regularly and disinfected or those hitchhikers we are dropping at the entrance will cross the threshold.
- A hand wash sink (vigorous hand wash) is an improvement over just hand sanitizer. A shower is the best but even the first level of entry will provide a huge level of control.
- A **clean** entry, good boots, towels and coveralls are important. A successful program is **all about attitude**. Ripped coveralls and dirty towels say to people "I'm not that serious about this" which then causes weekend people to start to skip the basics.
- All of these preventative measures are for nothing if the back door is forgotten. These other doors are equally important and if anyone exits the barn for any reason, the above entry protocols must apply. Slipping out to bang a bin is just as dangerous as coming from town. The truck driver that hooked up to your bin just left another farm and left you some of the other guys' bugs around your feed bin. These in and out excursions are the most common breaks on even the best controlled facilities.
- Use disinfectants that have some virus killing component and use the correct label rates.

**Summary:** Exercise minimum Danish entry, drop your boots and outwear on one side of the dirty bench, step in, sanitize your hands and change into barn clothes, it's that easy.

### **Products**

- Any products brought to the farm must have controlled entry.
- At the very minimum, products should enter the dirty area in packaging and be removed and passed through to the clean area.
- If the product can have some downtime (48 hours) in a clean, dry storage room before entry into the pig area this will add to safety.
- Any product that can be safely wiped or sprayed with disinfectant will add another level of control.
- Any high risk items, such as water nipples, that have been purchased loose from a box that another pig farmer may have dug through must be soaked in a disinfectant solution.
- Some risk assessment and procedures must be formulated for each operation.





- Again this comes down to attitude; if employees see inconsistent applications of biosecurity the system will fail.

### **Animals**

- Entry of animals is the greatest risk to any operation; a PRRS study found even washed trucks to be a major vector of disease transmission.
- Entry protocols must be developed between yourself, staff, veterinarian and stock supplier. There are too many variations to be briefly covered in this summary.
- A few standard rules of animal entry are:
  - a. Have an isolation and acclimatization facility.
  - b. Blood test these animals before entry to the main herd to ensure they meet your health status.
  - c. Enter animals as seldom as the system will allow.
  - d. Use one carefully screened supplier.
  - e. Have a written agreement with the supplier including rules of transport, health status and disclosure policy of health status changes.

## **IV Herd Replacement Rate and Parity Distribution**

If you have reduced the number of replacement breeding females being introduced to the herd for economic reasons you will need to take steps to restore a correct parity profile in the herd. In order to restore the correct parity profile replacement gilts must be brought in to the herd at a minimum of the long term replacement rate level for the herd. Optimum productivity occurs in parities 3 to 6, with a substantial productivity dip thereafter.

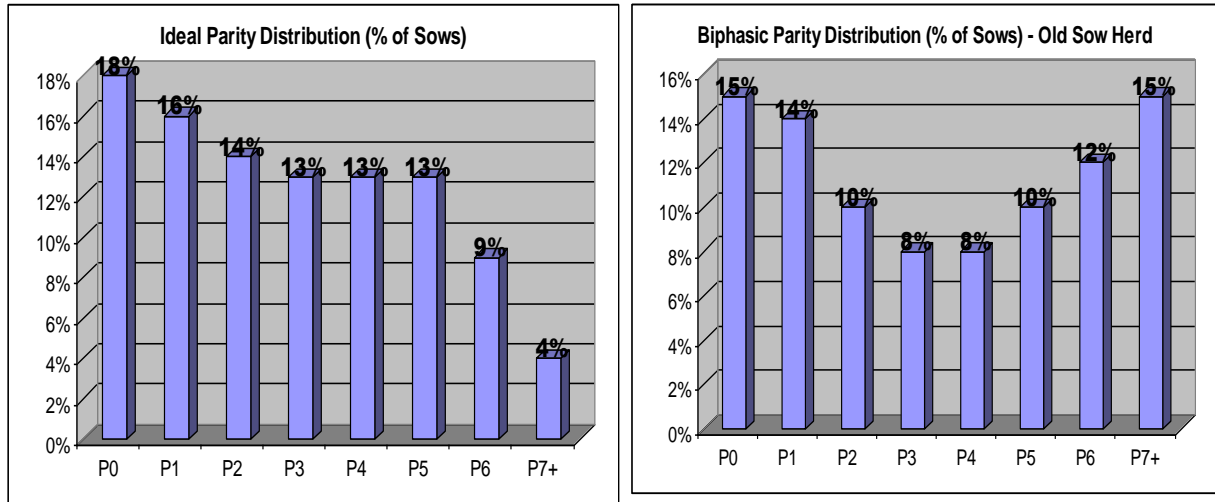
Look at average litters per sow lifetime. This is what drives replacement rate. If your average sow has 5 litters, at 2.4 litters per sow per year you will have a 48% replacement rate, and will turn over your entire herd in 25 months. In predicting your gilt replacements, add an additional number based on the percentage of gilts that drop out prior to first breeding.

