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AHDB

HORIZON



Preparing for change: The characteristics of top performing farms

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FOREWORD

AHDB previously published 'Brexit scenarios: An impact assessment', aiming to help farmers and growers understand the potential impact of Brexit on their sector. The report modelled three scenarios for Brexit. While the impact varied, both by scenario and sector, one factor remained constant under all scenarios, regardless of sector or farm size: the top 25 per cent of performers, in terms of their ability to turn inputs into outputs, remained profitable.

The obvious next question was: what are the characteristics of top performing farms? What are the top-performing farmers doing differently to others? How can two neighbouring equally-sized farms on similar soils with the same fundamental farm systems make radically different amounts of money?

In this latest publication in the Horizon series, we examine these questions. It summarises the results of a project commissioned by AHDB and conducted by Anderson's Farm Business Consultants in 2018. The purpose of this project was to provide an assessment and ranking of the main factors that differentiate the highest-performing farms from all others in each of AHDB's six sectors: Horticulture, Cereals & Oilseeds, Potatoes, Pork, Dairy and Beef & Lamb.

This guide is intended as a reference point for farmers seeking to improve their own performance, whatever their sector or current level of performance. It is intended as an ideas map not to sit on the shelf once read, but to keep close to hand and read and re-read and used to identify actions to take now and in the future. It looks at each of these factors in turn and suggests actions which farmers and growers can take to start improving their performance in each area. It then goes onto to explore differences at sector level through the use of Farm Business Survey (FBS) data, alongside case studies.



Graham Redman
Partner of The Andersons Centre



BACKGROUND

Three main approaches were taken. Firstly, a literature review of published work. Next a novel analysis interrogating the outputs of the Farm Business Survey (FBS) matching pairs of similar farms from different performance quartiles[1]. Thirdly, six case studies.

This work empirically and statistically demonstrates the links between certain practices and high performance. The full technical report can be found here: **ahdb.org.uk/knowledge-library/the-characteristics-of-high-performing-farms-in-the-uk**

In this study, performance is measured as: income generated by the farm divided by the costs associated with it; a return on turnover.

Using this method, farms of varying sizes can be compared; it simply examines how a farmer manages to convert inputs into outputs. It is the return that a farmer has managed to generate as a proportion of their output. By this measure, a farmer with a large estate receiving millions of pounds of sales and making £200,000 is not performing as successfully as a small new entrant with minimal turnover and making £100,000.

The study showed the top 25 per cent of farms, across all farm types, perform 1.8 times better than the bottom 25 per cent. This means a great deal in terms of profit difference between farmers. In 2014/15 to 2016/17, the bottom 25 per cent lost £34,600 per farm from agriculture and lost £11,200 overall after subsidies and diversification. Meanwhile, the top quartile farmers made £42,000 from farming and made over £115,000 in total[2].

Less than five per cent of variation in farm performance is related to geographic factors, such as soil and climate[3]. More than 70 per cent of the difference between top and bottom quartile farms is due to decisions made by the farmer. The factors a farmer cannot change are mostly of small importance to performance.

While there are scenarios where farming could become more profitable after Brexit, we cannot depend on these outcomes and most farms will need to work to become more competitive to retain a viable long-term and sustainable business. It will be the decisions made on farm that will determine your future. AHDB intends to support its farmers and growers to succeed in this, as part of our programme to get Fit for the Future.

> “Measuring performance simply examines how a farmer manages to convert inputs into outputs”



[1] Measured as farm income divided by costs associated with it; a return on turnover

[2] Defra, (2018) The Future Farming and Environment Evidence Compendium
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683972/future-farming-environment-evidence.pdf

[3] Langton, S, (2012) Grazing Livestock Farms: Economic Performance and Links With Environmental Performance
Pub: Defra Agricultural Change and Environment Observatory Research Report No. 30
webarchive.nationalarchives.gov.uk/20130403192957/www.defra.gov.uk/statistics/files/defra-stats-foodfarm-environ-obs-research-cattle-grazingrep-120308.pdf

SECTION 1:

THE EIGHT FACTORS

AHDB intends to support its farmers and growers to succeed in this, as part of our programme to get Fit for the Future.

Section 1 looks at eight key factors differentiating the top-performing farms. A hierarchy of importance for these factors will vary for each farm according to the farm system, environment, existing skills, resources and performance on the farm but for the industry overall our assessment of the factors in priority order is as follows:

1. Minimise overhead costs
2. Set goals and budgets
3. Compare yourself with others and gather information
4. Understand the market
5. Focus on detail
6. Have a mindset for change and innovation
7. Continually improve people management
8. Specialise



1. MINIMISE OVERHEAD COSTS

In any commodity-based industry such as agriculture, the best performers simply spend less money producing each unit of output when measured on a financial basis. This does not necessarily mean generating more output per hectare or per head of stock.

> Higher output accounts for just ten to 30 per cent of higher profits in top-quartile farm businesses but lower costs contribute 65 to 90 per cent[4]

However, with margins tightening over time, in order to retain a steady profitability in real terms, it is necessary to generate more output at lower costs.

Wilson *et al's*[5] study asked what piece of advice farmers from the FBS would leave for other farmers. As seen in the table below, two points dominated: to control costs and to give ample attention to detail. All others are clearly identified as less critical for most farmers.

Table 1. **Farmer to farmer advice – top tips for success**

What key advice would you give?	High performers	Improved performance
Control costs	✓✓✓✓✓	✓✓✓✓✓
Pay attention to detail/focus on key things	✓✓✓✓	✓✓✓
Be flexible/open to change/look for new opportunities/ react to change fast	✓✓	✓✓
Look after cows and they will give you profit	✓	✓✓
Get the right people around you	✓	✓
Do not buy in livestock as it leaves you open to disease		✓
Develop a range of income streams		✓

Top-performing farmers clearly have a sound comprehension of what a commodity business model is all about: high turnover and low margin. Reducing costs of production is paramount when you have minimal control over the sales price. The literature identifies the greatest variation in cost structure between high and poor performers is overheads, with power and labour dominating.

This is the strongest message of this guide. In all sectors, higher-performing farms in the FBS study had lower overheads than the rest, as will be examined in more detail later. No farmer can operate in the top-performing quartile without a keen focus on cost control. Both the literature review and the farming examples focus on 'low-cost' production; it's what commodities require.

Always remember the sector farming is in. Every day, look for ways to trim costs that don't affect turnover. Collaborate with nearby farms or businesses, keep machinery longer and maintain it well, spend time developing and training staff and other key resources, keep necessary staff and machines and no more.



[4] Redman. G., (2015), The Best of British Farmers; What gives them the edge? By The Andersons Centre for The Oxford Farming Conference

[5] Wilson. P., Lewis. M., Crane. R., Robertson. P., McHoul. H., Bonner. J., Davenport. R. and Riley. M. (2012) Farm Level Performance: Identifying Common Factors Determining Levels of Performance. Pub, Rural Business Research

1. MINIMISE OVERHEAD COSTS

STEPS FOR SUCCESS

- Renew your machinery replacement policy; when was it last reassessed?
- Can you keep your oldest tractor another year but maintain it better?
- Work with neighbours to share an item of machinery
- Negotiate with the contractor harder
- Calculate which overheads you can do without if you stop any individual enterprise
- Question the seed rate you have been using
- Challenge your farm advisor to demonstrate a return to you on his or her costs
- Calculate how much additional yield is required on your farm from ploughing to make it worthwhile? Is it worth trying a parcel of land unploughed?
- Identify how to maintain machinery better and cheaper
- Be more organised with paperwork. Can you do some to save accountancy of farm secretary costs? What accounts could you do that would give you a better understanding of the farm business?
- Identify the time you spend driving farm machinery on a road, what it costs in terms of wear and tear, fuel and wasted time. Calculate if it's worth it
- Cancel any subscriptions you have not used or read for the last 12 months
- Consider the size of livestock trailer you need. Would hiring a lorry be better when you need to move them?
- Calculate the cost of machinery finance. Are you better paying cash and using overdraft? By how much?
- Negotiate your borrowing rate. Check with other banks that you are paying a low rate
- Identify where the farm is overcapitalised and slim it down
- Ideas on how to cut costs are almost endless. Make a list of 50 ways to trim costs



> "No farmer can operate in the top-performing quartile without a keen focus on cost control"

2. SET GOALS AND BUDGETS

Farms that intentionally carry out farm business management practices are considerably more profitable, particularly at the individual business level (Langton 2012[6]). High-performing businesses are likely to:

- Set ambitions and long-term goals
- Undertake management accounting, including budgeting
- Use comparative data, including benchmarking
- Seek information and advice through means including farm visits and paid advisors
- Interact with customers (those buying from the farm)
- Adopt formal risk-management strategies (see overleaf)

This is identified clearly in a recent publication by Defra, as shown in Figure 1 below:

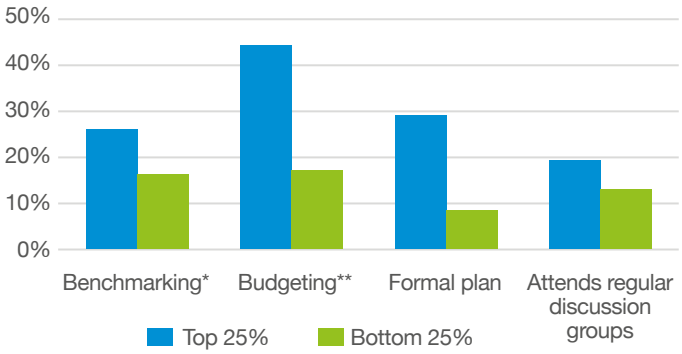


Figure 1. **Percent of farms carrying out various management practices by farm performance**

Source Defra, data from 2016/17, *Benchmarking is either Enterprise level, Balance sheet, or international, **Budgeting is creating a predicted spend allowance, then monitoring gross margins including profit and loss.

Farms that write a formal long-term business plan are more profitable than the others. Writing your ambitions down is one of the most successful ways to visualise in your mind what you want to do and therefore for it to happen, as proven by the FBS. However, only 19 per cent of farmers have a mission or written goal (Defra)[7]. Farms that quantify their aspirations by putting numbers against what they would like to achieve, in other words by setting financial targets, perform significantly better than those who don't (Langton 2012).

Undertaking detailed financial budgeting each year not only gives an indication of expected profitability but also makes farming activities fundamentally more profitable. Some consider budgets to be of limited value when you don't know for sure what the price or yield of a farming enterprise is going to be, or what costs might be in a year.

But setting targets provides a guide for farm businesses to work towards and challenges the manager when spending rises above expected levels. These targets can be drawn from previous performance or published information, such as the Nix pocketbook or market intelligence data from AHDB. Indeed, writing a budget when you do know the figures is arguably less meaningful.

The Farm Business Survey identifies that those farmers that compile complete farm budgets and make regular use of them are significantly more profitable than those that don't. The financially best performing farms undertake budgeting universally. Yet, two thirds of farmers do not put a budget together, or for that matter even a cash flow schedule.

Analysis by Langton (2012) identified the higher-performing farms go beyond simple budgeting and use gross margin analyses for each of their enterprises. This allows comparative analysis between other farms that share similarities, and crucially with the farm's own performance in previous years or other parts of the farm. Properly compiled budgets, when coupled with management accounts, identify the areas of high and low performance, as well as those parts of the farm that are losing money. Budgeting also facilitates the use of key performance indicators (KPIs), those measurables that give a strong indication of the level of success of an enterprise or entire business. AHDB is compiling a series of suggested business level KPIs.

To summarise, without a goal or ambition, you will not know if you have achieved what you are working towards. Sit down and speak with business partners and family members. Discuss what each other wants to achieve (financial and non-financial). Make sure your aspirations are aligned. Write them down pin them up and discuss them regularly. Share them with your business advisor if you use one. Work out a plan how to achieve your mutual goals.

