

INCREASED MARKET SHARE FOR AUSTRALIAN PULSES: A QUALITY ASSURANCE STRATEGY

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Abstract

The Australian pulse industry will require a shift in culture, from that of a commodity trade to a direct trade in food products. We Australians believe that Australia produces some of the best quality pulses in the world. Yet, however in the eyes of many of our consumers, such as those on the Indian sub-continent, this is not necessarily true. In the traditional bulk commodity trade that has dominated our pulse exports in the past, the emphasis tended to be more on price than quality. Minimum export standards were introduced to and accepted by the industry itself to satisfy basic customer requirements. This has been of little concern as the emphasis was on price more than quality. The market, however, is changing, and overseas traders increasingly demand strict adherence to product specifications. In India, presently our most important market for chickpeas, the affluent and growing middle class, presently our largest market for chickpeas, is growing rapidly. It can afford to pay for superior pulse products. This means not only is it demanding superior higher quality but also consistency of product quality. The implementation of a quality assurance system such as that being developed by Pulse Australia in collaboration with and being investigated by Agriculture Victoria, will provide an effective tool in achieving this change. It will bring a greater understanding and control of on-farm production procedures, which ultimately will be of benefit to farmers involved by increasing access to high value markets and improved farm efficiency.

Key words: Quality assurance, quality management, pulses, SQF2000, Pulse Australia.

Australia produces some of the best pulses in the world and our export markets buy Australian pulses as a first choice. Is this statement correct? The average farmer will say yes, a politician will defiantly say yes, and many agronomists will also agree. However, it would seem that our perception of the quality of our products exceeds that of our customers, particularly in the human consumption markets in the Indian sub-continent (R. Rees, pers. comm.). While these markets have been buying our product for many years, it would seem that they do not necessarily consider it to be of the highest quality. This is not to say that our pulses are inherently poor. They are just not the product of first choice. Why is this so? The reason may lie with crop management agronomy, but there has been enormous effort in producing agronomic packages. It could lie with varieties, but the breeding programs have started to consistently release vastly improved material. Perhaps it lies with the culture of 'near enough is good enough' in growing the pulse crops. Too many farmers still see pulses as a break crop for cereals rather than as potential food products and treat them accordingly. Quality assurance could change this culture and allow farmers to produce a consistent supply of high quality pulses.

Discussion

What is quality assurance?

Quality can be defined as a "degree of excellence", but also as a "characteristic trait". In other words, it specifies the product. Assurance is the formal guarantee of that specification. The Australian Quality Council defines quality assurance as 'all those procedures necessary to provide confidence that a product or service will satisfy customer needs' (1). From this definition we can see that quality assurance is a process that we can put in place to provide a customer with quality. How does this differ from current practice? A great deal of work by various sectors of the Australian pulse industry has already been put into developing and maintaining minimum receival standards, such as those published by NACMA. Grain is tested on delivery to ensure that it meets these industry standards of sufficient quality. Grain that does not meet these standards is rejected or discounted. Pulse Australia documents standards and encourages their use for Pulses in Australia, and some individual traders may also have their own

standards. These systems are quality control systems or end point checking. Quality Assurance will assist growers in achieving these receival standards by checking that everything is correct at each point of the production process.

Why does the pulse industry need quality assurance?

Australia has a quality control system in place for grain receivals and because of this, it can be argued that the Australian Pulse industry does not need another quality system. In many cases the critics may be right. There are, however, a few issues to be considered.

(a) Food safety issues are becoming more widely recognised. Recent estimates suggest that there are up to 2 million cases of food borne illness in Australia per year (1). It is easy to see how these occur, as was demonstrated by the examples of recent food poisoning incidents with small goods in South Australia, but it is not always easy to see how such incidents could occur in the grains industry. One example of food poisoning relating to the grains industry is the Kraft peanut butter recall in 1996. It has been suggested that the problem may have been caused by salmonella contamination, from rodent droppings in the peanut grain.

Bacteria are only one type of food safety hazard that could potentially occur in the grains industry, chemical and physical hazards being other examples. Physical hazards are pieces of foreign material, such as glass, metal, weed seeds, other types of grain, etc. Chemical contamination is a food safety hazard that has received a lot of publicity and one that has led many grain buyers to consider asking farmers delivering to them to sign vendor declarations when they deliver grain. While Australia has a system of maximum residue levels, some countries want residues to be 'at minimum detectable level'. Japan, for instance, does not want any chemical residues at all in beef and a low tolerance level of contamination in grains.

