

The changing role of AQIS in the regulation of grain exports from Australia

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Abstract

Inspectors acting on behalf of the Australian Quarantine and Inspection Service (AQIS) have up to 1993 sampled and inspected all wheat, barley, oats, sorghum, dried field peas, lupins, mung beans and vetch presented for export at shipping terminals and packing premises. These inspections were to check that grain was free from live insects and contaminants such as weed seeds and to be satisfied it met the phyto-sanitary requirements of importing countries.

AQIS has been actively encouraging grain exporters to move away from the traditional form of inspection, often referred to as end-point inspection, to a self-regulated 'systems approach' termed Certification Assurance (CA). Under a CA arrangement, a grain exporter must document and implement a quality assurance system, incorporating in-house controls which ensure that AQIS's regulations and the importing country's requirements are satisfied. AQIS then conducts audits on site to ensure the quality assurance system is in place and effective. Exporters may, if they wish, expand their quality system to comply with the requirements of the International Organisation for Standardization (ISO) standards for quality management systems—the ISO 9000 series.

Introduction

The Department of Primary Industries and Energy, through the Australian Quarantine and Inspection Service (AQIS) regulates the export of wheat, oats, barley, sorghum, lupins, field peas (which are collectively termed 'prescribed grains') and mungbeans, and any other grains and seeds for which a phytosanitary or any other form of certification is required by a foreign country authority. When an importing country does not require Australian certification, non-prescribed grains, including rice, chickpeas and lentils, can be exported without inspection.

The *Export Control Act 1982* prohibits the export of prescribed goods unless they comply with the conditions specified in the Prescribed Goods (General) Orders, the Grain, Plants and Plant Products Orders (GPPPO) and, in the case of mung beans, the Export Control (Mung Beans) Orders. The legislation covers requirements for the registration of establishments, product standards, trade descriptions, inspection procedures, export clearance and certification. Traditionally, inspection and certification of grain has, by necessity, been a monitoring exercise based on sampling before or at time of loading. This has been termed 'end-point inspection'. All export inspection of grain in Australia is undertaken by State departments of agriculture officers who act on behalf of AQIS.

Bulk grain is inspected at 20 grain terminals owned and operated by five bulk handling organisations (BHOs) throughout Australia. The BHOs store and handle grain for a number of marketing authorities and exporters, including the Australian Wheat Board and the Australian Barley Board. Containerised and bagged grain is inspected at 64 registered premises, many of which are owned and operated by exporters. AQIS applies separate charges for bulk, containerised and bagged grain.

The overall objective of AQIS's export inspection service is to ensure that exporters meet their responsibility by shipping grain which is free of insects, is safe for human or animal consumption, is honestly described and meets importing country phytosanitary requirements. In providing this service, AQIS seeks to ensure that its practices do not act as an unnecessary impediment to legitimate trade and meet the changing needs of the industry. This is achieved by ongoing review and consultation with peak industry bodies. The major identified requirements set by the industry for AQIS and the inspection service are to:

- reduce government involvement by adopting modern technology in the inspection function, particularly where this leads to reduced labour inputs and greater efficiency and cost effectiveness;
- align with internationally recognised standards;
- maintain the current prescribed grains regulations; and
- allow provision in new legislation for sufficient flexibility to make further additions or deletions.

This paper identifies the steps taken to meet industry, government and AQIS needs.

Toward an Effective and Cost-Efficient System

The clear aim of AQIS is to move as many commodity-based clients as possible from 'end point inspection' to quality-assurance-based arrangements. The principal limitations in the move will be:

- acceptance of this approach by authorities of importing countries;
- the commitment of grain producers, handlers and exporters to quality-assurance-based programs; and
- the ability of individual clients to develop and maintain comprehensive documented and auditable quality systems that address all issues relevant to AQIS and the authorities of the importing country.

AQIS does not see quality assurance as a means of deregulation. Rather, it is a way of providing the means for greater industry self-regulation and, as a consequence, more assurance that the product meets buyer requirements.

