QUARANTINE - A CLIENT ORIENTED APPROACH

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ABSTRACT

The common practice with the international movement of plant produce is for certifying officials to determine what the pests of quarantine concern should be for the importing country and certify produce for export accordingly. It is anticipated that with the successful conclusion of the Uruguay GATT Round, importing countries may attempt to use quarantine as a technical barrier to trade and so in order to prevent this, a series of rules have been developed (FAO Guidelines) for importing countries to adhere to. Such rules would require the importing country to determine which pests associated with the produce would be of quarantine concern and justify any phytosanitary measures required. This implies that the exporting country needs to develop communication systems to ascertain what these pests are and develop systems to ensure that the exported produce meets the importing requirements. It is recognised that importing countries have a choice of suppliers and all things being equal, the supply country that can most effectively and efficiently meet the needs of the buyer should capture the ongoing market. Quality assurance systems are seen as a tool whereby produce can be prepared to meet the stated plant quarantine requirements of the importing country. Such systems should start in the field and involve producers, packers, exporters and government officials.

***Key words**: Quarantine pest, pest risk analysis, export certification, import inspection, quality control, quality assurance, standards.*

INTRODUCTION

The traditional approach to international quarantine has tended to be that of the exporting country "guessing" what pests associated with an export product would be of concern to the importing country and certifying freedom from these accordingly. Improved international phytosanitary communication and the concern of the Uruguay GATT Round of phytosanitary measures becoming non tariff barriers have led to the development of international phytosanitary guidelines. Essentially such guidelines are developed to ensure that quarantine is not used as a barrier to trade and that any measures required by an importing country are technically justified. This means that the quarantine requirements of an importing country will become more transparent and enable exporting countries to match their products to both consumer and quarantine requirements. Hence quarantine authorities will be able to become "market oriented" ensuring that exported produce meets the (phytosanitary) needs of their "clients" (import officials).

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CONCEPT OF MARKETING

The modern concept of marketing, whether it be domestic, industrial, international or whatever, is:

"satisfaction of a consumer need at a profit".

It is generally recognised that in a competitive market, being customer orientated increases an organisation's (or country's) chance of success. Market (customer) orientation, requires the identification of a particular market segment and its associated needs and the production of a service/product that can satisfy these at a profit. The service/product must not be the end in itself, but rather the "means to the end", which should be a satisfied customer who pays accordingly and places a repeat order.

Too often in marketing, the needs of the targeted market segment are not adequately identified and suppliers "push" products/services onto the market in the form that they believe the customer should have. In the case of horticultural products it is important that the purpose of the product be understood and production and distribution planned accordingly. A classic case study to demonstrate

this is the situation of New Zealand kiwifruit. In the early to mid 1980's, the New Zealand kiwifruit industry was a phenomenon and held up to be the marketing example for the world. Nothing could go wrong and no-one could get enough of the unique hairy berry that the whole world wanted to consume. A decade later, the situation is now, that producers are getting approximately one quarter of the '80's income per tray and with hind sight the reason for this is rather obvious. Kiwifruit in itself is not exceptional as a fruit and in fact is not really a preferred fruit (compared with bananas, oranges, grapes, nectarines, etc). The phenomenon of kiwifruit was that there was a market segment containing consumers with a need for something exotic, different and unusual and kiwifruit was a means of satisfying that need. In other words kiwifruit was the means to an end and kiwifruit was consumed for "ego gratification" rather than as a means of satisfying hunger. Because of the high price associated with satisfying this need, increased production resulted (both within and outside New Zealand) with the result that this segment became saturated. The resultant price decrease meant that the fruit was available to the "supermarket" segment and kiwifruit lost its mystique. It is now another commodity fruit competing with apples, oranges, bananas, etc and no amount of promotion will ever return it to its former glory. It should now be recognised for what it is, i.e. a commodity fruit, and packaged and distributed accordingly with the associated price expectations. Many other parallel examples can be given, one from the cut flower industry being cymbidium orchids. This was once considered to be the diamond of flowers, but the fact that you can now buy these in the supermarket by the stem has somewhat lessened its appeal.