(b) Australians have been proud of their perceived reputation for producing high quality grain. However, Australian pulses are not necessarily the products of first choice in some of our major markets. It has been suggested that the main problem lies not in their inherently poor quality, but in the wide range in quality (U. Singh, pers. comm.). This variation has not been of such a major concern in traditional 'bulk commodity' trade. While quality is important, products are generally bought on price, not quality (R. Kohli, pers. comm.). In developing market outlets for specific food products, these quality issues are important. There is a rapidly growing middle class in India, its size reaching up to 150 million already (T. McGreevy, pers. comm.). People in this income bracket are moving away from shopping in the traditional grain retail markets supplied from the bulk commodity trade, to western style supermarkets. In this latter situation, pulses are sold in 1 or 2 kg bags, much the same way that we would buy lentils at supermarkets in Australia (2). These people are demanding higher and reliable quality and are also prepared to pay for it. There is potential for grain, purchased acquired in this fashion, to total up to 1 million tonnes. It is these newly emerging market outlets, that are becoming the driving force behind the push for quality assurance in the Australian pulse industry.

(c) Another factor is legislation such as that proposed suggested by the Australia and New Zealand Food Authority, which is an independent body set up as a result of the Australia New Zealand Food Authority Act, 1991. They are promoting an approach that would see all individual food businesses registered, with food safety programs in place. These proposals only apply post farm gate. However, there are strong signs that this requirement could be extended to on-farm grain production in the future. The Pulse Australia Quality System would be a suitable mechanism, should such changes occur. It would certainly assist in preventing unpractical quality systems being imposed by legislators.

The Pulse Australia Quality System

The quality systems that Pulse Australia identified as being the most suitable for the grains industry is SQF 2000. The SQF2000 system was developed by AgWest for use by primary producers. It is based on HACCP (Hazard Analysis Critical Control Points). The Codex definition of HACCP is 'a system that identifies, evaluates, and controls hazards that are significant for food safety'. It was primarily developed

to reduce the incidence of unsafe food reaching the market place. However, its principles translate very easily into food quality issues. It can also be used for on farm efficiency issues.

The Pulse Australia Quality System was developed from the SQF2000 concept because the commonly used ISO 9000 system was considered to be cumbersome for the grains industry.

How will the program work?

Agriculture Victoria initiated a project in 1997 with the objective to increase the market share of Australian pulses. The ability to provide a consistent supply of high quality pulses was identified as the critical factor in achieving this aim. To this end, we first needed to identify and describe what quality is, ie. ask the question "what does the customer want?"

To answer such questions, samples of grain are being assessed to determine just how our grain compares to others with respect to criteria that customers find important. Quality evaluation is carried out at the Victorian Institute for Dryland Agriculture and at Food Australia, Werribee. The project has also links with the national pulse quality assessment program being sponsored by the Grains Research and Development Corporation. Samples will also be evaluated within target countries, such as India, to gain the benefit from local expertise as much as possible.

The second part of the project is a case study of implementing quality assurance on-farm as a method for achieving the goal of a more consistent supply of quality pulses. Two groups have been formed in the Wimmera and Southern Mallee of Victoria in collaboration with The Lentil Company and The Birchip Cropping Group. Each group has 7 to 10 farmers, working through the implementation process of the Pulse Australia Quality System. The groups will concentrate on chickpeas, field peas and lentils as these are the three major pulse grains in Victoria destined for export as human food products.

The Pulse Australia Quality System consists of six elements, viz.

- commitment;
- suppliers;
- control of production;
- inspection and testing;
- document control and quality records; and,
- product identification and traceability.

To comply with the code, farmers must show how they are meeting each of these elements. The HACCP plans are largely designed to show how each of these elements is being met.

In developing a HACCP plan, the first phase is to identify each step of the production process. At each step of the grain production process, hazards will be identified. For instance, a delay in harvesting of field peas will affect grain colour. A critical limit must then be set. If the quality of the product falls below this critical limit, then the product does not meet the specification. A monitoring system needs to be put in place to ensure that the critical limit is not exceeded and corrective action needs to be established, ie. what do we do if it does exceed the critical limit. Many farmers would already be involved in all of the above to some extent, but the last step is the one that is most important and most often neglected. This last step is to document the system, so that it is open to external audit and verification.

