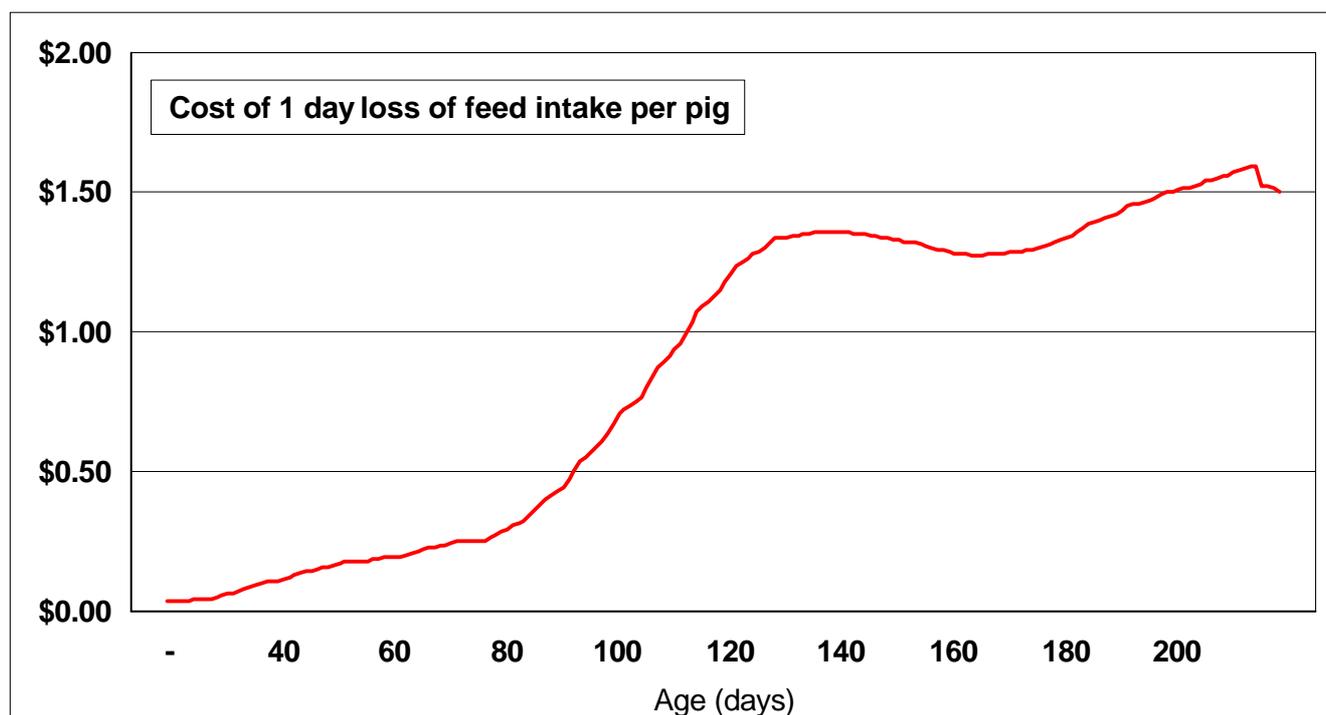


Loss of Feed Intake : Hidden Cost



This chart shows the estimated cost per pig of a one day loss of feed intake.

Whilst the numbers may seem alarmist, I think they are conservative.

The basis of calculation is very simple (perhaps over simplified). It is based on the length of time it takes to make up for the maintenance costs.

To illustrate this as simply as possible :

- Suppose a pig is eating 2 x maintenance (that is, twice as much as it needs to maintain its body). For simplicity, call this 4 lbs of feed.
- So 2 lbs is for maintenance, and the other 2 for growth.
- If it does not eat one day, then the maintenance ration it required that day has to be made up out of the next day's intake
- So if it eats 4 lbs the next day, that's 2 lbs for maintenance, and 2 lbs for yesterday's maintenance. So that's 2 day's loss of growth. Two days for which you have fed the pig, but you've gained nothing.

As the pig gets bigger, the proportion of feed used for maintenance gets higher and higher.

It is limited by appetite, but it's appetite does not increase commensurately with it's size.

So a weaner recovers very quickly, but a finishing pig takes several days to make up for that loss of feed.

The costs are calculated *only* on feed cost. No account has been taken for other factors such as electricity, labour, or building amortisation costs. So real costs will be higher than shown.

The calculations are based on loss for one day. Partial reductions will have a proportionate effect, which gets worse as the animal gets older just as shown, because it is eating only a little more than maintenance.

The result will be longer to finish weight, and worse Feed Conversion Ratio. Because of the high maintenance element of feed intake, the one leads to the other.

BUT

If an animal dies, or piece of equipment fails so that you have to call the repairman, you see the cost immediately and clearly. But if the pigs don't eat, or don't eat as much as they should, there's no bill. You probably won't even notice the loss. The cost is there nevertheless, and it's much greater than those pig losses or repair bills that you are aware of.

