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INTERNATIONAL FARM MANAGEMENT CONGRESS 2003
FARMING AT THE EDGE

MANAGING THE CHANGE THROUGH BENCHMARKING BEST PRACTICE

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INTRODUCTION

Sentry Farms is a private limited company operating in the UK. Working with a large range of landowners - which have an equally large range of objectives - by way of numerous operational leases, the company is currently producing over 100,000 tonnes of produce in the form of Cereals, Oilseeds, Pulses, Root Crops and Milk.

Farming in the UK is traditionally a very visible business which in times of good profits, have allowed image and emotion to be the driver behind a lot of the decision making process. This has been good news for the peripheral supply industries and costs left uncontrolled frequently rose towards income levels. With current world market prices making the high prices of the late 80's and 90's very distant memories, cost structures and production systems have and are changing within the agricultural industry in order for its component farm businesses to survive.

Working with commercial rental equivalents, Sentry has equally had to change, and change quickly in order to survive. Part of the process of managing the change has been the direction and support Sentry has provided for its 20 managers and trainees, who are the key people in the decision making process at farm level.

One aspect of this direction and support has been to encourage best practice in its farming businesses through its internal benchmarking systems, known and published internally as *'4 Thought'*. It is now in its 10th year of production and believed to be unique in the UK in that it takes benchmarking beyond the usual headline financial parameters, and looks at providing support for the short term, day to day decision makers as well.

Benchmarking

At Sentry, we have been benchmarking our farms from its early days in the 1970's. Every year there are new aspects that come under the microscope with a view to improving the efficiency of the farms and the bottom line profitability. The parameters we are working to have changed dramatically throughout this period, and they will continue to do so. We believe that by looking at such detail within our businesses, we have a competitive advantage within the market place.

We have the advantage of a significant sample size, 20+ units covering approximately 15,000 hectares, and a wide geographical spread, West Lothian to Suffolk to Dorset, from which to collect our information. The internal benchmark data we produce enables our managers to learn from the trials and tribulations of other units, without having to make the same mistakes again. With the comforting knowledge that all the benchmark parameters come from actual businesses, they know who to contact or where to visit to get the facts directly.

Our experience shows that most of our farms excel in some aspect of an efficiency measure. It is definitely not a league table to establish who has the best farm. We publish benchmarking data across a wide range of parameters with the view to influencing the decision-making processes that steer and fine-tune the business.

In my early days as a Sentry Manager, I could never understand why the farms that produced higher yields didn't make higher profits given similar rental equivalents. The law which states that 'cost will always rise to match income' - I suspected had something to do with it. Trying to change people's views, due to the characters involved and the very visible nature of the industry was always going to be a challenge. Telling farmers or farm mangers to change will always receive a negative reaction – the implication being that they are 'not good at what they do' or they have been doing 'something wrong'. The answer I believe is to work with them, in their environment and using their language, and help them to discover their new ideas.

Farming with subsidies has provided a very comfortable zone of the 'well tried and tested' procedures. Not having a new combine harvester every 3 years in some farming circles was seen as very second division farming - we all aspired to be in the premiership - visibly if not financially. We were totally hooked on non-financial parameters albeit because we thought we were efficient and our income allowed us to afford them.

We wanted to encourage our people to look at how other businesses, which they knew, were performing and think how theirs compared. We wanted to cover a whole range of performance parameters to prove that all farms were efficient in some areas and poor in others, so that all could benefit. We wanted to influence the thought process before the decision was made. We wanted to update data that wasn't 18 months old. All this, and at the same time we wanted for it to be viewed positively and used as a management tool.

To achieve this with our benchmarking data, which by this stage had been given the name '4 thought' to provide an identity and a more user friendly name, we highlighted the following objectives to reinforce what we wanted to achieve:

- Expose people to new ideas

If a new approach is working well on one farm we needed to communicate it quickly to others, avoiding the need for us to keep re-inventing the wheel on every unit.

- Serve as a catalyst for learning

The more aspects you highlight the more questions are asked. It encourages us all to learn more about our business and what they are, and are not, capable of.

- Overcome natural disbelief that a business can perform to a higher level

It is relatively easy to be a big fish in a little pool. Benchmarking increases the size of the pool.

- Create an external business view

Statistical analysis of a business is a great tool for external business advice. It provides a factual starting point for any person performing a review of a business.

- Lower the costs of production

Through either increasing output or reducing the costs, the aim is to produce the product at a cheaper level.