RELATIONSHIP BETWEEN MARKETING, QUALITY CONTROL AND QUARANTINE

I appreciate that discussing marketing may at first glance seem rather unusual for a subject entitled quarantine and quality control services in the Pacific. However, the marketing concept is so closely related to that of quality control and quarantine that if a market oriented approach is taken, i.e. identifying the quarantine officials of the importing country as your customer and satisfying their needs, the chance of ongoing success will be enhanced. Essentially quarantine is about communication between importing (consumer) and exporting (supplier) countries. The quarantine needs of the importing country must be determined and this is generally that produce shipped to it by a supplier must be free from pests of quarantine concern (note that in some instances the "need" for quarantine may be to act as a means of preventing entry and hence competition to domestic producers! More of that later.). This requires then, that the supplier undertake "market research" to ascertain which pests are of quarantine concern to the importing country and develop the appropriate quality control systems to ensure that these are not "exported".

QUARANTINE AND INTERNATIONAL TRADE

It is recognised that following the successful conclusion to the GATT Uruguay Round, there may be a temptation, as mentioned above, for importing countries to use quarantine as a substitution for quotas, tariffs, prohibitions, subsidies etc. Consequently there is a strong movement worldwide to ensure that all quarantine measures required by an importing country are technically justified and to support this, a special Agreement has been formulated under the GATT for the application of sanitary and phytosanitary measures. This Agreement outlines a set of "rules" that need to be considered when a country is developing quarantine specifications.

The general procedure (phytosanitary) for plant produce moving in international trade is that the importing country categorises for the exporting country, the organisms that may be associated with the product (pathway) into quarantine (actionable) and non quarantine (non-actionable) pests.

A quarantine pest is defined by the International Plant Protection Convention (IPPC) as being:

> "a pest of potential national economic importance to the country endangered thereby and not yet present there or present but not widely distributed and being actively controlled".

This categorisation becomes the specification to be met by the supply country and such information should be relayed by the quarantine authorities to the exporters and producers of the product. It is then the responsibility of the producers to ensure that the produce is produced in accordance with the wishes of the importing quarantine officials. Produce that does not meet the requirements of the importing country is generally treated on arrival

which adds to the cost of production and either makes the product more expensive to the consumer or less profitable to the supplier. As well, there is the inconvenience of having the product held up and not available for immediate distribution. If the importer has a choice of suppliers, then logic dictates that all things being equal, he will give the repeat purchase orders to that supplier whose product causes the least problems on arrival, i.e. the product that satisfies the needs of the importing quarantine officials.

As quarantine is chiefly concerned with stopping the flow of quarantine pests from one country to another, it is important that both countries are aware of what organisms infest/infect products in their respective countries so that accurate information is available and appropriate categorisation undertaken. In order that both countries are aware of the integrity of the pest lists, some form of surveillance standard (preferably international) is required against which systems can be developed and implemented. This would require services being available that could accurately detect and identify any pests of concern associated with a product.

REQUIREMENTS OF A QUARANTINE SERVICE

Essentially, the above implies that the key requirements of a quarantine service, regardless of where it is in the world, include:

- Communication

  Communication channels established between the two control organisations that will enable free information flow (eg. organisms present on produce, import regulations, etc).

- Surveillance

  Knowledge of what organisms are present on what crops in a particular country (can be determined by planned surveys, insect traps, general ongoing identifications by scientists and field workers, etc)

- Pest Risk Analysis

  A documented procedure in place that enables organisms associated with a product to be categorised into quarantine (action) and non-quarantine (no action).

- Training - Inspection

  Inspectors (both import and export) trained to recognise pests of concern to the importing country.

- Export Certification

  Procedures in place to ensure that exported produce is inspected in the appropriate manner (eg. sample size, probability of tolerances not being exceeded) so that it satisfies the tolerance levels set by the importing country.

- Import Inspection

  Procedures that would mirror those for export certification. That is, produce sampled at the appropriate rate to ensure the supply country is meeting the import specifications.

- Legislation

  The necessary powers to enable the inspectors to take any appropriate quarantine action (eg. refusal to certify export produce or the requirement to treat imported produce).

QUARANTINE AND QUALITY CONTROL

As far as phytosanitary quality control is concerned, from an export point of view the final responsibility is that of the certifying organisation. The certifying officials need to know what to inspect for (i.e. take action against) to enable phytosanitary certification and exporters and producers in turn need to know what to check for during packing and what activities need to be undertaken in the field. In other words, quality control should commence at the very start of the operation and proceed throughout with feedback to the previous sector from the following one. If this procedure is followed, then any mistakes that occur can be corrected as soon as possible within the system and the consequences minimised. It makes a great deal of sense to identify a pest problem in the field and fix it then, rather than have the produce harvested, packed and presented for inspection at the export border, only to have it rejected certification with the consequences of having to then sell it on the domestic market at a lesser price.