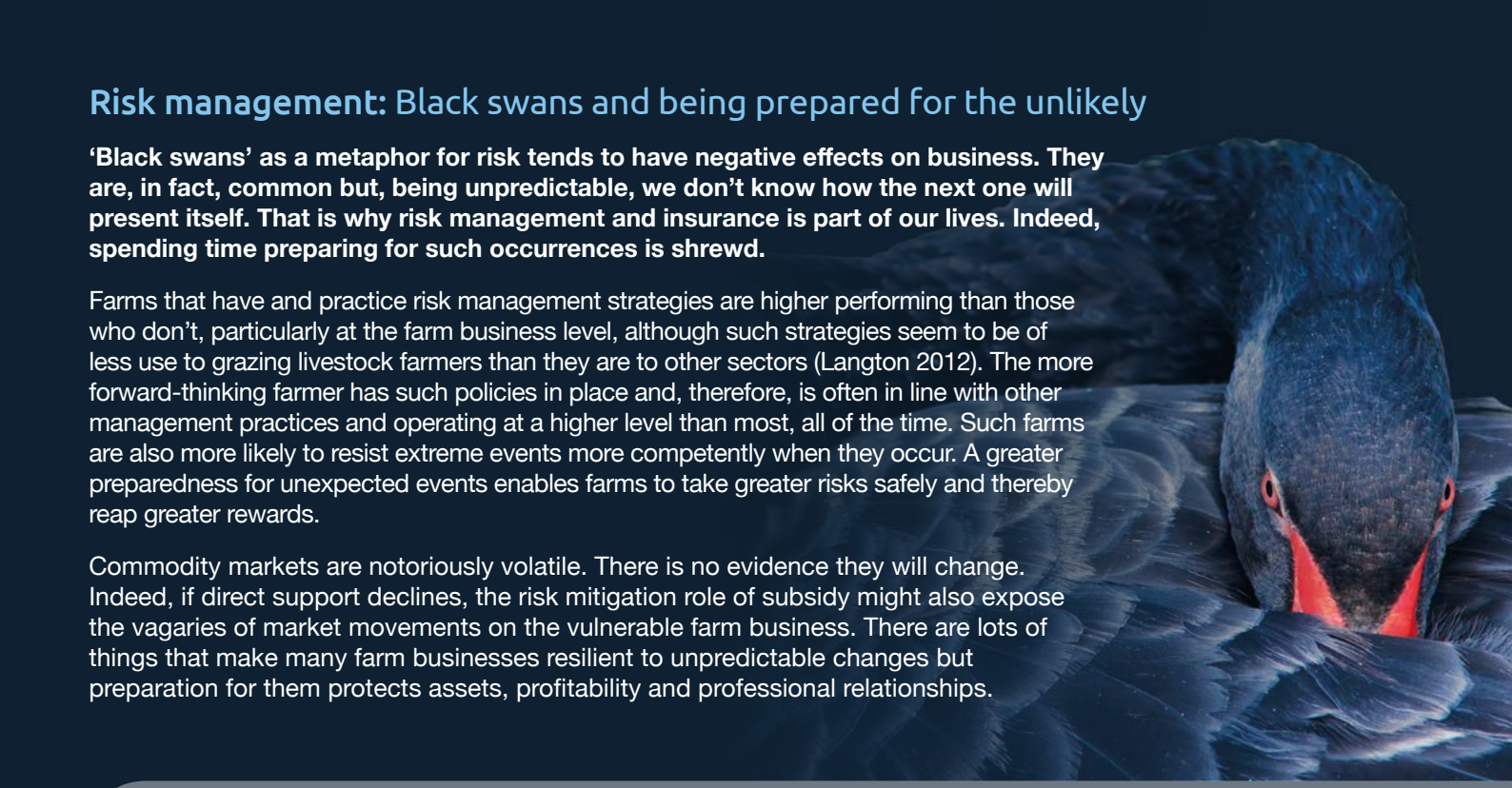
Compile annual budgets to show how the year is planned to go. You can identify what is going well and what not so well, helping you to adjust things if necessary. Ideas can be tested using this tool. Think through contingencies by developing a risk plan and quantifying each risk. Successful entrepreneurs don't take higher risks than others, they just have a better understanding of them, so know what they can do safely. Others guess and are sometimes wrong, so make less progress or don't act in case they are wrong, guaranteeing no progress. Use these schedules regularly and frequently.

[6] Grazing Livestock Farms: Economic Performance And Links With Environmental Performance. Pub: Defra Agricultural Change and Environment Observatory Research Report No. 30: **webarchive.nationalarchives.gov.uk/20130403192957/http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-environ-obs-research-cattle-grazingrep-120308.pdf**

[7] Defra, (2018), Business Management Practices on Farms, England 2016/17. Pub: National Statistics **assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/682764/fbs_businessmanagement_statsnotice_22feb18.pdf**

Risk management: Black swans and being prepared for the unlikely

'Black swans' as a metaphor for risk tends to have negative effects on business. They are, in fact, common but, being unpredictable, we don't know how the next one will present itself. That is why risk management and insurance is part of our lives. Indeed, spending time preparing for such occurrences is shrewd.



Farms that have and practice risk management strategies are higher performing than those who don't, particularly at the farm business level, although such strategies seem to be of less use to grazing livestock farmers than they are to other sectors (Langton 2012). The more forward-thinking farmer has such policies in place and, therefore, is often in line with other management practices and operating at a higher level than most, all of the time. Such farms are also more likely to resist extreme events more competently when they occur. A greater preparedness for unexpected events enables farms to take greater risks safely and thereby reap greater rewards.

Commodity markets are notoriously volatile. There is no evidence they will change. Indeed, if direct support declines, the risk mitigation role of subsidy might also expose the vagaries of market movements on the vulnerable farm business. There are lots of things that make many farm businesses resilient to unpredictable changes but preparation for them protects assets, profitability and professional relationships.

2. SET GOALS AND BUDGETS

STEPS FOR SUCCESS

- Do the maths and identify whether each enterprise is making a net margin after all your time is accounted for. If not change the farm
- Ask your business partner what their aspirations for the next 10 years are. Are they what you thought they are?
- List your most useful KPIs. Keep them updated regularly (monthly for some, daily for others). Can you get it automated on your phone?
- Work out how you would farm if there was no subsidy
- Keep a spreadsheet of yields, prices and other key measurables to easily compare performance each year or month
- Measure how you have grown the farm business since taking it on. Do not account for rises in capital value that are not down to you such as land appreciation
- Chase bad debtors more frequently
- Differentiate between investments and speculations. Consciously decide how much to speculate
- Calculate how strong your balance sheet is and therefore how much risk to accommodate
- What is the optimum capital to have in the business? Remove any surplus for other investments
- Recognise that insurers make money from you. Can you afford to take on more liability yourself that is currently insured?
- Calculate the potential benefits and costs of environmental schemes
- Communicate with landlords about fixed investments or environmental schemes. Check they are part of your agreement or you have the landlord's written consent and tenants' improvements are acceptable
- Are you borrowing the right amount of money? Would you make more money if you borrowed more or less? What is the impact on your return on capital?
- How could you invest the cash if you took more money out of the business?
- Challenge your tax advisor/accountant to actively look out for tax savings without spending all the profit
- Use average historic prices to budget/stress test. Download long term pricing information from the AHDB website

3. COMPARE YOURSELF WITH OTHERS AND GATHER INFORMATION

More than half of farmers operating in the bottom quartile do not realise they are under-achieving, suggesting the benefits of benchmarking or other comparable analysis could be tremendous[8].

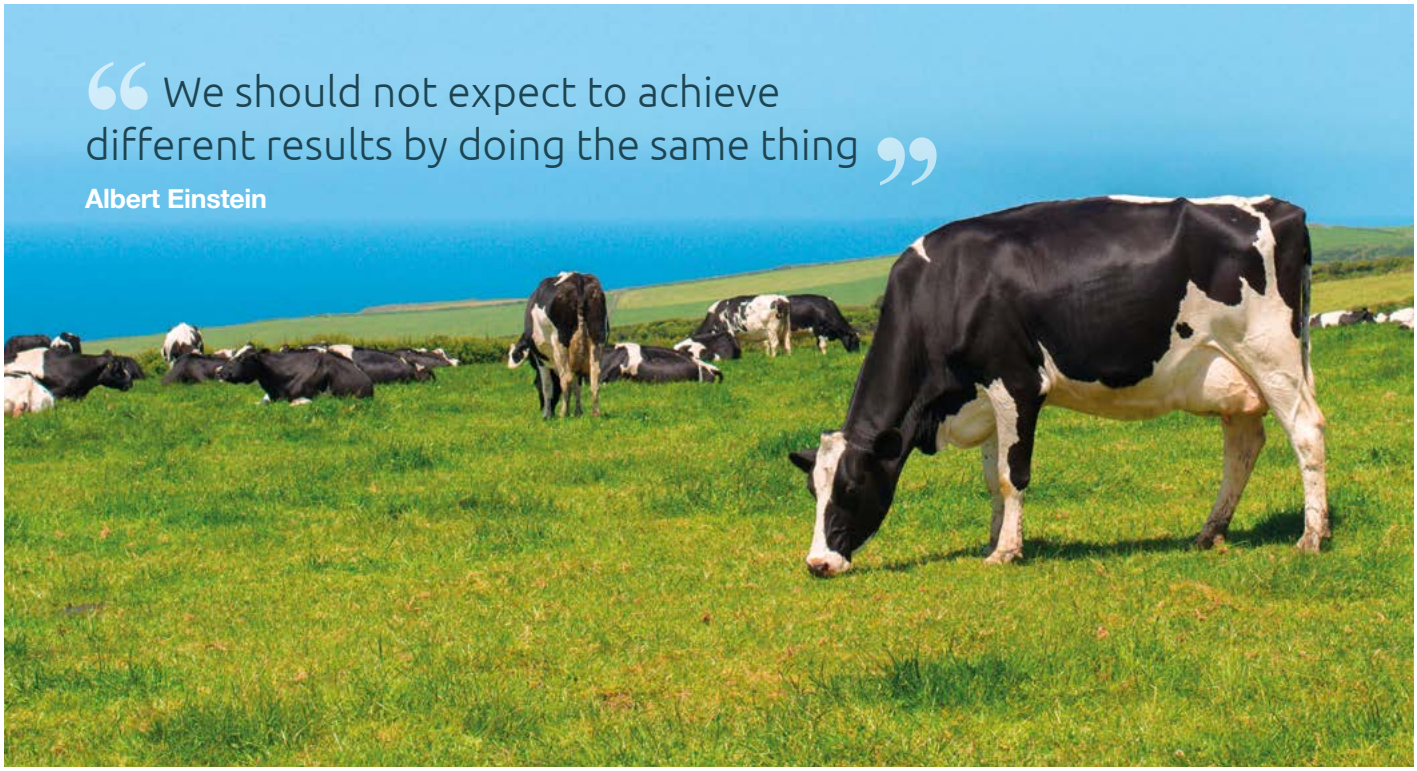
Most people are likely to work to achieve the minimum income necessary to provide the lifestyle they want or have become accustomed to. But greater effort is then required to exceed that and generate a surplus. Indeed, not all farmers want to operate in the top quartile. To clarify, while we should assume that all farmers (like any other) would prefer more money than less, to move from the bottom quartile or even middle-ground would involve 'doing things differently'. This is a challenge for many people, especially if nothing major has changed in many years. Clearly, as Einstein is credited to have pointed out, "We should not expect to achieve different results by doing the same thing" so to raise performance, we therefore need to change.

All top farmer's benchmark[9]. It is a sweeping statement but the authors claim that formal or informal comparison of performance is essential to be a top performer. Wilson et al in 2012 identified that most high-performing farmers undertake benchmarking activities, allowing them to use other people's knowledge to identify where performance is edging forwards and what the expectations for performance should be. The FBS agrees that benchmarking is significantly related to high profitability, with less profitable farms unlikely to benchmark.

Higher-performing farms tend to attend discussion groups, both on business management and other issues. Both discussion groups and benchmarking become useful when comparable measurables are set that pitch performance between farms and resources (for example breeding stock or land). KPIs are crucial for measuring performance. Examples such as kg milk solids per hectare, horsepower per hectare of arable land or daily liveweight gain give clues about performance of various sectors of the farm.

Attitude to risk is also relevant. Most farmers are risk averse, a sensible approach in the context of a family business they hope will continue in future generations. So many will prefer a safe position at the centre of the distribution, rather than adopting higher-risk strategies that might take them to the top.

Farms with more information make more money. It could be through benchmarking, discussion groups, informal discussions, regular reading (not just farming press), farm walks or a combination of all the above. Critically, taking that information to the farm to identify what you can do to farm more profitably is what matters. Knowledge is only useful if you change something as a response: look to invest knowledge into smarter farming.