Most producers suffer loss of feed intake to some degree. Days to finish is longer than it could be, and FCR is worse than it should be. The aim is to reduce the number of times loss of feed intake occurs.

It's hard for a producer to know whether his less than optimal DtF and FCR are due to a general lack of performance and feed intake, or particular incidents as illustrated here. Barn Report can be a great help in telling one from the other - for example, if occasional sudden drops in feed use are seen, it suggests particular incidents are to blame.

A Myth Exploded

Forget compensatory growth. As far as I can see, it doesn't happen. It looks like the reverse is true - that once you fall behind, you just get further and further back.

The only basis for the "compensatory growth" idea is that biological development could still occur- cells can be produced, bone can be formed - waiting for the feed the express itself.

Nice idea - in fact, very attractive for people who make a lot of mistakes. Doesn't matter if I screw up, it will all come out in wash. But it doesn't happen. Yes, they all reach target weight eventually, but they take longer and so it costs more because you feed them for longer..

Forget eating extra to make up. If they miss feed one day, they don't eat more the next day. If you miss lunch, you don't have two suppers. They can't, because they already eat as much as they can. Again, it seems the opposite is true. If they miss feed one day, it appears they actually eat less the next day, not more. If the feed system is broken down, and doesn't get fixed until just before nightfall, they just don't cram it all in to make up for what they missed. As far as we can see, losses are losses and they get worse rather than better.

Causes of loss of feed intake

- feed system run out, bridged or broken down
- loss of water
- illness and scours
- change of ration
- change of taste
- after effects

Feed system

They can't eat if it isn't there.

Monitoring shows feed outage for one reason or another is much more common than anyone likes to admit to.

Sure, for some it's a rare and brief problem, and - other than the cost of getting it fixed - it has no financial impact.

For most, however, it's a regular occurrence for a variety of reasons, and it's shocking how long the condition persists on a lot of farms. Any feed outage in pen is undesirable, but the data indicates that anything longer than a few hours starts to cost in terms of feed intake and therefore growth.

It's easy to see in Barn Report, because there's a gap in the feed run trace.

First, there are problems in the auger and control equipment itself. Many systems are simply a cheap pressure switch with an overrun timer. Given the auger control is delivering tens of thousands of dollars of feed a year, it's surprising that people want to economise here, but they do. This kind of system has no control over how often it runs, so the auger starts and stops many more times than it needs to, increasing the wear and leading to premature failure. Second, bridging is common on many farms. To what extent this is due to the feed, or type of feed in combination with the slope of the bin is not clear.

Third, very few people have alarms on augers. Since the cost of feed loss is so great, there's a big case for alarms of under run as well as overrun.

Loss of water

They need water to go with the feed. If they don't get water, they don't die (not immediately anyway), but they eat less.

Complete loss of water isn't that common, but shortage or limited availability due to lack of drinkers, or the wrong type is a lot more common than most people expect. Since they'll limit the amount of feed to the amount of water they've got, it has the same effect.

In a particular case we looked at, there was plenty of water, but it tasted bad. They drank enough to survive, but they didn't like it, so they grew badly, but no one realised quite why. Illness and scours

Illness speaks for itself. Pigs that are ill are off their feed and as the graph shows, the costs are greater than you might think.

In the case of scours, it's not quite the same because they eat, but don't digest. So you may not see it so easily in feed used.

Change of ration

Rations are formulated precisely to match the needs of the animal in terms of energy/protein ratio, amino acid balance and so on.

Well, that's theory anyway.

In practice, it seems that rations may be far from this ideal.

In practice, it seems that changing ration (which is always from higher to lower protein, more expensive to less expensive) *always* gives an intake reduction. Sometimes slight, sometimes extreme, but *always* downwards. It takes typically 5 to 7 days to recover to the previous level of intake. This may be partly related to taste, but you have to question the quality of the match of ration to pig.

Change of taste

A new delivery very often gives a reduction in feed intake, even when it is the "same" ration. Unlike human food production (or even pet food production), feed mills don't have end of line product tasters. Pig feed isn't mixed that way. A feed formulation is based on energy, protein, amino acids and so on. The "same" ration may well taste slightly different, and they are sophisticated animals. They may just need time to get used to the new flavours.

There seems to be a case for phasing in any new feed - whether a new ration or just a new delivery - by admixing, rather than a step change.

After effects

After effects of any situation that alters their routine. For example, let's suppose the ventilation fails for 12 hours such that it gets too hot, though no pigs actually die as a result. (That was close, it could have cost us money!) Will they eat the same amount that day and the next day? Probably not. Similarly, if the heater fails so they get too cold, or any other disturbance, whether or not it leads to pig deaths.

All these situations lead to hidden losses, which are liable to be much more expensive than more obvious factors. Studies suggest that an increase of 10 days in time to finish is fairly typical.

It is unrealistic to expect errors and problems to be entirely eliminated, but a reduction to say 3 or 5 days is quite achievable.