The International Organisation for Standardisation (ISO) defines quality as:

> "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs".

Quality control is defined as:

> "the operational techniques and activities that are used to fulfil the requirements for quality".

You will note the very close similarity between the definition of quality and the one given earlier for marketing. As far as quarantine is concerned, the stated or implied needs in the definition of quality, are those of the inspector at the importing border.

QUARANTINE AND QUALITY ASSURANCE

Depending on the consequences of market failure, it is often appropriate to apply energy within the production system to reduce the chances of this. In other words it may be necessary to identify those areas in the production pathway where faults could develop and develop control measures to ensure this does not happen. Essentially this is a hazard analysis critical control pathway (HACCP) and as such should be documented as part of a quality manual. Documentation would enable those involved (i.e. producers, graders, packers, cool store operators, exporters, inspectors and transporters) to be aware of the duties expected of them and the activities required to maintain the correct condition of the product. If such an approach is to be followed, it requires a degree of organisation and should be coordinated by one sector of the distribution channel. Generally this is the exporter as they are responsible for ensuring the market/customer requirements (i.e. grade) are also known and met. If the exporter happens to also be the producer, this is relatively straight forward. But when there is more than one pack house/supplier it is important that the grade specifications from the exporter are documented and available to suppliers.

It is appreciated that the exporter may not necessarily know how to most effectively and efficiently produce products to meet the grade and phytosanitary specifications and so this is often the role of the extension service of the local Ministry of Agriculture (if such a service exists - in New Zealand it does not) and/or commercial consultants. Advice as to the most appropriate production system can be given and producers, graders and packers monitored to ensure they are undertaking their roles in an appropriate manner.

It is recognised that if all the critical inputs to a process are identified and appropriate controls applied, the end product will very likely satisfy the specifications of the customer. This then means, that rather than inspect produce at the point of export (which may often be too late), energy may be more profitably expended by continually monitoring the whole system to ensure that the particular operations are carried out correctly and hence reduce the likelihood of failure. This is the concept of quality assurance which is:

> "all those planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality".

ACCOUNTABILITY FOR EXPORT CERTIFICATION

Although the exporter may be responsible for ensuring the product that he presents for certification meets the importing country's phytosanitary requirements, as mentioned earlier, the final responsibility is still with the export certification officer. The "rules" that the certification officer must work to are those based on international conventions, guidelines and principles as once the produce leaves the country, it is no longer under their jurisdiction. Hence, any national rules imposed on exports no longer apply after export certification, unless of course they are there to support the international rules developed by FAO and GATT (assuming of course that these are the rules to which the importing country works to). Under these circumstances, the actual "department" that controls the export certification should not be of primary concern as long as the importing country has confidence in the export system and is able to hold someone accountable should failure occur. In most cases however, there tends to be a very strong desire by an importing country to be able to hold the government of the exporting country accountable for certification failure and hence require that the persons responsible for export certification belong to a government department. There should be no reason however, why a government department could not delegate the export certification activities to a third party as long as it is understood that they would still be accountable for any systems failure (this would obviously require the gov-

ernment department to approve/accredit the system employed by the certifying party and undertake appropriate audits).

SEPARATION OF DEVELOPMENT OF STANDARDS AND DELIVERY OF SYSTEMS

From an organisational point of view, it is useful that the officials responsible for setting the export standards (i.e. ascertaining the importing country's quarantine requirements and the standards which the system must meet to enable certification) are separated from those that develop and deliver the actual systems. This focuses accountability to where it should be and readily enables a second body to be involved (if appropriate) with the development and delivery of the export systems. As mentioned above, the systems would need formal approval which would transfer accountability to those with the overall responsibility for export certification. The control authority would then need to audit the systems to ensure compliance with the agreed accredited system to enable certification.