For the grains industry there are currently two methods of inspection and certification available; 'end-point' inspection or Certification Assurance (CA) arrangements. CA has been available to the industry since 1991. End-point inspection systems have a number of deficiencies that can be addressed by a certification system.

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The traditional 'End point' inspection system

It is almost universally accepted in manufacturing industries that 'quality cannot be inspected into the product or service'. This approach applies to export certification of grain in the same way it applies to the production of motor vehicles. Using only 'end-point' inspection for quality determination has four fundamental shortcomings.

It concentrates on identifying and then fixing the problem at the end of the production process where most value has already been added to the defective product. Grain is received into the handling system at country terminals from individual growers under specified receival standards. The current system may check the hygiene of the terminal and the condition of the grain at export but it does not use information relating to the grain from the time it was first received at the country terminal. In a recent incident at an export terminal, an unknown contaminant was found in a batch of grain. The level of the contaminant was high and therefore the grain was withheld from export until it could be correctly identified. This highlighted that the system of control did not go far enough back to adequately identify the characteristics of the grain.

End-point inspection, even under the best of conditions, will identify only some of the problems associated with grain, which means that defective products will enter the market. In addition, as grain is sampled and inspected during loading to ship, if insects or weed seeds are detected, there is a possibility that some may already be on board, unless detection occurs at the start of loading.

End-point inspection is expensive in terms of inspection staff who add little value to the product. To operate a meaningful sample monitoring regime, it would be necessary to sample the complete storage source lot, i.e. the bin or cell before any of the grain is loaded. This means, in practice, running the contents of a storage bin lot into another bin, such as a dedicated shipping bin, for inspection, and releasing its contents only when the complete lot has been sampled and found to be satisfactory. This approach is costly, since the grain is handled more than once.

Inspection staff have only limited input into the design of the process, and have no direct incentive to identify the source of recurring problems, which may be at the time of receival in the country.

While the nil tolerance policy for live insects improves the presentation value of Australia's grain and gives it a marketing edge, it allows little flexibility for any BHO shipping pesticide-free grain. For example, field insects such as *Sitona discoideus*, Sitona weevil, can often be harvested with the grain and emerge from the bulked grain over a period of time. The only treatment available for this grain is to allocate sufficient time before shipment for field insects to depart. The end-point system would identify this problem and bar shipment of the grain unless it was insect free.

A systems approach to certification

Certification assurance (CA) agreements are voluntary arrangements between AQIS and companies demonstrating effective in-house quality systems. The companies take on the inspection functions previously exercised by AQIS. AQIS audits the quality systems to ensure that they are effective and are meeting all AQIS requirements.

To establish a CA arrangement with AQIS, a company must be able to prove that it has a quality system in place at its establishment that will assure that only product that meets export requirements and importing country requirements will be produced for export. Further aims of the CA arrangement are

to gain information by process monitoring and to refine the system to ensure that non-conforming product is removed or retreated at the earliest possible stage. The emphasis is on prevention rather than remedial action. This has the net effect of reducing costly reworking or treatment.

The exporter of grain is defined as the person/organisation that owns the grain when the vessel leaves the wharf, since that is the point of export from Australia. The exporter is therefore responsible for the payment of all inspection costs and has ultimate responsibility for the cargo. CA arrangements with AQIS are entirely voluntary. A BHO can enter into a CA arrangement with AQIS for the systems it has documented, and on this basis offer a service to its clients. In any CA arrangement, the BHO must obtain written agreement to store and ship an exporter's cargo. If a written agreement does not exist between the exporter/broker and the BHO, then the grain will have to be inspected by the traditional AQIS inspection. In addition, some exporters may need to be linked with the BHOs system, since they may perform control elements that are critical to the scope of the CA arrangement such as setting receival standards, monitoring grain receivals, investigating market complaints, and preparing export documentation. Smaller brokers and exporters rely on the BHO to do this for them. It is also envisaged that some exporters may want to audit the storage and handling agreements they have written with each BHO. The opportunity exists for exporters to conduct joint audits with AQIS, AQIS auditing the elements of the system relating to the Orders, client auditors examining their own elements. A failure of one of the audits may not necessarily affect the other.