Do a gilt predictive projection. Look at each week of production and anticipate how many gilts will be required each week to replace the old parity sows. By measuring your precise gilt requirements you can anticipate and plan your replacements. Ensure that you are still introducing the minimum monthly number required based on your replacement rate calculation. You will need to make culling decisions each week as it will take more than one production cycle to entirely correct this problem.



If you retained any females sired by terminal line boars consider replacing them at any parity. Productivity of such females is also considerably lower than traditional female lines.

Ideal or target parity distribution and a “typical” biphasic parity distribution observed in an old sow herd are portrayed below.



## V Vaccines

As the industry moves forward it is an excellent time to review vaccination protocols with your herd veterinarian. In order to save costs, some vaccine usage has been foregone with little consideration of the consequences. There may be places where this can be implemented strategically to achieve that goal, but in other situations it may not be the best place to perform such cutbacks. For example, vaccination of gilts and young sows should remain a priority. Reduced vaccine dosage has been a common industry practice with at times disastrous outcomes.

### Drugs and Needles

In part due to the deterioration of labour force, and in part due to cost, individual pig care has diminished. Time spent observing individual animals and identifying sick pigs has largely been skipped. As pig value increases, now is the time to ensure a more maximal number of animals make it to market, and part of that is proper identification of sick animals, followed by appropriate treatment. Training of staff must be a priority.

Strategic group medication may be helpful to reduce production cost, under certain circumstances. There are situations where investing in health costs results in greater savings on feed due to improvements in feed conversion. However there are also



situations where routine medication use is of little benefit. Strategic interventions rely on proper diagnosis of disease and appropriate treatment protocols worked out with a herd veterinarian.

For the first time in a number of years broken needles have become a significant issue in our product (pork). Once again training is absolutely essential to avoid losses to the industry from this problem.

## **VI General Maintenance**

Maintenance can be a casualty when an industry is under financial distress. Through lack of money, lack of labour, lack of time or simply lack of enthusiasm, repairs may be replaced with patches and patches with more patches - another piece of duct tape on the one that is already covering the hole in the feed line. The “broken window” syndrome can take hold. Lack of maintenance becomes more pervasive leading to more serious deterioration of all production practices by management and employees. As best as possible, each point of maintenance needs to be evaluated with a conscious and careful decision made as to the risks of choosing to patch or delay rather than fix it. Consider the following:

- Prioritizing repairs is important when resources are limited. Burned out fans can lead to greater temperature fluctuations and a higher room temperature gain in hot weather. However, this will be more important in a nursery room with only 3 fans than in a finishing barn with 15 fans. Fixing the nursery room fan likely trumps the broken finishing barn fan.
- Thermostats not properly set or not working at all will create greater temperature fluctuations, adds environmental stress to the pigs and leads to poorer performance and the risk of increased health problems. In many cases this will be as simple as readjusting the thermostat to its proper settings.
- Air inlets will often get out of adjustment leading to inconsistent air patterns across the pen, across the barn and throughout the day and night. This in turn creates drafts or hot spots at pig level and will affect pig performance. Spending time down at pig level can direct you to discover these problems and lead to simple adjustments.
- Electrical connections in swine barns can become corroded over time and can cause a significant fire risk. Plugs on fans are prone to this. Routinely check the wiring in your barn.



## **VII Transportation**

With the hard economic times for the trucking industry and high turnover of labour, it is sometimes difficult to find skilled livestock truckers, which sometimes can lead to poor handling of the pigs.

