Agribusiness in Schools
DELIVERING AGRIBUSINESS TO NZ SECONDARY SCHOOLS

Duram Wheat - Adding Value from the Ground Up

Follow the link to the video on Monty and Sons: Link here.

Read "*Adding value from the ground up*". Discuss and answer the questions.

Questions

1. What is meant by "adding value" to an agricultural product? Give an example from the article.
2. How does Monty & Sons add value to locally grown durum wheat before it reaches the consumer?
3. Why is growing durum wheat in New Zealand important for Monty & Sons and local arable farmers?
4. How does using traditional bronze dies instead of Teflon dies add value to the pasta?
5. Why does Monty & Sons slow-dry its pasta for up to 24 hours rather than drying it quickly? What benefits does this provide for the finished product?
6. How does sourcing wheat directly from local growers provide value to both farmers and consumers?
7. How do regenerative farming practices contribute to the value of the pasta product?
8. Why has Monty & Sons invested in biodegradable packaging? How could this make the product more valuable to consumers?
9. Monty & Sons does not rely on one major technological breakthrough. What different decisions or practices are combined to create a higher-value product?
10. The article concludes that the next opportunity may lie in "producing smarter" rather than "producing more." What do you think this means? Use at least three examples from the article to explain your answer.
11. Why is understanding customer needs important when building a successful agribusiness?
12. Discuss how developing value-added products influences the future growth of the agribusiness.

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Adding value from the ground up

For generations, New Zealand agriculture has excelled at producing some of the world's highest quality raw materials. Wheat, milk, meat, wool and horticultural products have earned international reputations for quality and consistency, yet many of the processed foods filling supermarket shelves continue to rely heavily on imported ingredients. That creates an interesting contradiction. We are exceptionally good at growing food, but we often leave the value-adding to someone else.

Monty & Sons represents a different way of thinking. Rather than simply manufacturing pasta in New Zealand using imported grain, the South Wairarapa business has built its production model around growing, milling and manufacturing within the same domestic supply chain. It is a relatively simple concept, but one that requires considerable coordination between growers, processors and manufacturers if it is to work successfully.

The foundation of that system lies with locally grown durum wheat. Unlike conventional bread wheat, durum has traditionally been sourced from overseas, largely because of the belief that New Zealand conditions were not ideally suited to the crop. By working with growers in the Wairarapa Grains Collective and selecting ancient durum varieties that perform well in the region's dry summer climate, Monty & Sons has demonstrated that a genuine New Zealand-grown pasta industry is achievable. That may appear to be a small step, but from a supply chain perspective it is significant, reducing reliance on imported raw materials while creating new opportunities for arable farmers looking to diversify their cropping programmes.

What makes the business particularly interesting, however, is not simply where the wheat comes from, but how it is transformed into the finished product. Modern food manufacturing is built around efficiency, with production lines designed to maximise throughput while delivering consistent quality. In the pasta industry, this typically involves extruding dough through smooth Teflon dies before rapidly drying the product at elevated temperatures. The system is fast, highly repeatable and ideally suited to large-scale manufacturing.

Monty & Sons has deliberately chosen a different production pathway.

Instead of Teflon tooling, the company uses traditional bronze dies during extrusion. While this may seem like a minor manufacturing detail, it fundamentally changes the surface characteristics of the finished pasta. Bronze tooling leaves a microscopically textured surface that holds sauces more effectively than the smooth finish produced by modern dies. It is a slower process that requires greater attention to production, but it reflects a conscious decision to prioritise product performance rather than production speed.

The drying process follows exactly the same philosophy. Rather than removing moisture as quickly as possible, the pasta is slow dried over periods of up to 24 hours using lower temperatures. From a processing perspective, this helps preserve the structure of the wheat proteins while producing a firmer texture and more consistent cooking performance. It is another example of manufacturing decisions being driven by product quality rather than factory output, even though slower drying inevitably reduces production capacity.

There is also an important story behind the grain itself. By sourcing wheat directly from local growers, the company has established complete traceability throughout its production system. At a time when consumers increasingly want to understand where their food comes from, shorter supply chains provide greater transparency while strengthening the relationship between growers, processors and end users. For farmers, it creates the opportunity to produce a premium ingredient with a clearly identified destination rather than simply supplying a global commodity market.



Locally grown durum wheat is helping create new opportunities to add value to New Zealand agricultural production closer to home.

That emphasis on production extends beyond the factory gate. The growers supplying the business follow regenerative farming principles that place a strong focus on soil health and long-term productivity. Regardless of where individual farmers sit on the regenerative farming debate, maintaining healthy soils remains fundamental to any sustainable cropping system. Linking production practices directly to a premium food product also demonstrates how agricultural management decisions can become part of a product's overall value proposition rather than remaining invisible to consumers.

Packaging has received the same level of attention. Food manufacturers continue to face the challenge of reducing plastic without compromising product quality or shelf life, particularly where moisture control is critical. Rather than accepting conventional plastic packaging as the default option, Monty & Sons invested time in identifying biodegradable alternatives capable of protecting the product while reducing environmental impact. It is another example of engineering and manufacturing decisions being considered across the entire production system rather than focusing solely on the food itself.