Sentry Benchmarking

With many different users of the data we had to make it reconcilable where possible. We therefore used the 'profit' figure (pre-rent and finance) as the initial starting point from which we could drill down into the respective parts of the business.

The main components of the farms profit naturally split into 'Direct Costs', 'Labour Costs', 'Machinery Costs', 'General Costs', 'Farming Income', and 'Other Income'. These could then be broken down further as follows:

- Direct Costs
  - Seed/Nitrogen/P&K/Herbicides/Fungicides/Trace elements/Feed/Vet & Med/ etc.
    - Rates of application/Feed rates/Timing/Response

- Labour Costs
  - Management/Office/Full-time/Part time/Seasonal/Other
    - Overtime hours/Package benefits

- Machinery Costs
  - Repairs/Depreciation/Hire/Fuel/Insurance/Hp per ha/Hrs per ha/Fuel per ha/Machine downtime/Machine age/Machine output

- Rent & Finance
  - Land rents/Property rents/Hire purchase/Lease purchase/Loans/ Overdraft
    - Bank charges/Interest rates

- Farming Income
  - Milk/Beef/Lamb/Wheat/Barley/Oilseed rape/Pulses/Subsidies etc.
    - Crop rotation/Yields/Soil type/Product Value/Market outlet

- Alternative Income
  - Property income/Horses/Consultancy/Woodland/Other activities

Many of these parameters overlap and cannot be looked at in isolation. One farm unit may be a relatively high yield producer, but with an associated high fixed cost his profit could be lower than others producing lower yields. Taking a realistic view as to what the farm is capable of yielding is quite often necessary to establish what cost structure it can afford. Through the accumulation of actual data over time, reliable trends can be established to eliminate any optimistic memories.

Sentry Benchmarking – Practical examples of business applications

The common threads in the data from this last years harvest suggests that the more profitable of our farms all tend to have lower costs per hectare in the categories of Direct Costs, Machinery, Labour and General costs. A few examples are given below as to how these have, and are continuing to, reduce our costs.

Wheat Production

With current wheat prices at a lifetime low, and ever increasing pressure from our world market competitors, we have to keep striving for a cheaper cost of production. The dilution effect on costs of yield will always act as a carrot for producers to strive for higher yield. However, being realistic in terms of what our land can consistently produce may be sometimes hard, but a fact that we have to recognise in our forward plans.

Example

The cost of producing a tonne of wheat in 1998/9 was £60 per tonne pre rent and finance, at a yield level of 7.36 t/ha. The same figure for the wheat we produced in 2002 was £50 per tonne at a yield level of 8.1 t/ha. This has been achieved not so much by the high yielding fields producing more, but by reducing the number of poor yielding fields and improving the rotation. Additionally we have become more extensive in our operational costs and reduced the number of cultivations taken to establish, grow and harvest the crop.

Fertiliser

Individual farmers or farm managers have used various approaches in formulating fertiliser recommendations ranging from experience, soil analysis, expectation of increased yield, just to name a few. The total company application of Potash and Phosphate was in excess of that being taken off as a crop. This prompted the introduction of a 'balance sheet' approach where applications are matched to crop offtake. A simple calculation involving the percentage of Potash and Phosphate taken off the field via crop yield forms the basis for the application. Unfortunately applications have to be made in advance of knowing the crop yield, so a budget yield can be used. Any over or under application is carried forward, and adjusted for in the next crop by way of the field fertiliser balance sheet. Calculating this figure on a whole farm basis quickly gives a measure of how efficiently compound fertilisers are being applied, and explains some of the variances.

Example

A farm regularly applies 250 kg of a 0:25:25 compound fertiliser on its wheat acreage. This is equivalent to the offtake of Phosphate and Potash from a yield of 7.9 tonnes per hectare. Actual yields were 7.1 t/ha. Adjusting the applications to 'straights' rather than 'compounds' at rates that match the yields achieved has reduced the cost of compound fertiliser by £3 per hectare.

Crop Establishment

Seedbeds for cereals are produced to many standards depending on the equipment available, the soil type and the manager's perception of how good it should be. Operations may include one pass or several to achieve the required result. Measuring the number of machine hours used to establish, look after and harvest the crop provides an insight into how 'intensive' or 'extensive' the field operations are. The current range is from 2.5 to 6 machine hours per hectare at an average cost of £25 per hour, demonstrating that there is significant scope to increase overall efficiency.

