Managing the vineyard business

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This presentation aims to give an outline of some of the key issues that Agribusiness Research and Management (ARM) has found to be useful for the development of a successful business model. These points do not provide a universal panacea for every vineyard business problem but are rather methods that have been found to be appropriate to the authors’ business.

Introduction

In simple terms enterprise performance is attained through consistent maximisation of revenue and the minimisation of costs within an acceptable risk environment. ARM uses some key cornerstones for success in enterprise performance:

• **Have a clear vision**—a clear corporate vision allows ARM to compete in a global environment. ARM’s vision is deliberately non-operational: “to provide shareholders with an attractive return whilst being recognized by customers as their preferred supplier of quality wine grapes”. This vision encapsulates a return on assets and the minimisation of risk.

• **Exploit competitive advantages**—the aim is to identify all competitive advantages that the business may have and exploit them to the full.

• **Create customer value**—to achieve preferred supplier status with ARM’s customers. The company aims to meet or exceed quality specifications in its contracts and maximise the services surrounding that delivery.

• **Influence our operating environment**—the aim is to manage the operating environment to maximise efficiencies, which involves maximising quality at a desired yield, while minimising costs.

**Key factors to consider**

Two key factors in getting it right when establishing a business are consideration of structural and operational efficiencies and objectives.

**Structural efficiencies**

Structural efficiencies require consideration of the environment within which the business will operate that leads to inbuilt efficiencies including:

• **Identifying customers and their needs**—is the business in a position to supply their needs more effectively than others?

  Questions may include:
  – Where is the market?
  – What do the customers want in terms of quantity and quality, distance from processing facility.

  – Who are the competitors now and in 10 years’ time?

• **Identifying the best possible operating environment**

  Questions may include:
  – Can an environment be found that will produce the quality required at acceptable yields?
  – Does the environment have unique grape quality advantages such as afternoon sea breezes that moderate temperature extremes?
  – Is there sufficient land and water resources to get uniformity in large block sizes and to gain economies of scale?

• **Analysing competitor structural strengths and weaknesses**

  Good strategic planning is the key to developing an efficient and profitable business. It results in businesses that are structurally efficient and hence have underlying competitive advantages and the potential to achieve the desired outcome as cheaply as possible.

  As part of the strategic planning process detailed financial models are built to:

  • Determine the information still to be collected.
  • Do sensitivity analyses and gain an understanding of the true drivers of the business and hence factors that most affect business performance. To be a grape grower you need to start at the market end and work back by finding the location that will enable the enterprise to produce the product required by your customers, in the most cost effective manner possible. This will undoubtedly require sufficient land, water and capital resources to operate at an efficient economy of scale. Structural efficiency of the business is essential. If it is not right first time, ongoing management cannot make it work without total or major re-engineering of the business.

**Business operational objectives and efficiency**

Once the basic business position within the industry has been assessed and consideration given to all the structural efficiency issues, the operational issues require consideration. The aim is to develop the business and maximise the efficiency of the business within the constraints of the external environment within which the business operates.

To provide a framework for the environment within which the business operates ARM has, for example, developed some key operational objectives in its vineyards:

• To ensure the production of quality grapes in a reliable
and efficient manner and provide a service to its customers that exceeds their expectations resulting in an attractive return to shareholders.

- To operate under a culture of measured performance that is involved in every aspect of the business.
- To move the business forward through innovation and logical incrementalism. By moving forward in incremental steps, gaining more information in the process and going further if this proves suitable, and if not, retreating and seeking another path.
- To provide an environment that encourages innovation and employees to work with commitment, enthusiasm and in safety.
- In return for each individual employees care, commitment and innovation in their job the company will try to develop each individual’s potential to the maximum.
- To operate in a sustainable manner that ensures ARM is a good custodian of the environment and produces increasingly healthy fruit.

To attain the key operational objectives ARM has focused on a number of key aspects in running the business that can be grouped under Financial, Suppliers, Customers, Internal and Measured Performance.

Financial
The company seeks to examine how the business strategy is affecting its bottom line. Traditional measures of profitability, growth and asset value are monitored. Goals may be set for earnings before interest and tax (EBIT) and return on equity (ROE) or return on capital (ROC). The levels at which these goals are set depend on the level of risk involved, e.g. new project (start up) risk or industry (agricultural) risks.