### **Biosecurity**

- Livestock trucks coming and going are another risk. A farm specific plan needs to be developed. A livestock hauler that can be trusted to follow this protocol needs to be selected.
- Speak with the drivers frequently as to where they've been and what they know to ensure their true level of commitment to the program.
- A few standard rules with haulers:
  - a. Trucks must be cleaned and washed thoroughly.
  - b. A higher health herd will want Monday loads - to give some downtime on trucks.
  - c. Truckers hold pigs on trucks and never step into barns.
  - d. Trucks should have side doors so drivers can enter trucks from the outside.
  - e. Time / cost pressures can lead to less than acceptable cleaning of trucks (washing not as thorough and less drying time).
  - f. Any money savings on transport or bio-security are irrelevant compared to a disease outbreak that could cost the survival of the entire farm.

### **Animal Welfare**

Crowded “on farm” transportation to reduce costs can cause problems. (Less of a problem on commercial transportation, because of possible overweight fines)

Trailers are being replaced at a lower rate => more old trailers => harder to clean.

Determine if the service is up to specification. If not, take pictures, send to the trucking company and discuss with transporters.



## Appendix I

An example:

### **JOB TITLE: TECHNICIAN (FARROWING)**

#### **Job Description**

To become competent in all the basic tasks involved in the care of suckling sows and their litters.

#### **Tasks and Responsibilities**

1. To learn how to feed sows pre and post farrowing, and to judge the daily feed requirements of the sows, through an understanding of feeder management.
2. To become competent at the caring of sows over the farrowing period.
3. To be able to process litters of new born pigs.
4. To assist with the fostering of piglets to even distribution by number and size.
5. To become competent at caring for disadvantaged pigs by the provision of supplemental feed or transfer to another sow.
6. To learn how to recognize diseases and conditions of sows and piglets that occur in the farrowing section.
7. To learn the appropriate use of medication, how and when to medicate.
8. To learn the significance of withdrawal periods for different medications.
9. To understand the requirements of the welfare protocol of the farm.
10. To become competent at recording the daily events in the farrowing section.
11. To help maintain the section in a clean and tidy state.
12. To learn how to pressure wash to a satisfactory standard.
13. To understand the requirements of the CQA.

#### **Minor Duties**

Assist in other sections as required by the Manager.

**Report to:** Section Manager

#### **Employee Supervision Responsibilities**

None

#### **Qualifications**

#### **Experience**

Minimum of 2 years working with livestock

#### **Training**

Grade 12 education, third level education and qualifications is an asset.

#### **Personal characteristics**

A liking for working with animals, a willingness to learn, and a desire to be a part of a team.

**Salary range**    Minimum.....    Maximum.....

**Normal work hours:** 8.5 hours/day



## **Appendix 2**

### **EMPLOYEE RIGHTS AND OBLIGATIONS**

*The following is a list of the elements that would typically be covered in an employee handbook.*

#### **INTRODUCTION**

#### **THE HUMAN RIGHTS CODE**

#### **EMPLOYERS RIGHTS**

##### **1. WAGES & BENEFITS**

*PAY  
PROBATION PERIOD  
BONUS PAYMENTS  
WCB BENEFIT  
ALBERTA HEALTH CARE  
HEALTH INSURANCE PLAN  
PENSION PLAN  
HOURS OF WORK, HOLIDAYS AND DAYS OFF  
MATERNITY LEAVE  
BEREAVEMENT LEAVE  
MEDICAL LEAVE  
TRAINING & CONTINUING EDUCATION*

##### **2. OPERATIONS**

*ANIMAL CARE  
BIOSECURITY  
BARN APPAREL  
OUTSIDE EMPLOYMENT  
PROBLEM RESOLUTION  
EMPLOYEE CONDUCT  
SEXUAL HARRASSMENT  
USE OF ALCOHOL AND DRUGS  
HOUSEKEEPING  
HEALTH AND SAFETY  
COMPUTER SOFTWARE  
USE OF FARM VEHICLES  
PHONE CALLS AND OUTSIDE FAXES  
DESIGNATED SMOKING AREA POLICY  
PARKING*

##### **3. PERFORMANCE**

*PERFORMANCE EVALUATION*

##### **4. ACKNOWLEDGEMENT OF RECEIPT**