[8] R Redman. G., (2015), The Best of British Farmers; What gives them the edge? By The Andersons Centre for The Oxford Farming Conference

[9] Verissimo. A. & Woodford., (2005) Top Performing Farmers are Information Rich Case Studies of Sheep and Cattle Farmers in the South Island of New Zealand. Pub: IFMA 2005 Brazil, 15th Congress - Developing Entrepreneurship Abilities to Feed the World in a Sustainable Way researcharchive.lincoln.ac.nz/bitstream/handle/10182/420/Verissimo_Woodford.pdf?sequence=1

3. COMPARE YOURSELF WITH OTHERS AND GATHER INFORMATION

STEPS FOR SUCCESS

- Look for easily comparable data between your farm, and others eg horsepower per hectare of arable land or daily liveweight gain
- Compare your staff's wages against other's nearby. Are you paying too much or too little?
- Calculate your staff turnover
- What should it be? How can you address that? What is your stocking rate? Calculate it per unit of productivity rather than per hectare, ie if some land is less fertile, is should have a different rate
- Calculate how much organic matter you are removing from soils and identify how it is to be replaced. Do you need to replace more to compensate for previous years' losses? Calculate the chemical and biological value of incorporating straw into soils before baling it and exporting it off the farm
- Quantify what each enterprise adds to the farm business. Do this objectively, rather than looking for justifications for keeping them. AHDB's Knowledge exchange team is there to help: ahdb.org.uk/farmexcellence
- Compare contracts for your outputs with other buyers in your area
- Shop around for inputs. Do not stick with the same supplier just because you know them, it might not be the best deal
- Benchmark your business using Farmbench: farmbench.ahdb.org.uk



4. UNDERSTAND THE MARKET

The value of interacting with the person likely to buy your goods on farm is higher than ever. Knowing exactly what to produce might be a relatively straightforward conversation or it could be highly complex. But recognising what is of greatest value to them is critical to adding value to both parties and to keeping costs down. For example, why produce fat carcases if your buyer wants lean? It costs more to make fat carcases and then costs to trim it off; it's simply wasteful.

Producing what your buyer requires could either be the difference between a few percentage points of the sale value, which is important for the marginal benefit, or it could be a cancellation of sale (such as antibiotics in milk or ergot in grain) – then it could be disastrously expensive.

Adjusting a commodity to make an added-value commodity – high protein wheat, brightly coloured beans, high protein milk, correct sized apples, clean carrots and so on – would progressively make a small premium on the commodity, a crucial process. Closer integration and rationalisation with your key customers to fully understand the level of service quality and price that they require will make the farm stand out as one to rely on, potentially then making it even more valuable.

Understand and supply what the market is wanting to buy from you. Ensure good communication with your buyers. This should be a comparatively easy one to achieve. Take your main buyer for a coffee, visit them at their site, and invite them to your farm. Ask them what would add value to what you produce, what they don't value and importantly, the service that comes with it; delivery dates, speed of loading, and so on.



STEPS FOR SUCCESS

- Talk to your main customer and ask them what you could do to make your output even more desirable than others'. Then do it
- By understanding the EUROP carcase classification system and dressing specifications of abattoirs you can increase your returns. Aim for most animals to fall within the green shaded area of the EUROP grid where there is the greatest demand and highest prices
- As dressing specification practices varies between abattoirs it is important to compare dressing specifications and price when deciding where to market deadweight as it will impact the carcase weight and your returns
- To find out more about the EUROP grid and dressing specification see the BRP manuals Marketing prime lamb for Better Returns and Marketing prime beef for Better Returns
- Check you have the right breeds or crop varieties for your customers' requirements and your farm system
- Make sure you are producing the right constituents in milk for the markets it is being used in
- Understand the impact of moisture content on: cereals.ahdb.org.uk/tools/agronomy-calculators/grain-moisture
- Know the cost of crops dropping into livestock feed category

5. FOCUS ON DETAIL

Wilson *et al* (2012) along with Redman (2015) also identifies there is no single action that the best farmers do that is completely different from others; they tend to be better at most processes throughout the farm. Once the farm structure is correct, the attention to detail of every aspect of farming makes a cumulative difference. What does 'attention to detail' really mean? Does it mean knowing every finer detail of the farm? This is simply not possible on large, diversified activities, especially when staff are involved.

Rather, it is more to do with knowing the value of each activity and, therefore, how much time should be spent on each one. Attention to detail is a difficult phrase to describe but is easily recognised when it is seen. A useful comment comes from Langton, 'High-performing farms are not the result of a tick-box list of skills that can be captured in a survey form. Instead, their success is down to a focus on business, applied consistently across all areas of the farm. Formal business training and business skills may aid this process, but they are not a magic potion that will transform a poor farmer into a high performer' (Langton 2012).

Farmers (indeed most people) don't realise just how many decisions they make throughout the course of a day, most of them leading to financial or time-cost outcomes. When something is a process, and repeated regularly, it becomes a habit.

> "Habits are repeated without being questioned and so, gradually, bad practice, good practice or outstanding practices become habitual[10]"

Thus, the processes of farming, whether poor or outstanding, gradually become engrained into the ways of life of the business owner. Habits are incredibly hard to change, even when a new one is forcefully imposed on top of an old one, the rut of an old process remains in the brain. Charles Duhigg demonstrates this in his analysis of habits and identifies that habits become so regular, they are repeated subconsciously and even conscious thought is not sufficient to break them. Ways of thinking become habits, as well as actions. Duhigg argues that excellence or poor performance become habitual in themselves. This is summarised neatly by a comment made by management coach Jim Rohn[11]. 'Success is a few simple disciplines, practised every day; while failure is simply a few errors in judgment, repeated every day.'

[10] Duhigg Charles ~ (2012) The Power of Habit. Pub: Random House Publishing Group

[11] **jimrohn.com**

The concept of attention to detail has developed in recent years to one of 'Aggregation of Marginal Gains'. It became popularised from the successes of the UK cycling team in the 2012 London Olympics, when Team GB took eight of the eighteen available gold medals, with no other country winning more than one. This remarkable achievement was based on a belief held by the Performance Director of the Team GB cycle team, Dave Brailsford, that, if everything that could be managed, improved by a marginal 1 per cent, then the impact overall would be noticeable. Not only did he examine wheel size, bike weight, training schedules and so on but also hand cleanliness and sleeping patterns of the racers in question. In fact, he determined to find 100 things that might affect cycling performance and improved them by 1 per cent. If 100 equal things improve by 1 per cent, then the impact on performance is multiplied giving a 2.7-fold rise of performance. Figure 2 demonstrates this:



Figure 2. **Iterative decisions; 100 Good and 100 Bad**



The same is true in farming, with the top farmers noticeably doing slightly better at the widest range of things, whether financial, technical or strategic. It is relatively easy to think of 100 things that managers have some control over on any farm. A conclusion of an Organisation for Economic Co-operation and Development (OECD) paper from 2013[12] states that the authors found no single factor that unequivocally makes some farms better than others but did comment that the range of performance is considerable in all countries they explored.

Everybody has different objectives and ambitions and, therefore, success measurables vary. Indeed, some farmers do not measure success at all, while others may not have considered what success means to them so cannot measure it.

The literature on what makes a successful farmer is focused on making money, with other benefits either ignored or given a monetary value. Most comments refer to management practices rather than technical points, with observers concentrating on things like attitude. This is easy to identify but difficult to score. Within this is the farmer's attention to detail; their focus on every part of the farm business that they consider matters to them or their customers.

Noticeably, many sources note that the best farmers cannot be picked out by one or two things at which they substantially outperform their peers, but push forward on everything, albeit by a small amount for each. An FBS surveyor's comments are relayed in Wilson *et al* (2012)[13], identifying exactly this:

> "… farmers pay close attention to detail, plan their business activities, have a passion for farming and take pride in their work"

Focus on detail is a difficult attribute to identify using a tick-box survey but can be spotted, probably more easily by others. Ask somebody you trust whether they consider you have it. How can you improve everything you do? Make this a continual program of improvement. Identify 100 things that could be done a little better and as you work through them, one by one, consider the cumulative impact of these marginal gains.



[12] Kimura. S., and Le Thi. C., (2013) Cross Country Analysis of Farm Economic performance. Pub: OECD FAO Paper No. 60

[13] Wilson. P., Lewis. M., Crane. R., Robertson. P., McHoul. H., Bonner. J., Davenport. R. and Riley. M. (2012) Farm Level Performance: Identifying Common Factors Determining Levels of Performance. Pub, Rural Business Research



5. FOCUS ON DETAIL

STEPS FOR SUCCESS

- Resolve to reduce cattle lameness through better cow tracks, nutrition or other techniques
- Explore your own time management; become more disciplined on time efficiencies by reviewing day-to-day practises – it is these that lead to the costs you incur
- Work on improving grass quality that your youngstock are on
- Identify the best date for cutting grass for perfect silage, not just good silage. How do you raise breeding stock health, so they last longer?
- Robust disease management practices
- Identify three key reasons for mastitis on your farm and take one additional step to reduce each
- Buy a grass meter and measure grass growth frequently in the growing season, especially beef and sheep farms. Manage fertiliser and stocking rates accordingly
- Keep livestock feed clean and dry. Do not feed damaged feed to livestock
- How can you raise the yield at the field edges?
- Improve your discipline on tightening your calving interval
- Ensure all machinery is thoroughly cleaned between fields with blackgrass in and ensure all fields are walked to patch spray with roundup remaining blackgrass areas and hand rogue isolated plants pre-harvest
- Tighten up the ear tags and NVZ records to minimise the risks of cross compliance breaches
- Put biosecurity wheel dips at the start of your farm drive. Expect all farm visitors to use a boot dip before entering the farm
- Do a risk assessment on each part of the business ie what would the impact to the business be if a key member of staff left and how likely is it to happen?

6. HAVE A MINDSET FOR CHANGE AND INNOVATION

The single factor having the greatest impact on performance identified by University of Minnesota Agricultural Extension Service survey was having a positive attitude. In this study, it referred to farmers who considered they had control over their own destiny, were free to make their own decisions and, therefore, also held responsibility for errors or losses that were incurred.

Other strong correlations identified included goal setting and striving for them. Working to make more efficient use of machinery was also a strong correlation. Carole Dweck[14] discusses how there are two main mindsets, the 'fixed' and the 'growth'. Somebody with a growth mindset is not concerned by other people's performances, other than as a learning opportunity but concerned with personal improvement.

Verissimo and Woodford (2005) identified that top farmers are not the earliest at adopting new technology, leaving others to be distracted by potentially costly and time-consuming new ideas, but are relatively early adopters, entering, where possible, in a gradual way.

High-performing farm businesses make better use of computers (Langton 2012). This does not necessarily mean if a farmer suddenly buys a laptop and starts communicating electronically, he or she will become a better farmer. More likely, it is an indication of the use of IT throughout the business and has been able to capture some of its benefits in so doing. It might also have a reflection on the ability of the individual to adopt novel and new innovations to facilitate life and work. The link to the next generation of big data and precision farming is currently unproven, although such technologies facilitate expansion, by allowing detailed farming practice over more hectares or head of stock. However there is no doubt that having the right information at the right time will help you make the right decisions for your business.

Mindset is tricky to score. Ask yourself; do you complete a budget begrudgingly and under instruction or willingly as you know it helps? Do you attend a benchmarking group because a friend goes and it's a free lunch but then make no business changes? The farmer's attitude must be correctly focused on benefitting from opportunities of farming and the rich, rewarding lifestyle it offers farmers. Remember this while going about daily farming business. Innovate your ways of working. It doesn't mean buy innovations others are trying to sell you but think about ways to overcome barriers on your farm to reach your desired goals rather than turn them into excuses or burdens. Actions have to follow; it's like joining a gym!