Suppliers
ARM has tried to limit the number of suppliers and deal with those that can supply the product on time, at a favourable price and can help the company by utilising their expertise and resources, particularly during the establishment phase of projects. There is a saying in business that you can often make more money out of buying right than selling right.

When requirements are put out to tender, ARM encourages multiple vendors to bid on the requirements. The suppliers with whom it forms relationships do not have an eternal hold on ARM business and it continues in a polite way to let them know this. Where possible ARM operates under a set pricing formula so that it does not always have to go to tender. This results in faster response times and an improved, team approach with suppliers.

ARM never gets too comfortable with suppliers, but always looks at ways to reduce their own supply costs, sometimes negotiates with their own suppliers and in turn has these savings passed on. Prices should be constantly reviewed and benchmarked.

ARM tries to help suppliers in non-cost ways such as:
- Informing them of new business opportunities such as new projects likely to start up, so they can get in early and chase any business.
- Informing them of new products they may be able to sell or opportunities for their business that ARM has discovered.
- Utilisation of purchasing volumes with their suppliers to reduce price for both ARM and for the product they may sell elsewhere hence resulting in a bigger margin with their other customers.
- Help them out with technical advice that they may use for their other customers.

In addition it is good for the supplier to be seen as the preferred supplier to the leading edge players in the industry and so the relationship is seen as a mutual recognition of excellence.

In return for the price and service benefits received ARM always pays on time and is loyal to suppliers.

The above principles should apply not only to the provision of goods but also of services. ARM outsources a lot of the non-core activities in the vineyard such as major repairs and fabrication work, and some specialist vineyard work such as barrel pruning. Outsourcing allows a greater focus on the business of running the vineyard efficiently without being consumed by things that really don’t have much to do with whether the business succeeds. It also can prevent some cost centres being covered up, e.g. fabrication work being booked out as repairs and maintenance.

Customers
In ARM businesses the focus is on getting closer to the customers. The aim is to be seen as preferred suppliers to customers through the total package of product supply and service provided. In its vineyards ARM commenced a customer focus program some six years ago and the response has been far greater than envisaged. This program has been based on not only supplying the quality grapes that customers require but also focussing on a range of other factors that increase the value the wineries place on the relationship. These factors include:
- Updating yield estimates through the season towards vintage so the winery knows the tonnages to expect.
- Managing the vineyard professionally to produce the yields and quality the winery expects in the contract.
- Having Q.A. systems (these are externally audited) and HACCP systems in place so that chemical spray records etc are available.
- Supply of sugar levels etc to all wineries regularly and on time to the wineries during veraison (ripening) and in a form (graphed over time) that enables easy interpretation.
- Making sure harvested grapes are handled correctly and arrive on time and in good condition at the winery.
- Being flexible, particularly at harvest and fitting in with the winery so that if there are difficulties with other suppliers etc we can for example delay harvest for a night or what ever is required to help out.
- Gaining an understanding of any special needs the winery may have (e.g. trials of different cropping levels) to assist in developing our customer’s business.

The above focus has enabled ARM’s vineyards to be valued by winery customers as preferred suppliers. This has enabled ARM to gain long term contracts at a time when few are being signed.

Finally, ARM is looking for customers who respond to management techniques and provide the feedback required to continually improve.

Internal
This focuses on the skills, competitiveness and technology of the business that gives the business the capability to supply the needs of ARM customers at a competitive price but also to add value by exceeding customers’ expectations with quality and service. It also gives the capability to maximise both quality and yields through the best possible management practices in growing crops. Quality should be maximised for a given yield as shown in Figure 1.

Measured performance
ARM uses both outcome measures (feedback or lag indicators) such as monthly financials against budget and performance drivers (predictive or lead indicators) such as activity based costings and key performance indicators to measure and drive business performance within the objectives.