Example

The farm was run very traditionally and to a very high standard of workmanship. Machinery and labour costs were high for similar category farms. Total machine hours per hectare were 17.5 (this figure also included some livestock work). Through changing the crop establishment system from a multi-pass system (ploughing, power harrowing and drilling) to a one-pass system, the farm reduced the annual machine hours to 8.7, giving an overall saving of £21 per ha on machinery and no apparent reduction in yield.

Combine Harvester Performance

Benchmarking the whole fleet of harvesting equipment highlights the range of performance being achieved. Parameters measured identify tonnes per hour, hectares per hour, downtime, repair cost per hour and cost per tonne. Comparing individual machines, which in many cases are identical, the variation in performance was considerable.

Example

With many reasons given as to why situations are not comparable, it was decided to work in conjunction with the manufacturer to improve the average machine output through an advanced Operator and Machine Manager Training Day. Through openly discussing problems and ideas on aspects such as driver management, machine settings, harvest management and decision making, maintenance, grain handling logistics, the overall performance of the fleet, in terms of tonnes per hour, was improved by 30% for the 2002 harvest. This reduced our harvesting costs from £6.7 to £5 per tonne.

Economy of Scale

Achieving maximum economy of scale is difficult if the farm parameters are fixed. Many solutions are available to achieve greater economies of scale such as using external contractors, machinery rings, taking on more land or collaborating with a neighbour.

Example

Two totally separate farm businesses were experiencing high costs in terms of labour and machinery. Through a collaboration agreement, the two farms now operate with one fleet of equipment and one workforce achieving significant savings in labour and machinery costs. At the same time there is no shared ownership of any labour or machinery, so each farm has totally retained its identity as a business. Labour and machinery costs of the combined operation is now running at 88% of the average of the three years prior to the collaboration agreement and of equal significance, it is achieving far better timeliness of operations reflecting in increased yields.

Machinery Fleet Age

With good profits it was easy to justify regular machine replacement policies. As profits have disappeared the replacement policies are being extended. This puts increased dependency on both the skills and the facility available to properly maintain machinery. With older machines, reliability becomes more of an issue and work plans need to allow for a greater degree of downtime. In practice, planning to work longer hours or increasing overall machine capacity largely offsets the extra downtime. Using actual farms to demonstrate the key issues, other Sentry farms have structured their business in a similar way to achieve a net reduction in costs.

Example

Benchmarking data was showing that farms running older fleets of equipment were not necessarily incurring higher repair costs as would be expected. Taking comfort from this fact, the average machine age within the Sentry fleet is now currently running at 4,330. Going back 5 years this figure was nearly 1,000 hours less. Many farms have increased capacity to cope with extra downtime. This has reduced our depreciation costs by over 30%, producing a net saving of £11 per hectare, whilst over the same period our repair costs have remained static. With no significant reductions in yield, it is assumed that timeliness of operations has not been significantly affected.

Cost of Operations

Having the equipment on site has long been argued as timelier than having to rely on external contractors. Within Sentry, the cost of performing any operation in house is benchmarked against the use of an external contractor. The economy of scale necessary to justify specific machines is often greater than can be achieved particularly where the machine is specialised. The machine finishes up being under utilised and in effect costing more than a contractor.

Example

The decision by one farm to take on extra land was bound to stretch the existing farm's slim labour and machinery resources. The sugar beet harvester was on its last legs and urgently needed replacing. By the time depreciation was taken into account, and even with the extra land, the harvesting operation was calculated to cost around £200/hectare to harvest his sugar beet, without allowing for any extra labour.

The answer Sentry came up with may seem unconventional for a company specialising in operational farming –we organised an external contractor to harvest the sugar beet. The one chosen had a number of harvesters offering to harvest his entire crop at around £20 per acre less than it would have cost to purchase his own machine.

Summary

The solutions found to many of our problems was often staring us in the face when viewed with hindsight. The process of benchmarking forces you to look at and justify not just the obvious, but also the more obscure parameters. It facilitates change through providing a comfort zone as it can only ever report on a parameter from an actual business that can be visited first hand.

We cannot afford to stop improving our businesses, nor can we afford to stop competing for our share of the market place. Measuring the exact benefit is hard, as much of how we change our businesses could be interpreted as natural development. However we would argue that our natural development is ahead of many in the industry because of how we use benchmarking.