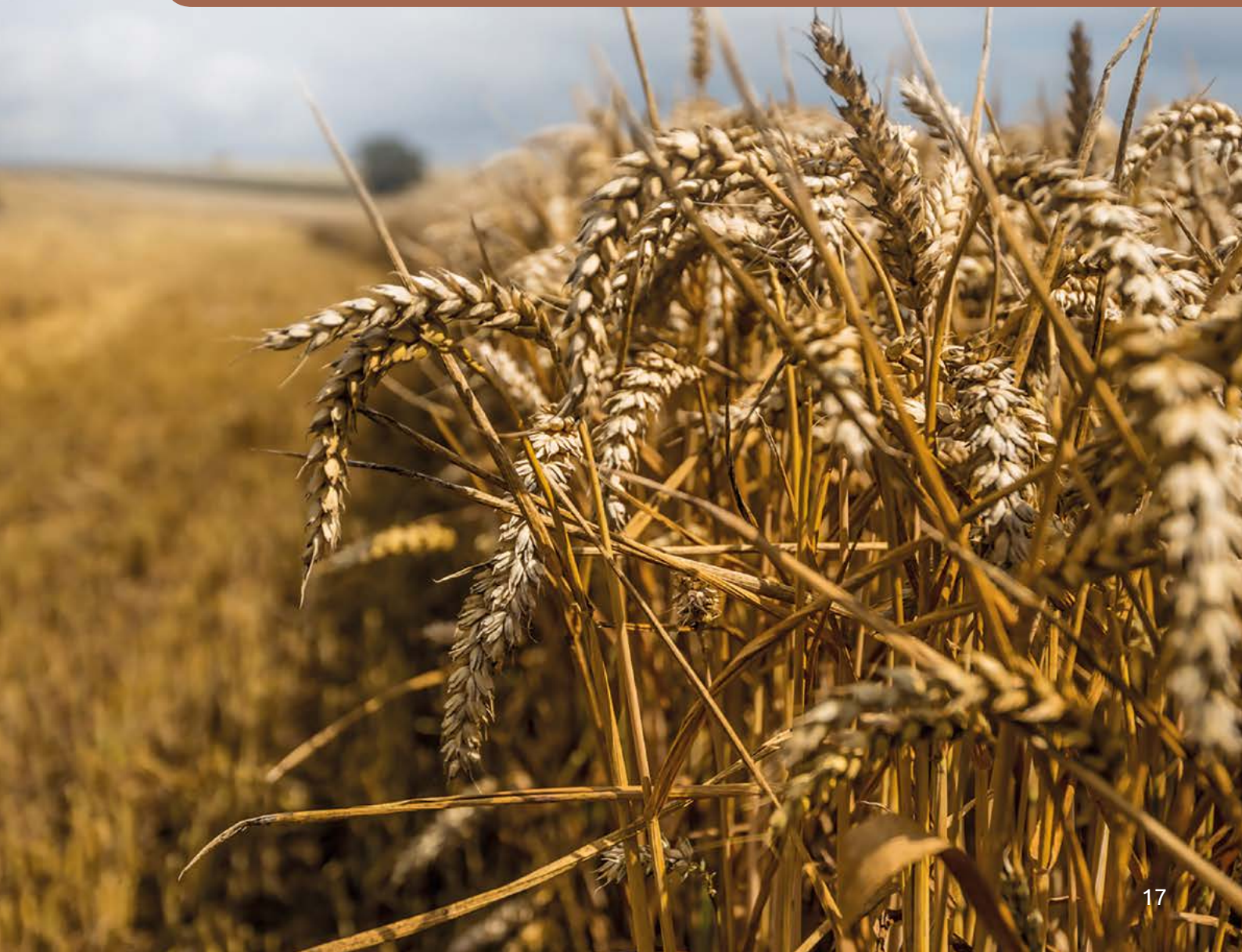


[14] Dweck Carol ~ Mindset (2017) Pub: Random House Publishing Group

6. HAVE A MINDSET FOR CHANGE AND INNOVATION

STEPS FOR SUCCESS

- Identify how livestock health can be improved further through considering changes to their housing and handling areas
- Discuss how contractors can improve your cost base by not owning all of your own machinery. Question the seed rate you have been using
- Identify the key factors that encourage mycotoxins and avoid or manage them carefully
- Identify your local monitor farm and attend meetings, discussions groups and farm walks: **cereals.ahdb.org.uk/get-involved/monitorfarms**
- Attend local small business (non-farming) discussion groups and seek new ideas and collaborations
- Listen to others more than you talk to them. Come home with ideas and try them out
- Enjoy what you do
- Read business books to gain inspiration from other industries



7. CONTINUALLY IMPROVE PEOPLE MANAGEMENT

As a farm grows, there comes a point when the farmer cannot personally do everything. Employing staff becomes a necessity. A labour force provides the opportunity to leverage somebody's time just as debt leverages cash or rented land leverages an owned land-base. Hiring good land is easier than spotting and recruiting outstanding skills and then motivating people to achieve great things on your behalf. It takes remarkable leadership, motivation and training. As more staff are involved, formalised farm governance becomes necessary to facilitate delegation of management tasks[15].

Langton's research identifies that farms with greater levels of family labour tend to be more efficient, even when the labour is costed at its full economic rate (as they should be for such calculations). The argument is that a business operated by those who own or are in line to inherit it are likely to put greater commitment into the work, possibly with no 'plan B' alternative. However, unpaid labour can also find itself doing low value work too; it's an easy way to lower the productivity of the workforce. Barnes (2010)[16] though, identifies that paying labour focuses the attention of the employer: a paid workforce is, therefore, less likely to have unnecessary overtime or do lower-value tasks that add no value to the farm. They have more time away from the farm, meaning a clear boundary between work and leisure time. This can make the workforce very efficient with its time on farm. Paying family labour a full commercial rate is healthy for the economics of the farm and also helps disconnect the often-assumed link between effort and inheritance. This should be dealt with separately.

Langton's work also identifies a higher level of efficiency with greater use of contractors. This is corroborated by Barnes. When work is consistently contracted to a third party, the need to spend large sums of capital on machinery decreases, saving capital expenditure. Contractors also often have higher-specification machinery, spending more of their time doing that particular job than most farmers. It also means specialist skills can be purchased, saving training time and expenditure on farm staff. This is a good example of rational profit maximisers making different decisions to emotionally-driven farmers. In Chicago, for most city dwellers, it is considerably cheaper to have a contract with a taxi firm than to own a car. Yet the town is still overcrowded with cars. It is 'nice' to own a car but expensive[17]. The same is clearly true in many cases in UK agriculture; while there are often benefits of owning machinery, on balance, there are many occasions when a full costing would demonstrate a contractor is considerably cheaper.

There is only so much an individual can do in a day, but no limit on the capacity of a team. Empowering staff (including family labour) to do a great job involves investing time and money, but especially time in them. Training, motivation and crystal-clear leadership all contribute to trusting, loyal and hard workers. This task becomes easier when the farm's objectives have been set. Provide all the necessary training and materials people require. Remember, they are helping you to achieve your dream.



[15] Cooney O. Governance: A Model for Dairy Farming cooneyleesmorgan.co.nz/governance-a-model-for-dairy-farming

[16] Barnes, A.P., Revoredo-Giha, C., Sauer, J. Elliott, J. and Jones, G. (2010). A report on technical efficiency at the farm level 1989 to 2008. Report for Defra, London **webarchive.nationalarchives.gov.uk/20101109181006/http://www.defra.gov.uk/evidence/economics/foodfarm/reports/agriculturalefficiency/agri-efficiency.pdf**

[17] Thaler. R. & Sustein. R., (2008), Nudge: Improving Decisions about Health, Wealth, and Happiness. Pub: Yale University Press



7. CONTINUALLY IMPROVE PEOPLE MANAGEMENT

STEPS FOR SUCCESS

- Calculate your staff turnover. What should it be? How can you address that?
- Staff might be your main asset. How robust is their training programme? Formalise it and put it in their annual diaries. How thorough are your staff's terms of employment and contracts? Re-read them
- Thank your staff at the end of each day's work
- Compliment each of your staff when you see them do something positive today. It is free and easy to do. Repeat tomorrow
- Give key staff members more responsibility. Allow them to do it their way; they might have ideas you wouldn't have thought of
- Spend time with staff exploring work processes. Make them more efficient
- Set up a communal work calendar with all staff and directors in your business so everybody knows who is doing what
- Have an annual staff away day. It will motivate staff as they will feel more valuable and it will encourage your staff to work together as a team which will produce better results for your business
- Arrange for staff to meet you daily in the farm office at a set time so all arrive on time. Have a daily briefing to motivate all staff
- Incentivise staff to earn you money. Consider providing a bonus for good work or performance
- Clearly set out the 'goal' of the business and get staff buy-in

8. SPECIALISE

Barnes' (2010) identified that more specialised farms tended to be more efficient. His paper refers to necessities of specialisation, particularly in the potato sector. The same effect is also happening in other sectors of farming and in all countries, too. The number of registered potato growers has fallen by over half to about 1,800 between 2000 and 2017 according to AHDB potatoes[18]. Despite that, since 2003, there has been no decline in cropped potato area, with 145,000 hectares in 2017, the same as 14 years earlier. This means the average potato grower is farming about 80 hectares, is more dedicated than before with greater capital investment and is more professional. This is partly because transition has demanded it. Those less professional have dropped out of potato farming or lost their sales contracts and had departure effectively forced upon them.

Specialisation means labour can concentrate on doing the same task and, therefore, get better at it. Repeating a task many times gradually turns a job into a process, making it more likely to be close to identical every time it is undertaken. Michael Gerber (2005)[19] explains this in some detail using MacDonald's Big Mac as an example to demonstrate if every process is correctly described, then it becomes identically repeatable and, thus, provides the opportunity to guarantee a consistent product. That makes the task very efficient and reliable. Commodity production is heading in this direction, although environmental vagaries prevent farming reaching the same level that fast-food service has reached.

Dairy farms that undertake a range of activities associated with the dairy farm such as bringing up the calves and youngstock, growing and preserving the winter forage and so on, tend to outperform those with flying herds and completely bought-in feed[20]. The reasoning is twofold:

1. The farmer has more control of the farm's critical inputs: forage and youngstock. The personal incentives of growing fodder and youngstock for yourself might lead to greater care being taken. Plus, a greater understanding of the input is also good business information for a farm.
2. Other dairy farmers selling surpluses would be inclined to keep the best for themselves. This does not take account of purchases from herd sales but, when herds close completely, the proprietor might have lost concentration by then and the quality of the stock potentially already deteriorated.

A recent report by the National Sheep Association highlights the benefits of livestock (specifically sheep) in an arable rotation and how it is excellent for soil organic matter, keeps soils healthy, adds nutrients and keeps other pasture areas tidy[21]. Working with neighbours with livestock can be a real benefit, allowing arable



[18] **potatoes.ahdb.org.uk/sites/default/files/publication_upload/GBPotatoes_21_11_2017%20WEB_0.PDF**

[19] Gerber Michael (2005) The E-Myth, Why most small businesses don't work and what to do about it. Pub: Harper Business

[20] Verissimo. A. & Woodford., (2005) Top Performing Farmers are Information Rich Case Studies of Sheep and Cattle Farmers in the South Island of New Zealand. Pub: IFMA 2005 Brazil, 15th Congress - Developing Entrepreneurship Abilities to Feed the World in a Sustainable Way **researcharchive.lincoln.ac.nz/bitstream/handle/10182/420/Verissimo_Woodford.pdf?sequence=1**

[21] National Sheep Association (2018) The Benefits of Sheep in Arable Rotations Published: National Sheep Association **www.nationalsheep.org.uk/policy-work/10424/the-benefits-of-sheep-in-arable-rotations/**

farmers to continue to focus on the arable business and livestock farmers to concentrate on stock. Both farms can benefit from collaboration.

Specialisation is also an indirect way to increase size. Many of the size issues are concerned about enterprises rather than farms per se. For example, a 200-hectare mixed farm with arable, dairy and beef is a small area for three major enterprises. However, if that farm was solely a dairy farm, it would be a reasonable-sized farm.

Diversification outside agriculture is associated with a modest increase in farm business performance on livestock farms (Langton 2012). Either better managers find other commercial opportunities for farm resources beyond solely food production or non-farming enterprises provide (management) experience that supports farming activities too.

This pattern does not hold true for all sectors of farming. Langton (2011) identifies that the performance of arable enterprises tends to fall on diversified farms, possibly indicating a dilution of management time but overall farm performance (including returns from diversification) usually rises (more profit for the business but less from farming). Undertaking non-agricultural activities distracts from farm performance. This does not mean that it affects overall resource efficiency.

In other words, while the farming performance tends to fall, on average, the overall farm profitability rises from diversification incomes.

In general, if a farmer is doing a good job with his or her farm, it is likely they are simply good managers and, therefore, will do a good job managing new non-farming enterprises. The corollary is also true; a poor farm manager is less likely to manage a diversified interest into a considerable success. There are overlaps such as the ability to create a vision, personal time management, and staff management, diplomacy with contractors or customers and so on. There are plenty of cases of farms whose diversification has stretched the farmer's management ability too far and the entire business has suffered as a response.

Farms that concentrate on doing one farming system rather than many tend to be more profitable. It focuses the mind and prevents distractions. Fewer enterprises gather fewer overheads. It also makes it easier to ensure each enterprise is an efficient and optimal size. Enterprises tend to generate greater overall profit and return on income as they grow, up to a point. So having fewer enterprises retain efficiency of size, especially on smaller farming units. Small farms can be efficient and successful if they are in proportion and costs and time are curtailed to meet the enterprise requirements. Only grow a business once it is operating at a high performance or the mistakes it contains will also grow. If a farm does not grow, resources must shrink to fit it, such as becoming part time.