A CA system has the potential to go further back in the grain handling system and identify grain for particular destinations before its arrival at the grain terminal. This prevents contamination in the first instance, as well as providing the same level of confidence attained by traditional inspection systems. CA encourages clients to consolidate in a documentary sense many of the existing procedures into a comprehensive system. Figure 1 shows the controls that have been used in the current system and compares them with the potential controls in a CA system.

CA has been developed by AQIS using elements of the International Organisation for Standardisation standards, namely:

- ISO 9000 series (Quality Systems for Production and Installation)
- ISO 10011 PARTS 1, 2 and 3 (Guidelines for Auditing Quality Systems)

The CA approval process

Clients first prepare manuals that detail their system. These manuals are subject to a comprehensive 'desk audit' that ensures all AQIS legislative and operational requirements are addressed. Clients are then informed if documentation has passed or, if not, what additional information is required before re-examination.

If the manual submitted is judged to satisfy AQIS requirements, a comprehensive 'initial audit' on site is arranged. The focus of this audit is to ensure that the procedures in the manual are in fact in place in the establishment. This audit is conducted in accordance with AQIS procedures (based on ISO 10011) and by experienced auditors.

After approval of the system it is subject to regular auditing by AQIS staff. The frequency of auditing varies with each type of program involved but all are monitored at least twice a year.

Appropriate sanctions are seen by AQIS as a cornerstone in the move away from end point inspection toward CA. In giving exporters more responsibility AQIS has established a