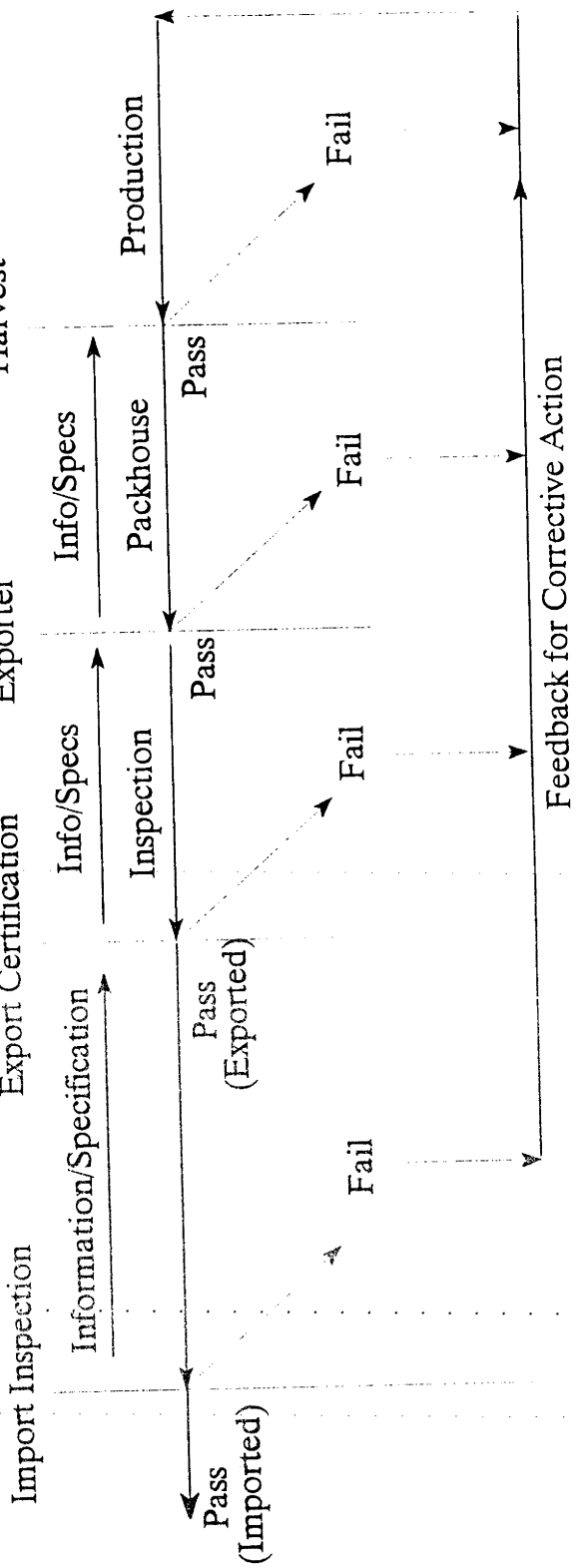
Regardless of who undertakes the certification activities, whether these be at the point of export or as a result of auditing quality assurance systems, two important points remain. These are that:

i) it is the importing country that determines what phytosanitary and grade standards must be met; and

ii) there must be ultimate accountability within a system and with government certification this is generally the responsibility of a government department (even though services may be undertaken on their behalf).

Some of the ideas discussed above are further elaborated in Figures 1-4.

Figure 1.


QUALITY SYSTEM FOR EXPORT PRODUCE
Import Inspection
Export Certification
Exporter
Harvest
Information/Specification
Info/Specs
Inspection
Info/Specs
Packhouse
Production
Pass
(Imported)
Pass
(Exported)
Pass
Pass
Fail
Fail
Fail
Fail
Feedback for Corrective Action
11 March 1994