- cereals.ahdb.org.uk/harvesttoolkit
- pork.ahdb.org.uk/skills-training/human-resources-toolkit



SECTION 2:

SECTOR RESULTS AND CASE STUDIES

INTRODUCTION

Farm Business Survey (FBS) analysis – methodology

The standard approach to comparing performance levels across farms is to compare the top and bottom quartiles. That is the average for the upper performing quartile (or top 25 per cent of farms) is compared with the average for the lower quartile. However, there will be factors that are outside of the farmer's control (such as farm location), which will impact on the level of performance and partly explain a farm's position in the sector's performance 'league table'.

The approach used in this paper is to match higher-performing farms with lower-performing counterparts with similar characteristics and to then assess the differences between these pairs of matched farms (in boxing parlance, middleweights are matched with middleweights, and heavyweights with heavyweights, rather than being pitched against each other).

The analysis then identified the FBS variables (eg fixed costs (referred to as overheads in this report), variable costs, agricultural output), where there are statistically significant differences between the top-performing farms and their lower- performing counterparts.



In one of the year's data analysed (2011/12), the FBS collected more detailed data on business management practices undertaken by farms (eg benchmarking). However, this was just for a subsample of farms within the main FBS sample, and the more restricted availability of this data meant it could only be analysed to seek differences between the top performers and their matched lower-performing counterparts across all sectors. However, where statistical differences were found for particular management practices, the data was then analysed to see if there was any evidence of this varying across sectors.

Summary of results by sector

The full details of the results can be found in the separate sector sections in the technical report here: ahdb.org.uk/knowledge-library/the-characteristics-of-high-performing-farms-in-the-uk They consider the straight comparison between the top and bottom quartiles, as well as the comparison between the matched top-performing farms and their counterparts in the lower half of the performance distribution.

Using the matching approach facilitates the removal of the impact of factors such as geographic location, which are outside individual farmer's control and so this summary, therefore, focuses on the matching sets of results.

For each sector, the first table compares the variation of Farm Business income for top and bottom performers. The data are averaged over 2011–12 to 2015–16. Farm Business Income is like 'Profit'. It represents the return to all unpaid labour and to all their own capital in the farm business, including land and farm buildings. The second table selects those variables from the detailed analysis where there is a statistically significant difference between the top performers and their matched counterparts in the lower half of the performance distribution, farmers have a level of control and they have a material impact on overall performance.

Explanation of practical farm case studies

These studies examine six real farming businesses. Five of them identify outstanding practice for various reasons. Each of these is performing in their top quartile and probably at the top of that. Their business and personal objectives are aligned, their time management is such that, while working hard, they make time for other parts of their lives that are important to them. The sixth farm is an antithetical example. It demonstrates how the farmer's logic and, therefore, focus is confused, which leads to ineffective decision-making and a poorly-run farm in need of change.

Each of the case studies is a real farming situation. The examples given were intentionally selected without the knowledge of the results of the FBS analysis or account from the literature review, so as not to be led by others' results. The names and some details have been changed to prevent identification. The idea of these studies is to identify best practice and to spot patterns and easy ways to raise any farm's performance.

BEEF AND LAMB

LFA grazing livestock

Table 2 compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. Top performers are making a good living, while the poorer farmers are losing money. The difference between the two categories is almost £50,000 per year for comparable-sized farms.

Table 2. **LFA grazing livestock farm business income £/year**

Mean of top performers	Mean of matched bottom performers	Difference
£45,200	-£1,600	£46,800

Table 3. **Significant variables between top and bottom performing counterparts – LFA Grazing Livestock**

Selected variables	Mean of top performers	Mean of matched bottom performers
Agricultural output (£'000)	133.9	83.4
Proportion of finished cattle (%)	30%	20%
Proportion of finished sheep (%)	70%	50%
Farm Business Tenancy land	29.1%	16.4%
Full Agricultural Tenancy land	16.6%	31.9%
Total agricultural costs (£'000)	128.7	126.8
Of which %		
Agriculture overheads	45.9%	52.1%
Agriculture variable costs	54.1%	47.9%
Fertiliser costs	6.9%	4.5%
General farming costs	9.5%	16.0%

"How does your business compare to the above?"

Lowland grazing livestock

The following table compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. The higher performers are making about £58,000 per year more than the poorest performers. The top performers are generating £100,000 more output than their poorer equivalents.

Table 4. **Lowland grazing livestock farm business income £/ year**

Mean of top performers	Mean of matched bottom performers	Difference
£56,600	£1,500	£55,100

Table 5. **Significant variables between top and bottom performing counterparts – Lowland grazing livestock**

Selected variables	Mean of top performers	Mean of matched bottom performers
Agricultural output (£'000)	183.2	84.8
AES payments £ per ha	42.6	63.7
Beef as a % of total SLR*	51.5%	42.1%
Proportion of finished cattle	50%	40%
Total agricultural costs (£'000)	166.0	124.4
Of which %		
Agriculture overheads	49.2%	55.0%
Agriculture variable costs	50.8%	45.0%
Bought feed costs inc. forage	16.3%	11.8%
Crop protection costs	1.3%	0.8%

*Standard Labour Requirement (SLR) as a % of total SLR

CASE STUDY: Beef farm

Joan buys about 500 store cattle per year for finishing in a shed, mostly in two blocks; spring and autumn. They come onto the farm at about 300kg to 350kg and are fed an intensive purchased ration, supported by silage. They are kept to approximately 560kg which takes 170 days, meaning they gain up to 1.5kg liveweight per day. Joan has approximately 250 head of cattle at any one time.

Joan buys high cost feed, made up of cereals, waste bread, minerals and other feedstuffs, already mixed and ready to feed. It is placed against a barrier by tractor bucket, with straw available in ring feeders. There is no mechanical feeding, it's an unnecessary cost. Joan recognises there is no margin to afford machinery in the beef or sheep sector. She is also aware that her beef enterprise is about as small as it can be to remain truly profitable. It is a high-feed cost system but, because the overheads are so low, the whole system works well. Her secret (it's not a big one) is she keeps the operations very simple, as this keeps out costs. Her budgeting and annual management accounts, that she calculates herself, identify when costs start to creep into the system. Her accounts serve as a regular tool to identify her performance.

Joan has made her farming system part-time, where many farmers consume their entire day doing something similar. Modern farming moves on and she has kept pace with time. To retain that discipline, she has other work she has to attend to, from mid-morning most days.

Joan's feed price per kilogram of liveweight gain is higher than many but finishing the cattle quickly and having minimal overheads including no machinery



Joan

makes the total enterprise profitable. Most beef farmers have substantially more overheads, with machines and trailers to mix and provide feed, move livestock to market and so on.

The simple system also means minimal time is used on the enterprise; taking only two hours per day to feed and check. Joan has other work to do, so has to be disciplined to complete the feeding and other duties quickly. Only when stores arrive, or finished stock are sold, does it take a little longer, but there is no trip to market: she has a series of trusted suppliers whom she orders her cattle from, mostly continental bred sucklers. She occasionally sources a few from local markets using dealers to buy them for her. She tries not to purchase from the market at all. Selling the finished beasts involves a telephone conversation with her buyer to confirm delivery dates and numbers, and overseeing them loaded into lorries when they leave the farm. Joan recognises the time many of her counterpart beef and sheep producers spend in livestock markets, leaning over steel gates to see whether they are going to take their stock back home, or what price they might collect from auction. She also knows that, to get stock to market, her neighbours use small inefficient trailers, capable of moving only half a dozen beasts or 40 lambs at a time but also requires expensive 4-wheel drive vehicles. She has none of these, so hires large lorries to deliver stock in bulk (mostly delivered in batches in spring and autumn), but she makes money from livestock after all costs, including her time and working capital, are paid.

Joan's animals are kept in old finishing sheds. The sheds require minimal maintenance. They might have an opportunity cost as they could be rented to another person to keep beef but would be small as it probably has little alternative use. They are relatively remote so probably have no alternative use.

Joan has been farming beef for many years but gave it far greater focus about a decade ago when another part-time opportunity also arose for her. The working capital built up is clearly significant but, having grown gradually over the years, has been self-financed from previous stock sales. There is a small overdraft and no core finance.

Joan knows what others spend finishing beef cattle, and that the profitability is marginal, but she also appreciates it is more than a labour of love. If it was not profitable, she would not be doing it, preferring to spend time with her family. Yet the enterprise achieves an annual gross margin of approximately £65,000 which is a margin of £130 per finished head. Overheads total £25,000 including small amounts of building depreciation and maintenance but no opportunity cost or finance and excluding her own labour. That leaves £40,000 of profit before finance charges and her time cost. Few beef systems can boast such a set of figures. And this, a 2-hour a day (plus occasional days of moving cattle in or out) enterprise fits into other off-farm work that Joan carries out the rest of the day.

Joan has considered expanding her enterprise, but her sheds are full, and she has not got the space to create new ones or storage for feed. She does not have the appetite to invest in new buildings elsewhere as it would lower her return on invested capital, even though it might raise the overall profits. She would have to increase in blocks of 30 to ensure filled lorry loads when delivered.

Summary of beef farm

- Ruthless removal of overheads has made a beef enterprise truly viable
- Keeping a system very simple exposes costs quickly
- A focus on technical performance to finish beef within a set timeframe keeps profitability per animal high and her buyer pleased with timing and carcase quality
- Setting a time deadline means she finished cattle work by a set time to get to work each day
- Non-cash costs such as own time are important
- Keeping track of costs, time and performance is critical



CEREALS AND OILSEEDS

Table 6 compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. Top performers are making almost three times as much money; almost £100,000 more per year.



Table 6. **Cereals farm business income £/year**

Mean of top performers	Mean of matched bottom performers	Difference
£157,500	£58,900	£98,600

Table 7. **Significant variables between top and bottom performing counterparts – Cereals**

Selected variables	Mean of top performers	Mean of matched bottom performers
Agricultural output (£'000)	365.4	268.2
Wheat yield (t/ha)	8.6	7.6
Cereals as a % of total SLR	83.0%	72.7%
AES payments per ha	24.4	42.2
Owned land as % of total land	80.8%	59.5%
Unpaid labour as % all labour	67.9%	55.2%
Total agricultural costs (£'000)	298.5	350.5
Of which %		
Agriculture overheads	42.5%	57.7%
Agriculture variable costs	57.5%	42.3%
Seed costs	6.6%	5.4%
Fertiliser costs	17.6%	13.2%
Crop protection costs	15.7%	11.6%
General farming costs	8.6%	11.5%
Agricultural labour costs	3.9%	7.6%
Contracting costs as a proportion of all machinery & contracting	30%	20%

CASE STUDY: Cereals farm

John



John has 400 hectares of heavy land on his cereals farm. He grows winter barley, allowing early entry for oilseed rape, winter and spring wheat and spring beans. The farm is part-owned, part-rented. His variable costs are relatively high, largely because he has a severe case of black grass, a legacy from the previous tenants, but the gross margins are good overall as his crop yields are unusually high; even the spring cereals. He knows what he can spend on variable costs and what his yields are likely to be. It is all built into his budget, which he uses regularly. John uses lots of sewage cake, lowering the annual cost of fertiliser and adding organic matter to improve his soils, which had been neglected by previous tenants. He is aware that arable farms must manage more than simply the chemical properties of soil to keep soils productive and maintain yields into the future.

John has one full-time staff plus himself and a casual harvest worker. He has non-farming diversifications which also involve his worker. He works hard to engage him, ensuring he is well qualified, motivated and eager to improve themselves and the farm. The worker is proud to work on John's farm and has been there for many years. About half of John's time is spent on non-farming enterprises (which includes commercial office and residential lets). John makes use of former agricultural resources that modern farming has outgrown. His mantra is 'don't leave an opportunity idle'. It is clear this is put into practice with redundant farm buildings, staff abilities, and his own time. While farming contributes a larger proportion of the business' output, the diversification activities lower the 'commodity risk', make use of some resources such as labour, which he still requires on the farm in busiest times, and so contributes to farm profits as well as makes its own margin. It is all costed, and he knows what the overall contribution is.

Power and labour costs on the farm are £335 per hectare including the grain dryer. The 'benchmark' for farms of this type is £350 to £400 per hectare. John keeps diesel and machinery costs, including repairs, low, partly as he operates a reduced tillage/low disturbance cultivation system, moving soils as little as possible. He first considered the idea after a farm discussion group session a few years ago where a low-till farmer, a high-till farmer and an organic farmer were comparing their systems. He is focused on profitability, not output and has calculated that the marginal cost of ploughing is about £55 per hectare, meaning that ploughing would have to raise yields by about 400kg/ha. He believes this is unlikely.