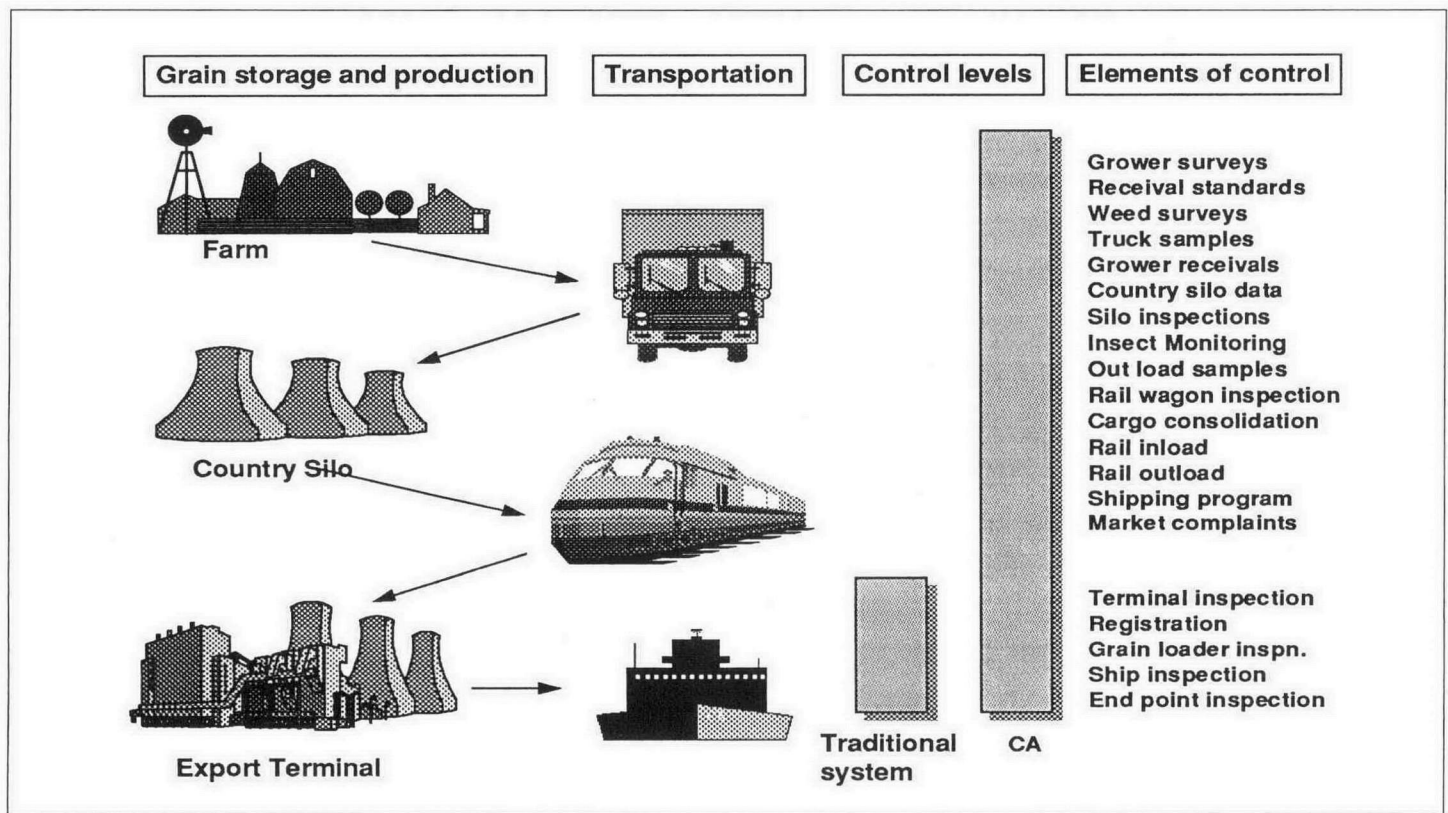


Fig. 1. Control points in traditional end-point inspection of grain versus certification assurance systems.

comprehensive quality assurance sanctions policy. This policy sets a standard approach for the application of sanctions for all commodity areas and for specific actions if any corrective action is required.

The sanctions are under-pinned by legislation and the action taken varies from rejection of specific product to cancellation of export registration and prosecution under the provisions of the *Export Control Act*.

The benefits of CA

AQIS has many clients within the grain and horticultural industries that have entered into CA arrangements. Some BHOs have obtained final approval for their systems while others have QA manuals at various stages of development. Benefits experienced include:

- the exporting organisation's satisfaction with a consistent, accurately described grain;
- a reduction in AQIS charges to exporters;
- reduced risk of AQIS inspectors rejecting grain at the final stage of export, therefore reducing demurrage costs and giving greater flexibility in the distribution and timing of shipments;
- increased competitiveness with other grain handlers;
- greater job satisfaction of terminal workers, with all jobs being well-documented;
- defective product is taken out of the system before further value adding, thereby reducing waste;
- the ability to develop and improve technological advances;
- a marketing advantage.

In the early period of CA development, many AQIS inspection staff were unable to fully accept it as an alternative because it was seen as an erosion of previously held standards and a loss of control. With time and retraining, AQIS inspection staff have now realised that their changed duties as auditors have given them greater job satisfaction and the ability to work with clients. This will be the focus for AQIS in the future.

Quality assurance systems allow greater flexibility in the use of controlled atmosphere storage, fumigation, and testing of alternative treatments, and could be used to enhance control of pesticide residues. They will help the BHOs to meet the nil tolerance for insects more effectively.

International Standards

As Australian agriculture moves beyond its largely 'production-oriented' past and focuses more on market requirements, there will be financial incentives to continually improve standards of export inspection and certification, so as to maintain a competitive edge in the world market. An increasingly sophisticated market will demand improvements, and quality assurance schemes, down the supply-line to the growing crop, will make them possible.

Exporters may, if they wish, expand their quality system to comply with the standards of the International Organisation for Standardisation for quality management systems — the ISO 9000 series — since CA is based on these. This may assist in gaining greater international recognition of the quality of Australian grain.