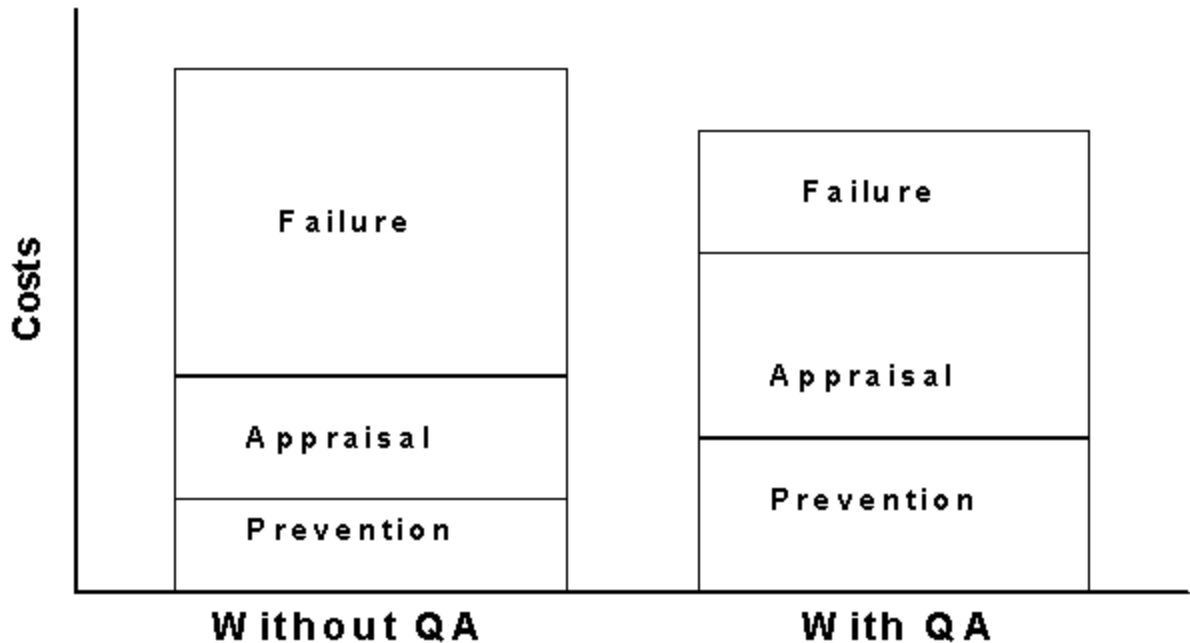


Figure 1

What will be the benefits be?

For a quality assurance approach to be accepted by the wider farming community, there should be obvious benefits to the farmer, and more particularly to the farmer's pocket. However, the most commonly desired benefit, a premium prices for the grain, is unlikely, at least in the short-term with the way the current pulse markets operate.

The main benefit lies with increased market access. For example, recently Woolworths had around 45 suppliers of fruit and vegetables. Since they encouraged their suppliers to develop quality assurance programs, the number has dropped off to only nine. The nine firms still supplying Woolworths, are unlikely to be receiving a premium for their produce. However, they have increased their individual share in this stable market. In contrast, those suppliers who did not embrace the quality assurance system, were forced to find other markets.

Quality assurance systems will also greatly benefit on-farm productivity. One way to improve profit is to reduce costs. On farm costs can be split into three categories: prevention costs, appraisal costs and failure costs. Prevention costs are those of actions designed to ensure in advance that nothing goes wrong; appraisal costs which are the costs of finding out if something has gone wrong so it can be fixed, and failure costs that occur when a customer is dissatisfied. Failure costs include yield loss, rejection or downgrading of crops, decreased market share or product recall.

With a quality assurance system in place, prevention costs will rise as there are costs involved with implementing quality assurance, appraisal costs will rise because the quality system must be assessed, but failure costs will be greatly reduced. The total costs on the farm have been reduced, increasing with its profitability (Fig. 1). The quality control system currently used, would result in grain that does not meet the specific standards, to be either discounted or rejected. At this point there is little that a grower can do to the product to improve the quality, should a problem arise.

The ability to prove 'due diligence', should litigation occur over the quality of a product is another important benefit of a quality assurance system. It can also provide a production checklist to ensure that

everything is done on time and that all operators know their job and are sufficiently competent. This will result in farms being run far more efficiently.

Benefits to the total industry are clear. It will improve our ability to consistently supply high quality grain to our markets. This again, will lead to our grain being well accepted and will lead to Australian pulses becoming the pulse of first choice among our customers. Quality assurance will also allow the pulse industry to promote a brand name. This is quite important when one realises that many of our potential customers in India are unaware that Australian pulses are being imported there on a regular basis (3). If this aim can be achieved in the Australian pulse industry, then it will be in a very strong position as a competitor in our overseas markets.

Farmer feedback

Feedback received from farmers to date has been quite positive in many cases. The group affiliated with The Lentil Company are finding implementation of the quality system a relatively simple task and are quite satisfied with its progression. The farmers in the group affiliated with Birchip Cropping Group are not as convinced of the potential benefits. Many of the farmers in the latter group deliver into bulk or pool type arrangements as opposed to niche marketing. As a result, the benefit can be lost when their quality assured grain is mixed with grain from less committed suppliers. The key to the success of these pilot groups is to have a link to a marketer who may be able to provide a segregation for quality assured grain so as it can be used to test markets.

Conclusions

Traditionally, Australian farmers have grown pulses for bulk commodity purposes. Pulse crops are still seen by many as an adjunct to cereal crops without too many considerations about long-term implications. As a result of this cultural attitude, the international market place may not regard Australian pulses as highly as many of our growers seem to think. To take advantage of new and rapidly growing high value markets, the Australian pulse industry will require a shift in culture, from that of a commodity trade to a trade in food products. Quality assurance systems such as the one being developed, monitored and promoted by Pulse Australia and Agriculture Victoria are an excellent tool for achieving this goal.

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