The marginal cost identifies the costs of an operation compared with leaving the machine in the shed. In fact, savings are greater because, without a plough, John needs less horse-power on the farm, saving him much more. John can deploy his time into more profitable activities while his neighbours are still ploughing and working-down the clods left from the process. He is aware that he is in a minority running this system on heavy land so regularly checks his maths, comparing his yields and costs with other arable units.

John is experimental and keen to test new ideas but only if they contribute towards his own personal and professional goals. He tests new ideas gradually, often letting neighbours go first and make the mistakes! He has built up his farm hectarage carefully over several years. He has decided not to rent land beyond a 3-mile radius from his yard to save travelling costs and wasting time 'putting tractors on tarmac'. John is aware that tractors make no money while on a road, but costs continue to escalate, especially those difficult to value such as time, and wear and tear. This also demonstrates John's focus, not only to identify his ambitions, he also quantifies them meaning he knows when they have been achieved. He attends discussion groups and tests his thinking with his farm advisor.

Summary of cereals farm

- Test new systems with land cultivation gradually
- Take great care of your soil, it is key to all agriculture
- Machinery and power costs are minimised by calculating which really contribute to the bottom line, not the output
- Investment in labour is prioritised over machinery. It is better to have a smart workforce than a new tractor
- Calculate the costs of doing things such as driving tractors on the road, ploughing, keeping idle labour and so on
- Find ways to profit from resources on the farm through diversification and rational decision-making
- Regularly challenge your thinking with a business coach, benchmarking meetings, reading business journals and so on

DAIRY

Table 8 compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. Top performers are earning more than four times as much money as similar farms in the bottom quartile; £100,000 more in actual terms. The variables of most significant difference between the top and bottom sectors are laid out in the Table 9.



Table 8. **Dairy farm business income £/year**

Mean of top performers	Mean of matched bottom performers	Difference
£136,800	£33,100	£103,700

Table 9. **Significant variables between top and bottom performing counterparts – Dairy**

Selected variables	Mean of top performers	Mean of matched bottom performers
Agricultural output (£'000)	533.7	408.7
Dairy specialisation*	75.0%	69.5%
Number dairy cows	203.1	153.2
Stocking rate (livestock units/ha)	2.1	1.7
Relative milk price (ppl)	0.8	-0.3
Total agricultural costs (£'000)	431.9	424.7
Of which %		
Agriculture overheads	39.4%	42.6%
Agriculture variable costs	60.6%	57.4%
Bought feed costs	31.8%	29.0%
Fertiliser costs	4.9%	4.2%
General farming costs	8.2%	10.4%
Machinery costs	13.2%	14.3%

*Dairy Standard Labour Requirement (SLR) as a % of total SLR

CASE STUDY: Dairy farm

Marcus and Eric



Marcus and Eric are two businessmen/farmers in Northern England. They came together eight years ago to form a contract farming agreement with a difference on a dairy venture. Marcus had a dairy farm and Eric had lot o dairy contract-farming expertise. They both recognised there were synergies to combine strengths and form a business that provided good profits for both. Marcus, who owns the farm was not so interested in farming, having other business interests.

Following a public tender for a contract-farming agreement, he chose Eric as a business partner. Marcus recognises the benefit of sharing the 'pie' with others if it means the pie can get bigger as a result. Both Marcus and Eric own stock in the arrangement and Eric undertakes the farm management. The farm comprises a herd of 500 spring calving cows with followers.

The herd had to grow to ensure the collaboration's viability and make optimal use of the available cow buildings and dairy, utilise the grass fully (coupled with some purchased fodder) and to generate comfortable returns. This business consistently delivers profit (a divisible surplus) of £100,000 per year for each of them; approximately 5 pence per litre. This is after a commercial rental payment on all the land, the individual's own labour has been paid at an equivalent of £30,000 annual salary, depreciation of all investments. This is mainly livestock and dairy plant (the capital that actually earns the money) but also a small amount of machinery and some infrastructure such as cow tracks and working capital. After a full rent on all the land is paid and depreciation but before finance, the total cost of production is 22.0ppl. A return on capital payment of ten per cent is made on all capital employed in business. This puts the farm in the top five per cent of milk producers in terms of costs of production. Marcus and Eric are aware of this. Some other dairy farmers are astounded to learn that one in every 20 dairy farms (five per cent) can achieve that remarkable level. Removal of costs by fully accounting for everything, including opportunity costs such as rent of owned land, paying for all time spent working on the farm, and other costs such as working capital, crystallise these expenditures in the minds of those focused on the economics of commodity production.

The cows' milk yield is low at about 4,100 litres per year (twice-a-day milking) keeping all direct costs to a minimum. They receive minimal cake (200kg per year) so the farm generates about 3,700 litres per cow from forage. To know the costs are low, they compare their farm business with others each month in a group. If any other farm appears to be doing better (lower cost), they scrutinise the system until they have extracted the answers and made relevant changes. Incidentally, the time they take to do this is also costed into the farm business accounts.

Their milk is sold for processing. Low yields and cow genetics mean high milk solids, so the price is about 2ppl higher than if their yields were at national average levels. As the milk is priced according to constituent solids, it is pointless calculating costs per litre, rather per kilogram of milk solids, as it means something tangible. The farm has an exceptional focus on the quality of grass.

The joint venture incurs relatively little of Marcus and Eric's time, but employs a full-time farm manager/herds person. He is critical to the success of the farm so has a good salary, plus a strong bonus which is based on the year-end divisible surplus (profit). This has been paid since the start of the arrangement. The monthly financials are shared with the farm manager, who has authority to purchase most items apart from capital. He must justify expenditure as well as other decisions at weekly meetings with Eric and attend a formal annual meeting where everything undergoes scrutiny. He has a clear line of financial authority but is left to make responsible decisions. Eric and Marcus have monthly meetings. They compile their own budgets each year and are convinced this helps them understand the farm more thoroughly and, therefore, farm more profitably.

Summary of dairy farm

- A very clear line of governance has been established on this farm, with clear expectations of what the farm is intended to return for each participant
- The optimal farm size has been calculated and agreed. No visions to grow beyond economic optimum cloud the owners' objectives
- Financial targets have been set and financial management is very closely monitored
- The farm produces exactly what the buyer is prepared to pay for, thereby making more revenue
- Staff management is outstanding, with a link between performance and staff reward
- A high level of cooperation draws on two individuals' resources and skills
- Clear focus on the purpose of the farm and agreement between business partners is key

HORTICULTURE AND POTATOES

General cropping (including potatoes)

The limited sample size meant that potatoes could not be analysed as a separate sector and that, therefore, the broader general cropping farm type was analysed. The following table compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. Once again, the difference between high performers and poor performers is about £100,000.

Table 10. **General Cropping Farm Business Income £'000 per year**

Mean of top performers	Mean of matched bottom performers	Difference
£168,900	£66,800	£102,100

The following table selects those variables from the detailed analysis where there is a statistically significant difference between the top performers and their matched counterparts in the lower half of the performance distribution, farmers have a level of control and they have a material impact on overall performance. There are fewer significant values in the tables than in some of the other sectors. This is likely to reflect the difficulty of demonstrating a difference with a small sample and does not necessarily mean there are fewer real differences.

Table 11. **Significant variables between top and bottom counterparts – General cropping**

Selected variables	Mean of top performers	Mean of matched bottom performers
Farm assurance members	68%	92%
Total agricultural costs (£'000)	490.3	524.1
Of which %		
Agriculture overheads	48.2	57.6
Agriculture variable costs	51.8	42.4

Horticulture

The matching process included the categorisation into specialist fruit, specialist glass, specialist hardy nursery stock and 'other', thus ensuring that farms are matched with one with a similar production system. The following table compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. Where the term 'agriculture' has been used, this includes horticulture.

Table 12. **Horticulture farm business income £/year**

Mean of top performers	Mean of matched bottom performers	Difference
£107,600	£12,500	£95,100

Top performers are generating farm business incomes of approaching £100,000 more than the poorer performers. In doing this, they are turning out far more output, almost three times as much, so are clearly intensive. Total costs are also double.

Table 13. **Significant variables between top and bottom counterparts – Horticulture**

Selected variables	Mean of top performers	Mean of matched bottom performers
Agricultural and horticultural output (£'000)	683.2	220.4
Log of total area	0.8	0.9
Unpaid labour as % all labour	38.2	53.1
Agricultural diversity index	0.0	0.1
Total agricultural costs (£'000)	591.5	237.8
Of which %		
Agriculture overheads	50.4%	57.1%
Agriculture variable costs	49.6%	42.9%
General farming costs	13.7%	18.1%
Agricultural labour costs	29.0%	22.3%
Machinery costs	9.0%	12.4%

CASE STUDY:
Vegetable and potato farm

Richard

Richard is an arable farmer in the South of England. He grows early potatoes, cauliflower and cereals, each crop type covering about 120 hectares. He lets surplus land for bulbs and vegetables whenever he can, as that is more profitable than occupying it himself and growing cereals, the alternative crop. Fresh produce generates considerably higher value per hectare than combinable crops. He also grows maize and grass silage for a nearby dairy farm with which he cooperates closely. He pumps slurry for the dairy farm and others nearby on a contract basis, which makes use of his labour by undertaking the contract, pumping mostly when the labour requirement for their (much higher value) vegetable operations are not so great. He has three full-time staff and uses casual workers as required.

Richard's rotation is labour and machinery-intensive. The farm has all its own vegetable machinery such as harvesting rig but only three tractors, a self-propelled sprayer and an old loader. The capital employed is exceptionally low for the turnover on the farm. Richard and his full-time staff are skilled in machinery maintenance. Richard has ensured his staff have been properly trained to undertake tasks that save considerable sums; it means he can run cheaper machines, save time and money on maintenance and service bills and keep machinery running for longer during key work periods such as drilling or harvesting crops. Total capital employed in arable machinery is £450,000 including slurry pumping equipment. Over the 400 hectares, machinery capital is about £1,090 per hectare. As a percentage of output per hectare of roughly £4,000 per hectare, this works out at about 27 per cent. On an average cereals farm, machinery capital valuation of about £1,000 per hectare is comparable with the average income per hectare of about £1,200, giving a comparable percentage of 84 per cent.

Richard buys no new machinery as he knows his workforce can maintain his existing machinery well. Some of his machines have worked over 10,000 hours, a very high figure for most farms. He would rather spend money training his staff than on replacing machines, and that keeps overheads very low. Richard shares his specialist vegetable harvesting rig and associated casual labour with a neighbour, instantly halving the capital cost. It also means he avoids competing for agency labour with his neighbour. He and the neighbour must plan their harvesting regime carefully together, but this is a small price to pay for cooperation. Richard is aware how much such a collaboration saves him; it is significant. He is still aware that a decline in migrant labour could affect him post-Brexit, but he is spending time thinking about contingencies he could put in place, if necessary.

Richard has set up his farm system to fit with the environment. His winter cauliflower is planted in August and cut in November through to March, when his potatoes are planted. They are lifted from mid-June through to August, thereby double-cropping two high-value crops in one season. Potatoes are then followed by cereals (or let). This combination of crops not only makes high value use of the land, but, especially when combined with slurry pumping, reduces work peaks and fills potential troughs, meaning the supply of labour required is remarkably flat for such a farm system. This minimises temporary work requirements and gives more earning opportunity to his staff. Traditional vegetable growers have high spring and autumn labour requirement; this farm saves costs and management effort by spreading the work more evenly and generating work throughout the quieter periods. Richard is also aware that his success is dependent on the health of his soil and takes a lot out of it so spends considerable attention looking after it.