The problem with the more traditional lag type indicators is that they don’t provide early indications of success or poor performance hence are not dynamic enough and are too distant from the ‘coalface’. From an operational efficiency point of view the concentration is on running the business utilising performance drivers (lead indicators) such as activity based costings, which provide early indicators of success and help focus on the drivers of future success. Activity based costings enables site managers and operations managers to have nearly instant feedback on both task performance, individuals’ performance and machine performance. This can be compared to a footy match where no one knows the score until the end. However, by keeping score (i.e. having a culture of ‘measured performance’) there is a quarter time benchmark progress.

The selection of the correct key activities to measure performance (efficiency and effectiveness) and produce key performance indicators (KPI’s) is important. KPI’s include activity based costings which measure efficiency but may also include outcome measures of effectiveness. The following factors are important:

- The activity being measured is materially important to the overall performance and the long-term success of the business.
- There is commitment to the initiatives. The organisation needs to create a culture of “measured performance”.
- Potential problems with performance measures are sorted out by utilising pilot programs.
- There is incremental development of the systems over time based on previous successful applications.
- Training and coaching for all concerned is critical.
- The data collected is utilised and seen to be utilised by benchmarking the KPI’s against previous performance and where possible with the same activities in other operations. The data is also utilised in other processes and systems such as the budgeting process.

An example of this and some of the other organisational processes is pruning vines in the vineyards. There are two tasks involved in this. The first task is to preprune the vines with a mechanical prepruner and the second to do a hand clean up.

Prepruning This job is tendered out on an hourly rate to a contractor for 700 hectares. A complete schedule is drawn up for the contractor. The schedule is designed to minimise mobilisation costs and maximise his efficiencies.

On each vineyard the manager keeps a record of the time taken in each block. Costs are calculated back from the $90/hour for the machine to cents per vine. Over the past 7 years the hourly rate has been reduced from $120 to $90 per hour ($75 per hour in nominal terms) through greater economies of scale for the contractor, better organisation of the contractor, giving him a lower percentage of down time (e.g. mobilisation) and just good old competition between contractors.

Whilst the hourly rate has been reduced by 37% in real terms the total per vine cost has reduced from 10 cents/vine to 5.5 cents/vine for the larger operations, a 45% reduction in cost. The additional reduction in cost (in real terms) over the hourly rate is due to greater efficiencies achieved within the vineyards due to better organization, greater ground speeds achieved with improved machine set up, longer row lengths, and smoother rows and headlands.

Hand clean up After prepruning the vineyard is pruned by hand. Every row is labelled with the block and the row number. Data sheets have the row length and number of vines in every row.

People are assigned to rows and prune on a piece rate basis. We find that there is a 20–100% productivity improvement compared to just paying on an hourly rate.

- Records are kept on individuals’ productivity and the overall productivity. Better workers generally earn 10–40% more on piece rates than on hourly rates.

Figure 1. This is a diagrammatic representation of how yield and quality interact in winegrape production. The solid line represents “best practice” and is theoretically where a producer would wish to be (eg. for quality Y a yield of C). In practice ARM targets slightly lower yields (the dotted line for yield B) so that in a vintage with less than ideal weather conditions it still ripens the fruit and achieves the desired quality. The dots represent the fact that producers can operate anywhere within the outer curve but below the outer or the dotted line when taking into account less than ideal weather conditions.
Vines are checked for quality and workmanship and have to be redone if not acceptable.

Better quality workers that are more productive and earn more working on our sites, are attracted.

Lower costs per vine pruned are achieved.

Overhead costs are lower due to less people more focused on productivity, the benefits of which are shared between the vineyard and the worker.

This is not where it all stops though. The costs and productivity (vines per man hour) for the hand clean up are benchmarked both between workers in the one operation and between vineyards, constantly through the season.

The use of predictive, lead, or activity-based costings for measuring efficiency of both labor and machinery tasks and benchmarking this within and between operations gives the data by which incremental improvements can be measured and become the drivers for productivity improvements.

One final important comment on the key performance indicator and benchmarking approach is that it is critical to sustain interest in the principle throughout the organization. The utilization of lead indicators not only results in reduced costs and better quality as such, but the process of performance measurement and the culture of "measured performance" it develops results in many of the improvements in the business being developed at the "coal face". It is important to recognize these innovations and improvements as this further enhances the commitment and ownership to these systems and their further development within the business.

