DEPARTMENT OF
PRIMARY INDUSTRIES

services & information for new landholders

Do you own a small property in rural Victoria?

farm diversification decision making - step 4 complexity

This Information Note discusses the complexity of an idea.

Simple ideas are easier to adopt.

The more complex the idea the greater the changes needed to fit the idea into to an existing system. As complexity increases, the risk of failure increases. As complexity increases, the need for, and the costs of gaining additional knowledge increases.

Types of complexity

There are many types of complexity including technical, financial and market.

Technical complexity

To overcome complex problems requires information, organisational and analytical skills. Some questions you may need to ask are;

Are you prepared to learn how to operate new systems? What knowledge do you have of soil fertility needs, irrigation needs, harvesting requirements, storage needs and/or spoilage risks?

Financial complexity

The costs of entry into many enterprises on a commercial scale, the cost of equipment, the length of the payback period all increase the financial complexity of diversifying in agriculture.

Management of financial risks including drought, exchange rates and imports are often overlooked but can seriously undermine financial returns.

Marketing complexity

Export and safety regulations and quality assurance programs increase the degree of expertise and specialised production systems required to be part of a market supply chain.

Frequent monitoring of storage conditions, management of records and the maintenance of certification for equipment are all activities that increase the complexity of producing or selling new products.

Plant variety rights, licensed production systems and controlled marketing increase the complexity of marketing a product.

Marketing requirements keep changing. In every industry you need to keep asking your old and new customers what they want, how they want it and when they want it.

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Complex industries

For established industries, the systems in place have been developed over many years. These systems can be explained by existing producers and agents. This is not always the situation for new industries. For some new industries the systems are very complex or have not even been established.

In considering which enterprise(s) to establish on your property it is important to understand the complexity of these activities. Are there several layers of complexity? Do I want to be involved in complex systems?

Some examples of complexity are provided.

Example 1. Wine production system. Technically demanding requirements to set up efficient production and irrigation systems. Demanding spraying schedules for herbicides, insecticides, fungicides and for pruning. Delayed income. Labor intensive. Demanding financial needs. Marketing maybe complex.

Example 2. Olives. Fruit needs specialist harvesting equipment and processing. Processing batches need to be large or costs become prohibitive.

Example 3. Alpaca production system. Alpacas are mated individually. Birthing can be spread throughout the year. Both issues need complex time management and impact on the fibre harvesting activities.

Example 4. Farm forestry systems. Demanding soil and water requirements and planting, management and harvesting schedules. Unclear market signals. Little income for many years.

Relationship to resource advantages

The level of complexity can be reduced by specific resource advantages that you may have.

Using some of the industries listed above, you may have following resource advantages that simplify complex issues.

Wine production: access to irrigation water and existing equipment for spraying.

Olive production: large area of land, close to processors.

Table 1 summarises the relationships between different levels of complexity, different types of complexity and barriers to entry into different activities.

Degree of complexity	Technical complexity	Market complexity	Financial complexity	Barrier to entry
Low	Easy to learn and do. Lots of information and training available.	Simple to sell. Many buyers. Commodity product	Affordable for many people. Low cost to start. Easy to sell if want to retire.	Low
High	Difficult to learn. Needs a high level of expertise to do well. Information lacking or kept as a secret. Specialist production system. Needs special equipment.	Controlled marketing systems. Exclusive distribution system. No clear market system. Need license, trademarks or special knowledge.	Expensive for most people. High cost to start. Hard to sell if retiring. Low cash flow for many years at the start.	High

Table 1. The relationship between different levels of complexity, different types of complexity and barriers to entry to an industry.

Further Information

More information on each aspect of this framework is provided in other information notes.

This information note is part of a series that explores five important aspects of decision making: compatibility, observing, trialing, complexity and resource advantage.

This series has been developed and written by Bruce McGregor, Attwood.

Disclaimer

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