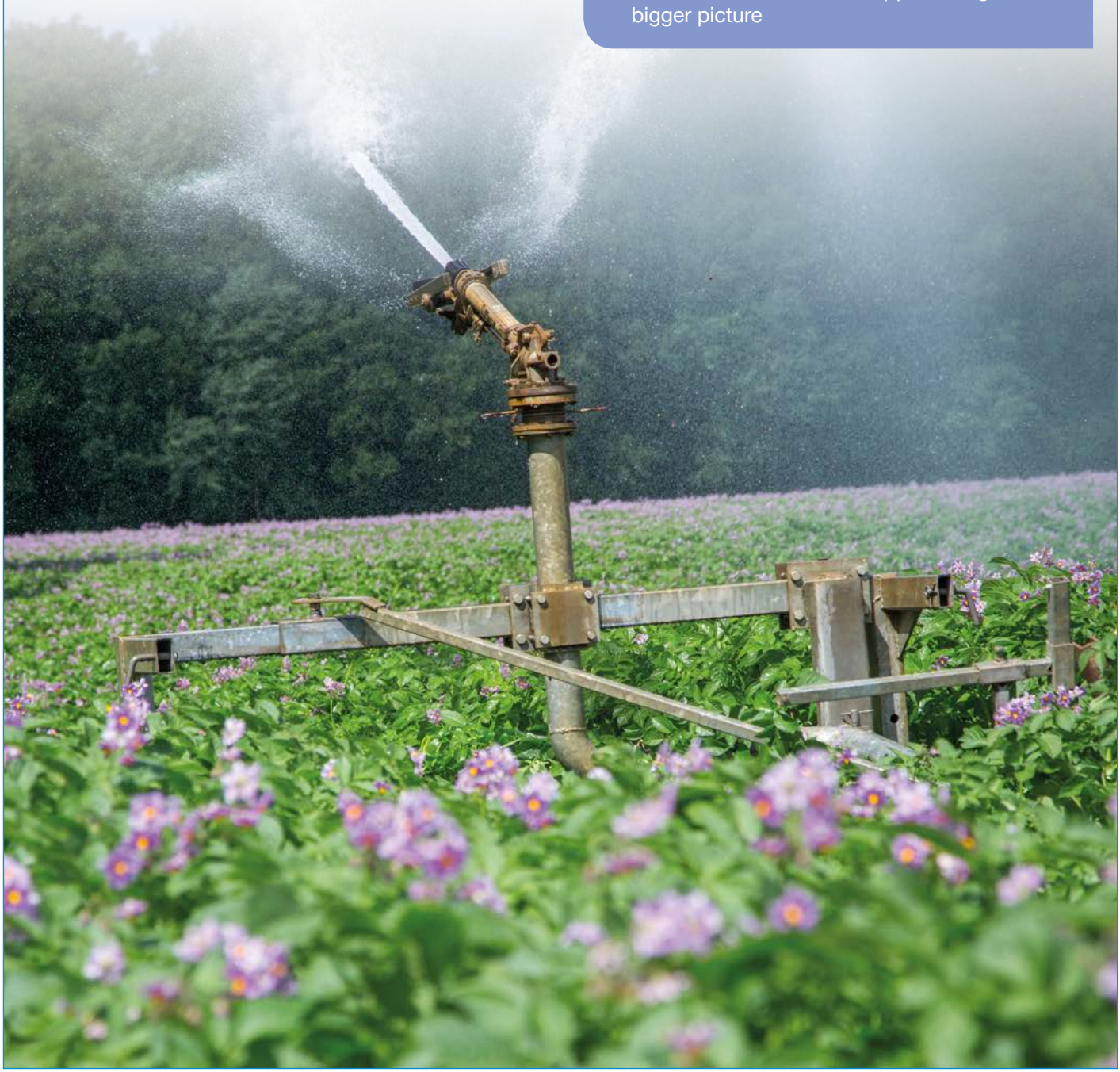


The vegetable crops deliver a good return on the tenant's capital attributed to them. This is because the capital invested is so low. Even the working capital is low because the crop is in the ground for a relatively short time saving inputs. At harvest, the potatoes are washed and sent straight to their buyer processor, saving storage costs, risks, and management time. He discusses potato farming with friends in East Anglia, despite operating a rather different system to them, he cross-examines his farm business advisor and uses any comparable data to check he is optimising his performance. He makes adjustments to his system if he picks up ideas to improve what he is doing.

Richard works hard to ensure the components of the farm fit together to create something greater than the sum of the individual parts. His highly organised life allows him time to perform these checks rather than just 'farm with boots on'.

Summary of vegetable farm

- Minimising machinery costs through repair and maintenance rather than replacement
- Highly productive, well trained and engaged labour force, with a flat annual work profile
- Focus of highest value output for land, letting out when more profitable
- Farming system matched to local geography and environment, and caring for soils
- Every activity is costed to aid decision-making; whether collaborating with a neighbour, contract slurry pumping or storing potatoes, aiding decision-making
- Benchmarking, budgeting, external consultant, are all critical
- Focus on the detail while appreciating the bigger picture



PORK

Table 14 compares the average income for the top performers with their matched counterparts in the lower half of the performance distribution. Top performers are making over three times as much money as the poor performers, equivalent to £100,000 per year more.

Table 14. **Pigs farm business income £/year**

Mean of top performers	Mean of matched bottom performers	Difference
£143,800	£40,800	£103,000

Few variables are statistically significant in the pig dataset because of the small sample size. Moreover, after matching, most of the significant variables seem to be detecting a difference between highly specialised pig producers in the top quartile and more mixed farms in the matched subset. It has not been possible to remove this difference by matching, because the top quartile contains very few non-specialised farms, whereas the bottom half contains few specialised ones.

The following table selects those variables from the detailed analysis where there is a statistically significant difference between the top performers and their matched counterparts in the lower half of the performance distribution, but these simply reflect that the lower performers engage in a low level of cereal production (although on average this still represents only 6 per cent, a small proportion of total economic activity), whereas the higher performers are more specialised. While in general, increased specialisation has been a driver of productivity growth for the agriculture sector, the limited sample size and lack of statistical significance for other variables means it is difficult to draw much from this result.

Table 15. **Significant variables between top and bottom performing counterparts – Pigs**

Selected variables	Mean of top performers	Mean of matched bottom performers
Cereals as a % of total economic activity*	0.3%	6.0%
Total agricultural costs (£'000)	£1,340	£1,160
Of which %;		
Fertiliser costs	0.0	1.7
Crop protection costs	0.1	1.2

*As defined by cereal Standard Labour Requirement (SLR) as a % of total SLR



CASE STUDY:
Pig farm

Nathan

Nathan is a pig farmer. He is young and has just taken on a new tenanted farm but is not new to farming, having had a small tenancy for several years producing high-quality pigs for a local processor. He has had a part-time job in the farm supply trade which has given him useful contacts. Because of his consistently high-quality performance in the past, he was given the opportunity to expand his weaner production enterprise substantially, following growth of the company he supplies. This required a major investment in weaner housing. His landlord at the time, while amenable to developments on his farm, was not prepared to incur tenant's improvements costs, which obligates a landlord to pay the tenant for improvements to a farm when the tenant leaves. Instead, a tender for a nearby estate farm tenancy arose. A £35,000 per year grazing livestock farm tenancy (including a house) was the route to business expansion for Nathan, as opposed to a non-returnable £500,000 investment on his previous farm.

Nathan had £275,000 of net worth but needed £600,000 to invest in sows and portable farrowing units (a bit like shipping containers). There was little chance of achieving conventional funding so secured the sums on an asset finance agreement. Nathan also required an overdraft for working capital and borrowed £100,000 using pigs as collateral. All this debt meant his loan to asset value was 70 per cent. Nathan was in lots of debt and rented all his land, potentially putting him in a very high-risk situation. But he had a 20-year tenancy, a long-term supply contract for weaners with a very secure premium and knew he was good at producing them at low cost. Nathan is not interested in grazing livestock production (a requisite of the estate's terms) so he arranged for somebody else to keep cattle and to use the land area as a separate business venture.

Nathan did his sums very carefully. While taking on considerable debt, he was buying in his sows in pig at only four weeks from farrowing and would be sold as weaners, so his additional revenue would begin to flow soon after starting at the new farm. His budgeting was very cautious but still left him an adequate margin to remove all debt within 10 years. Indeed, it is now three years since Nathan took this big decision. He has grown his business further, as a result of high-quality finishing specification and outstanding customer service such as loading in unsociable hours, providing detailed auditing of pig feeding and management regimes. He always meets his customaers' requirements such as putting video cameras in the pig pens. Nathan continues to have plans for growth but is currently focused on debt consolidation before taking on new capacities. He is clear that borrowing money with an end in mind can be a good way to grow, but solid financial control should be practiced at all times.

Summary of pig farm

- Use new ideas to overcome barriers including novel forms of finance
- Keep looking for new ideas in an entrepreneurial way; a farm is a great place from which to diversify
- Budget carefully and cautiously, especially when doing something new and involving other people's money
- Have clear targets especially regarding repaying debt
- Develop your network and take advantage of it when appropriate, it helps everybody
- Always remain aligned to what your customer is asking for
- Once you have achieved your business objectives, decide on new ones



CASE STUDY:
The poor farming example (Cereals)

Norman

River Farm covers 1,560 arable hectares; a very large farm. The owner, Norman, has eagerly grown his business, which has meant increasing the area. This is his (probably misguided) idea of success. For him the definition of success is acquiring more land and he has eagerly pursued this goal at the expense of both his time and focus. As a result, the farm is entirely cereals, with no diversified activities. Short of 150 hectares, the farm is either rented or contract farmed, covering a series of nine contract farming agreements and ten small tenancies, all short-term FBT agreements, resulting in a lot of additional administration work. His professional costs are inevitably high. His wife handles the accounts adeptly but she is not paid, so Norman does not notice her cost; the opportunity cost of her doing similar work elsewhere or something she would prefer to do. Due to the couple's workload and time pressures, they have not had a chance to consider or discuss the alternatives.

With so many separate agreements, some of the land is inevitably far from 'home farm'. Indeed, the furthest plot is approaching an hour's drive, the cost of which Norman has not calculated. In fact, the furthest land makes no contribution to the farm's profitability (as is the case with much land farmed from afar) but is kept on 'for emotional and personal' reasons.

In his eagerness to expand, Norman overlooked some of the problems he signed up to when agreeing land parcels; resistant blackgrass, low soil nutrient indices, small awkward fields with high hedge management costs, low fertility, wet corners and so on. Norman is working to reduce the impact of blackgrass but was unable to prevent its incursion onto the farm in the first place. Yields are generally poor, partly because of the blackgrass but also because Norman has focused on land acquisition rather than land management. Each plot of land has to be managed in a similar manner which is inappropriate because of the soil variation. Much of the soil has not been properly cared for or maintained in the past and, as a result, organic matter has fallen, and phosphate and potash levels are low in some areas. Covering such a wide area, the soil types vary enormously, making his machinery requirement bigger than it should be as some cultivators are not suited to all soil-types.

Norman is in his 60s. The farm employs two full-time staff. Overall, the technical performance is poor. Despite being active, Norman does little practical farm work himself and is not fully engaging in the farm business. The staff pick up on this and are consequently less dedicated to doing a great job. They receive weak leadership. Ultimately, Norman is responsible for all the mistakes that are made on the farm, although he does not see it that way, expecting more from the farm staff and scolding them when errors occur.



The farm employs two full-time staff but Norman does not actively develop them or manage their performance – though he is quick to blame when errors occur. His disengagement from the practical farm work and the poor technical performance of the farm as a whole, alongside the lack of leadership and direction, means staff morale and motivation are poor.

Norman is too busy to undertake benchmarking, or complete costings. He thinks because prices are set by the vagaries commodities markets, then budgets become meaningless. His complacency over the farm subsidy he receives potentially puts him on a dangerous position in the future. He does not realise that he is in the bottom quartile and believes it is impossible to farm profitably without subsidy.

The poor technical application, questionable staff management techniques and fascination with taking on new parcels of land, usually at uneconomic rents or distant locations, means Norman's farm is making no money. But he is not aware of that: This year's results returned a small loss but, because he has little core debt, and a significant depreciation charge in excess of his current hire purchase agreements, the business generated a cash surplus. Norman doesn't complete a full set of management accounts each year, so financial problems can be masked by a rise in bank balance, simply keeping an eye on cash flow is not enough.

The opportunity on this farm is enormous. If Norman managed to increase his yields by half a tonne per hectare, taking the overall combinable crop yield from 5.5 tonnes per hectare (including all cereals and break crops), to 6 tonnes per hectare, it would be worth £140,000 per year. This farm is very sensitive to changes in yield. A 20% increase in yield would add 1,700 tonnes to his total crop output. Multiple small changes make big differences.



Summary of key actions needed to improve this farm

- Ensure your private and business objectives are aligned and agreed with all family and business members
- Talk with family members and find out what they truly want from life!
- Ensure your business objectives are commercially viable
- Be bold enough to make difficult decisions when necessary
- Budgeting and management accounts are essential to identify financial problems
- Strong leadership as well as good staff management pay dividends in all situations
- Look for the hidden costs that don't appear directly on the profit and loss such as opportunity costs and time spent in a tractor on a road

SECTION 3:

RESULTS AND OUTCOMES

CONCLUSIONS

FBS analysis: Management practices

The restricted sample size for the business management module (1,178 farms meeting the criteria for analysis) means it was not possible to provide an analysis of management practices broken down by sector. The analysis, therefore, seeks to identify statistically significant differences in management practices for all sectors combined. The matching process for this part of the analysis includes farm type, in addition to uses of the geographic location and farm size to ensure top-performing farms are matched with comparable counterparts in the bottom half of the performance distribution.