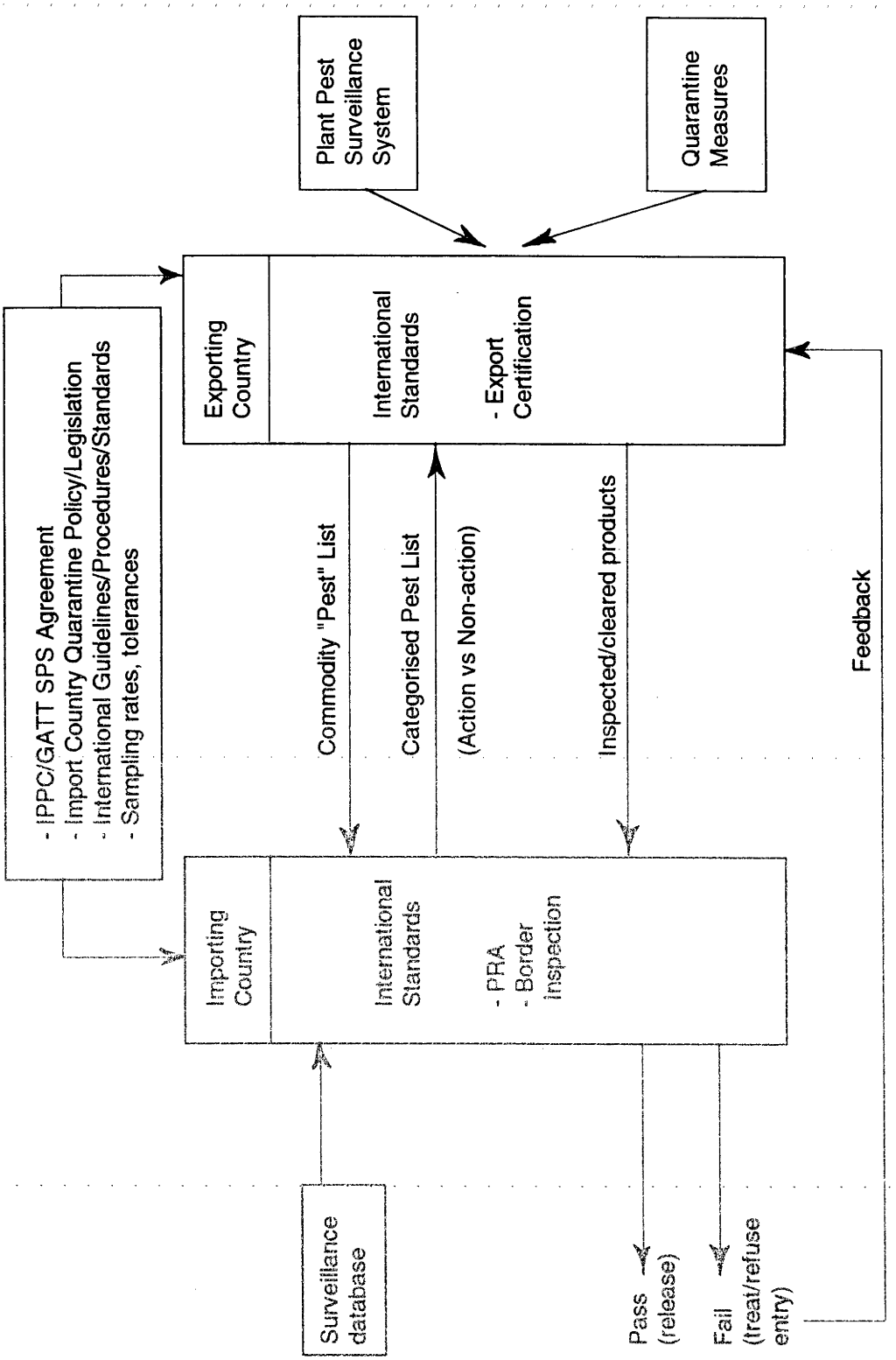


Figure 2. **Phytosanitary Proceduresfor Plant Produce Moving in International Trade**

Figure 3. **AUDIT PYRAMID**

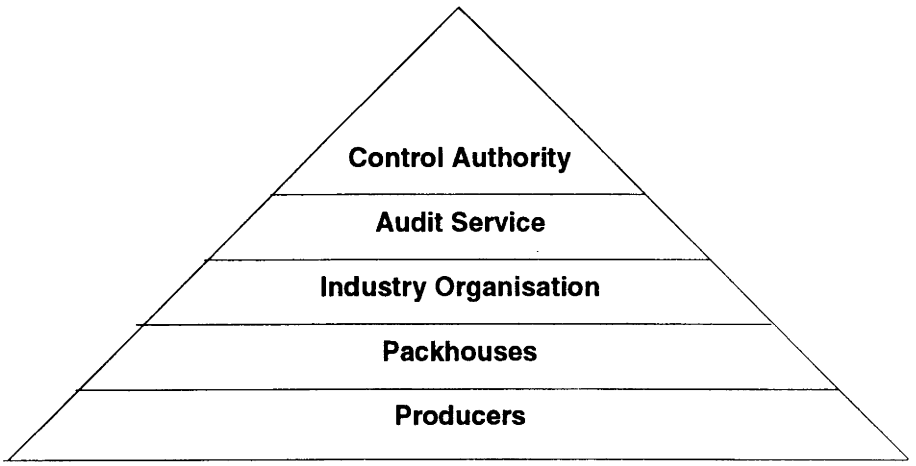


Figure 4. **Control Authority**