Perhaps the most interesting aspect of the business is that there is no single breakthrough technology underpinning



From locally grown grain through to the finished product, shorter supply chains are creating new opportunities to connect New Zealand agriculture directly with consumers.

its success. Instead, it is the accumulation of numerous production decisions that collectively create something different. Locally grown durum wheat, bronze extrusion, slow drying, shorter supply chains and thoughtful packaging are all established technologies in their own right. The innovation comes from integrating them into a production model that delivers greater value while remaining firmly connected to New Zealand agriculture.

For the wider agricultural sector, there is an important lesson in that approach. Adding value does not always require revolutionary technology or major scientific breakthroughs. Sometimes it comes from asking how existing production systems can be redesigned to retain more value within New Zealand while giving farmers access to new markets built on quality, provenance and transparency.

As pressure continues to grow for agriculture to deliver more than commodity production alone, businesses such as Monty & Sons demonstrate that the next opportunity may lie not in producing more, but in producing smarter. **RC**

Answers

1. What is meant by "adding value" to an agricultural product? Give an example.
   Adding value means processing or improving a raw agricultural product so that it becomes a higher-value product that can be sold for more. For example, Monty & Sons takes locally grown durum wheat, mills it and turns it into premium pasta rather than selling the wheat as a raw commodity.

2. How does Monty & Sons add value to locally grown durum wheat before it reaches the consumer?
   Monty & Sons adds value by growing and sourcing durum wheat locally, milling the grain and manufacturing it into pasta in New Zealand. The company also uses bronze dies, slow drying and biodegradable packaging to create a distinctive, premium product.

3. Why is growing durum wheat in New Zealand important for Monty & Sons and local arable farmers?
   It reduces the company's reliance on imported wheat and creates a new market for New Zealand growers. It also allows farmers to diversify their cropping programmes and supply a product with a clearly identified New Zealand destination.

4. How does using traditional bronze dies instead of Teflon dies add value to the pasta?
   Bronze dies create a microscopically rougher surface on the pasta. This allows sauces to stick to the pasta more effectively. Although bronze extrusion is slower, it improves the eating and cooking qualities of the finished product.

5. Why does Monty & Sons slow-dry its pasta for up to 24 hours rather than drying it quickly? What benefits does this provide for the finished product?
   Slow drying at lower temperatures helps preserve the structure of the wheat proteins. This produces pasta with a firmer texture and more consistent cooking performance. The disadvantage is that it takes longer and reduces production capacity, but the company chooses product quality over maximum production speed.

6. How does sourcing wheat directly from local growers provide value to both farmers and consumers?
   Farmers gain a specific market for their durum wheat and an opportunity to produce a premium ingredient rather than simply supplying a commodity market. Consumers benefit from greater traceability and transparency, because they can have more information about where the wheat used in their pasta was grown.

7. How do regenerative farming practices contribute to the value of the pasta product?
   Regenerative farming practices focus on maintaining soil health and long-term productivity. This connects the farming practices used to produce the wheat with the final food product. For consumers, sustainable production practices can increase the appeal and perceived value of the pasta.

8. Why has Monty & Sons invested in biodegradable packaging? How could this make the product more valuable to consumers?
   The company wants to reduce its use of conventional plastic and its environmental impact while still protecting the pasta. Biodegradable packaging may make the product more attractive to consumers who are concerned about environmental issues and want to make more sustainable purchasing choices.

9. Monty & Sons does not rely on one major technological breakthrough. What different decisions or practices are combined to create a higher-value product?
   Monty & Sons combines several production and processing practices to create a higher-value product that is different from mass-produced pasta. These practices add value for both consumers, through quality, traceability and sustainable packaging, and farmers, by creating a market for locally grown durum wheat.
   Practices include;
   - *growing durum wheat in New Zealand*
   - *working with local growers*
   - *milling and manufacturing within a short domestic supply chain*
   - *using traditional bronze dies*
   - *slow drying the pasta at lower temperatures*
   - *using farming practices that focus on soil health*
   - *providing traceability from grower to finished product*
   - *using biodegradable packaging*

10. The article concludes that the next opportunity may lie in "producing smarter" rather than "producing more." What do you think this means? Use at least three examples from the article to explain your answer.
    "Producing smarter" means finding ways to increase the value of agricultural products rather than simply trying to produce larger quantities of raw materials.
    Monty & Sons demonstrates this by:
    - *Turning New Zealand-grown durum wheat into a finished pasta product, rather than exporting or selling the wheat as a commodity.*
    - *Using bronze dies and slow drying to improve the quality of its pasta, while local sourcing and traceability provide consumers with information about where their food comes from.*
    - *Using biodegradable packaging and links with regenerative farming also add environmental value*

11. Why is understanding customer needs important when building a successful agribusiness?
Understanding customer needs helps an agribusiness develop products that people want to buy. Monty & Sons responds to consumers' interest in quality, traceability and environmental sustainability. The company provides information about where its wheat is grown, focuses on the quality of the pasta, and uses biodegradable packaging. Meeting these customer needs can help the business differentiate its product from competitors and create greater value.

12. Discuss how developing value-added products influences the future growth of the agribusiness.
Developing value-added products can create new markets, increase the value of agricultural products and provide greater opportunities for farmers and processors. Monty & Sons takes locally grown durum wheat and transforms it into a finished pasta product in New Zealand, rather than simply selling the wheat as a commodity. This keeps more of the value within New Zealand and creates opportunities for local growers. By focusing on product quality, traceability, local production and sustainable packaging, the business can develop a distinctive product and respond to changing consumer expectations. This demonstrates how producing smarter rather than simply producing more can support future growth in agribusiness.