The analysis tested for overall differences in the proportion of farms reporting the characteristic (eg whether there was a difference in the proportion of farms using benchmarking between the top and bottom groups). Before matching, there are consistent overall differences between a simple comparison of the top and bottom performers (of a straight comparison of the average incidence of the top and bottom quartiles) for many of the management practices variables, including business planning. However, there were far fewer that were statistically significant after matching the top performers with their comparable counterparts in the bottom half of the performance distribution. This suggests that some of the differences seen in the simple comparison might be due to the relationship with confounding factors, particularly economic size and farm type, which are adjusted for by the matching.

The table below identifies those variables where there are statistically significant differences between the top performers and their matched counterparts in the bottom half of the distribution. The values represent the proportion of farms in that group.

Table 16. **Significant variables between top and bottom counterparts – Management**

Selected variables	Mean of top performers	Mean of matched bottom performers
Risk management – sales made on contract*	42%	37%
IT – Those who don't own a computer	2%	7%
IT used for official forms	89%	80%
CPD scheme member*	42%	36%

*Only significant at the 10 per cent level. Table shows proportion of farms reporting the activity or characteristic

The bottom performers are less likely to have a computer and less likely to use it if they have one for tasks such as completing official forms online and internet banking. Other IT-related questions do not show significant differences between the top and bottom performers but there is evidence that the picture varies between the different sectors; for example, top performers in the poultry and horticultural sectors show high usage of computers for maintaining accounts and other key business documents. Note, this information was collected in 2012 and many farms will have increased their dependency on IT since then.

Management practices such as business planning do not show a statistically significant difference between the matched top and bottom performers. That is, bottom performers are as likely to undertake business planning (of their own description) as the top-performing counterparts. Identifying and implementing changes through business planning that improve a farm business are a good thing and should help the bottom performers close the performance gap. But this analysis suggests that the quality and attention to detail with which these practices are undertaken to identify and implement improvement actions is a crucial part of this process. Simply producing a business plan does not improve your farm, it's the ability to do something with the information that matters.

Membership of CPD (Continual Professional Development) schemes is more common among the top-performing group, with the difference being particularly striking in the horticultural sector. Causation is uncertain though. Are better farmers more inclined to want a measure of their professionalism or does CPD improve farmers? It is possibly a combination of both. This seems to grind against the information provided in the general cropping section about farm assurance membership.

The matching analysis failed to find many statistically significant differences between the frequency with which management practices are undertaken by the top and bottom performers, but it did identify significant differences by farm type. This may not be surprising and partially explains why many of the statistically significant differences from a straight comparison between the top and bottom quartiles drop away after matching. By way of illustration, the following chart shows the comparison of the proportion of farms undertaking business plan budgeting by farm type.

The chart shows that 41 per cent of top-performing dairy farms undertaking business plan budgeting compared with 39 per cent of their matched counterparts in the bottom half of the performance distribution (the small numbers in the sample mean that this is not a statistically significant difference). For the pig sector, there is a large difference, albeit based on a very small sample size, with over a half of top performers budgeting, compared with less than 10 per cent of bottom performers. This contrasts with LFA and lowland grazing, where around a quarter of the top performers undertake budgeting. The chart also shows how, in some farm types (lowland grazing, cereals, general cropping, poultry and mixed), the bottom performers have the same or higher incidence of budgeting than their top-performing counterparts (although once again the small numbers in the sample mean these are not statistically significant). There are similar patterns for differences by farm type for other management practices.

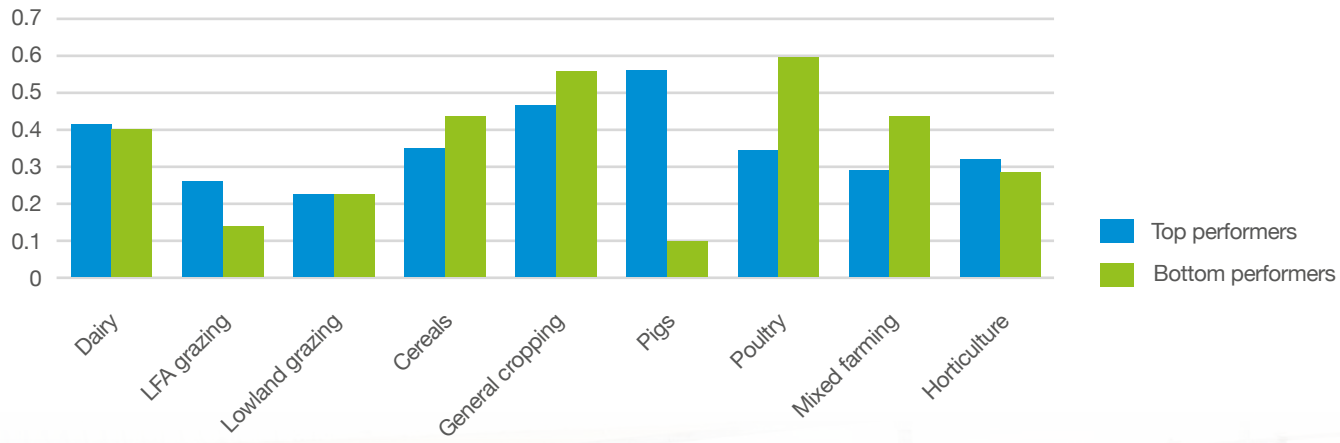


Figure 2. Proportion of farms performing Business Plan Budgeting (2012)



> “Are better farmers more inclined to want a measure of their professionalism or does CPD improve farmers? It is possibly a combination of both”

Summary

The broader picture for top performers compared with their matched counterparts in the bottom half of the performance distribution is that:

- The difference in farm business income for most sectors seems to be about £100,000 per year. For grazing livestock, it is approximately £50,000 per year. Both considerable numbers, considering the farms are matched and identified as similar
- Top performers tended to be more specialised
- The total costs of top performers are often similar to the bottom performers, but they produce greater output and are, therefore, considerably more effective in their choice and utilisation of inputs
- The overheads for top performers accounted for a lower proportion of their overall costs, reflecting a more efficient use of capital
- Top performers are focusing their expenditure on items that directly contribute to production, whereas bottom performers are spending too much on overheads



CASE STUDY CONCLUSIONS

The six farms discussed highlight a number of points that are consistently addressed to achieve outstanding performance. Clarity of a vision is critical to know which business route to take. Once that vision is set, the pathway to getting there can be laid out and therefore identify what staffing requirements will be needed. Each of the top-performing farms not only write their budgets each year (some with help from their advisors) but also undertake partial budgets to test new ideas or identify whether an activity is contributing to the farm accounts or not. Each farm then use these figures and their own performance with others' either by discussing them or benchmarking with others.

Top farms recognise the importance of good staff. They pay above the odds and reward good practice, rather than just turning up to work. Appropriate training, motivation and clear leadership are all paramount if you are to entrust another person to do your work for you.

These farms have demonstrated thought and implemented novel ideas, both to fit with the environment, meet financial needs and also to keep commodity-focused. When taking on high-risk situations (borrowing lots of land and money for example), financial clarity becomes increasingly paramount.

There are several examples of collaboration, saving costs, passing enterprises of no interest and sharing resources. Each one makes the business more viable and enjoyable a workplace. Figure 5 demonstrates the key common themes that define success in the farms above. Note, the sixth (poor) example, does not share in any of them.

Table 17. **Summary of common traits on Example farms**

	Vegetables	Cereals	Beef	Dairy	Pig	Poor farm
Clear business objectives	✓	✓	✓	✓	✓	
Collaboration with other farms	✓			✓	✓	
Budgeting	✓	✓	✓	✓	✓	
Benchmarking	✓	✓	✓	✓	✓	
Innovative ideas	✓		✓	✓	✓	
Care for soils and environment		✓	✓	✓	✓	
Working with buyers			✓	✓	✓	
Outstanding staff management	✓	✓		✓		
Remarkable attention to detail	✓	✓		✓	✓	
Enjoy working on the farm business	✓	✓	✓	✓	✓	
Ruthless cost removal where possible	✓	✓	✓	✓		



FINAL WORD

Farming is an industry that consists of tens of thousands of diverse businesses. We work to generate crop and livestock outputs worth more than £26 billion. Throughout the farming year, we will make thousands of decisions, whether day-to-day or more strategic in nature. This guide has delved into the various characteristics of those farming businesses. Common themes become evident, as identified in the eight key factors that support farm performance.

Brexit equates to change, for UK agriculture and horticulture. Potentially greater competition, the shifting dynamics in our traditional export markets and the significant change in agricultural policy. All of these emphasise the need for efficiency and effectiveness in producing those outputs and making informed decisions. In short, Brexit puts farm performance firmly in the spotlight.

In contrast to the trade and farming policy details that AHDB have explored in previous Horizon reports, this work underlines the factors that fall firmly within our scope of influence on farm. This guide is intended as a reference point for farmers striving for incremental improvements over a wide range of parameters in their businesses. The top tips included throughout this guide are practical pointers, for some it might be a potential source of ideas for doing things differently or for others, it might be a checklist or a reminder of the practices already being undertaken. Improved performance means increased resilience to the inevitable changes and challenges that lie ahead for the industry.

This guide has been created for day-to-day use, it is not intended to sit on a shelf once read – keep it close to hand, read it, re-read it and identify actions to accomplish now and in the future.

AHDB is working with farmers and growers to get you fit for the future and support you with the challenges that lie ahead for our industry. Developing gradual improvements across a wide range of parameters will be key to ensuring performance, productivity, profitability, and securing the viability of your farm business.

In preparing your business for change we offer a wide range of resources whether it be through our Farm Excellence Platform, Farmbench or through the range of practical tools and information we have available on our website: ahdb.org.uk/brexit



TOOLS FOR SUCCESS

Being fit for the future involves putting together a plan of where you want to go and making informed business decisions. To help with this, AHDB has developed a number of tools and resources which can help you work through business planning issues and improve your overall performance.

FARMBENCH

BREXIT IMPACT CALCULATOR

Farmbench

Farmbench helps you get to grips with your farm costs by highlighting your businesses strengths and weaknesses, allowing you to make informed decisions.

Our industry will experience significant change over the coming years and the knock-on effect to your business is exposure to fluctuating prices, currency swings and adverse weather events, to name but a few. Your ability to protect your business by managing these risks and building resilience will become more and more important if you want to remain competitive.

AHDB's Farmbench is a web-based tool that allows you to input your own data and, most importantly, to split your costs between all the enterprises you have on your farm. Costs can be split between beef, sheep, potato and arable enterprises with dairy and sugar beet becoming available in autumn 2018. A report is then generated for each farm enterprise, which breaks down the costs to show exactly what you are spending and where. The next step is to compare where you are with your peers and we encourage you to do this at AHDB on-farm business groups where you can safely share aggregated and anonymised data.

Once you have this level of information about your costs, you can start to make confident and informed decisions about the future direction of your business. To find out more about Farmbench visit the website at: ahdb.org.uk/farmbench

Help desk

Email: farmbench.support@ahdb.org.uk
Telephone: 024 7647 8599

Brexit impact calculator

The biggest challenge of Brexit is trying to make it as relevant as possible to your individual business. What are the big policy headlines? How do they translate to the farm? To help answer those questions, we have developed a Brexit toolkit to help you make sense of the Brexit implications. The Brexit Impact Calculator can be used to investigate the potential impact that Brexit (Britain's withdrawal from the European Union) will have on your farming business.

A report will be generated predicting the consequences of three possible Brexit scenarios:

- **Scenario 1:** Full and comprehensive free-trade agreement with the EU. Support payments stay at the current level
- **Scenario 2:** No free-trade agreement with the EU but the UK unilaterally lowers all agricultural tariffs to zero. Level of support reduced by 50% and permanent labour costs rise
- **Scenario 3:** No free-trade agreement with EU and the UK adopts current EU tariff levels on all agricultural trade. Level of support reduced by 75%. Permanent and casual labour costs rise

Please enter input and output data for your business, either by hectare or by enterprise. If you do not have the data to hand, you may use the default sector averages for your business. To use the calculator visit: **bic.ahdb.org.uk**

Resilience checklist

Is your business Brexit ready and fit for the future? If you don't have the numbers at hand for the impact calculator, then the Resilience Checklist is another way of pinpointing the potential key Brexit issues for your farm.

For each question score yourself between one and five, where one is no, not at all and, five yes, I am fully implementing this.

Be honest: understanding your strengths and areas for development will help you to understand opportunities to improve your businesses resilience. To use the checklist visit: **ahdb.org.uk/brexit-resilience-checklist**

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