Information and technology transfer

As already outlined the use of key performance indicators and benchmarking are essential, but there is a lot of emphasis on information and technology transfer and to give operational staff the information with which to make good management decisions. This is done through:

1. Production of technical manuals that include information on:
   - Integrated pest and disease management
   - Vine nutrition
   - Weed control
   - Spray equipment calibration
   - Pruning methodology
   - Canopy management
   - Irrigation to produce quality fruit
   - Tips for managing an efficient vineyard
   - Financial controls, KPIs, benchmarking, budgeting

2. Operations manuals

   For example, a detailed manual on the design and layout, operation and maintenance of the irrigation system on each site.

3. Input from external technical staff

   For example, vineyard operations are run by managers that generally do not have formal graduate qualifications, but a qualified viticulturist will service 5–8 operations and assist the managers with their work programs, technical input, and benchmarking of performance.

4. Staff training

   Staff are a key resource in the efficient management of a vineyard business and are critical to its success. The aim within the business is to maximize the abilities of all those within the vineyard management team. Training is integral to achieving this. It is also vital that staff are committed to the goals of the business and share the enthusiasm to move the business forward.

   Training is used to ensure that staff develop leadership skills and good technical skills. This starts by ensuring that staff employed have an aptitude and the skills that will allow them to be successful in this business environment.

   An industrial psychologist is utilized to assess the strengths and weaknesses of job applicants to improve the selection process. This also gives managers a good understanding of each permanent employee's strengths, weaknesses and physiological profile before they start their employ, allowing the manager to better manage them.

   Both internal and external technical courses are provided for staff, in addition to the manuals and other information provided together with coaching from specialist technical staff.

   Staff employed in vineyard operations may be located in remote areas, requiring the whole family to relocate. Considering the needs of the whole family is important. There is an emphasis on the provision of quality housing and ensuring the smooth transition of the whole family into a new position.

   Training is provided to staff to develop their skills in leadership. This is valuable, as staff are required to manage itinerant workers that are more difficult to motivate to achieve the goals of the business. The development of good technical skills by managers is also vital. Good technical skills allow managers to understand and efficiently implement vineyard programs, freeing them to spend a greater component of their time on providing leadership and management of other staff.

   5. An online computer system that provides:

      Vineyard or crop performance data, fertiliser programs, document management systems (e.g. SOPs, MSDS's, labels, forms etc), weather data, etc, to ensure employees have access to the up to date information they need.

      The systems, processes and available technology are combined to not only reduce costs but also (and often more importantly when in the business of growing things) to maximise yields and quality, which in turn maximizes returns. It is a real challenge starting from site selection and establishment to consistently produce excellent yields and quality in crops.

      The production of good yields and quality in horticulture often leads to reduced harvesting and packing costs in addition to greater revenue from the product itself.

Innovation and learning

In its businesses ARM emphasises the notion that continuous improvement never ends and to achieve best practice there must be continuous improvement. Alternatively aspiring to mediocrity will ensure the business’ demise. There is a strong financial focus in each business that ultimately focuses on return on capital invested. Businesses that do not achieve acceptable returns and that have no credible plan to improve will not survive.

The emphasis, however, is not only on getting better at what is already being done, through incremental improvements, but being innovative as well. Innovation means the need to create purposeful, focussed change to continuously develop the economic and social potential of
the businesses (Drucker 1998). Innovation centres on culture, empowerment, skill development, the adoption of new technologies and fresh approaches to traditional ways of working. Innovation is crucial to continued business success.

Innovation is possible if the manager is in control of the business. Business control requires measurement (eg. activity based costings, KPI’s) and benchmarking. If there is no business control, the manager is always chasing his/her tail, putting out fires. If in control, the manager will likely have the time and capability to think how to ‘do it better next time’.

Imagine the footy having no score. What would the game be like? It would likely have no purpose (focus), and not be competitive. If the business continually measures performance and fine tunes it, it will improve.

In summary ARM believes there are three key factors to getting it right in the agricultural businesses it is in. These are, getting the structural efficiencies right and if this is not possible stay out of the business. Secondly, having a culture of measured performance and improvement in the business. Finally, focus the business on getting closer to the customer to increase the value the customer places on the supplied products and service.

References