

The role of non-traditional crops in New Zealand

Robert Coulson

Seedbank New Zealand Ltd., PO Box 1054, Palmerston North.

Abstract

Many crops termed 'non-traditional' are already successfully grown in New Zealand each year under normal commercial conditions, the end product being for either domestic or export use. However, often the connotation of 'non-traditional' prevents the scientist, grower or marketer from making a prudent commercial decision. It is essential that the market be first established and tested before commercial production begins. A crop should also not be termed 'non-traditional' simply because of its area or volume of production. Another potential problem is that often the value set by the scientist and grower for a 'non-traditional' crop is too high at the breeding and growing end to enable successful marketing. A joint approach must be taken.

Introduction

In looking at the role of non traditional crops in New Zealand, it is sometimes difficult to identify from my perspective as a marketer and processor which crops are in fact non-traditional. Some are obvious, such as buckwheat, amaranthus and quinoa, but there are others that have areas of specialisation within their generic group, such as wheat, barley and maize. This may be of some surprise, but the advent of colours in grain for example, opens up a whole new field for the food manufacturer to promote a new product. One of the more successful crops in this area has been purple wheat, which we now commonly eat in our bread, and more lately in cereal snacks.

Difficulties

There are many difficulties in establishing crops in New Zealand, whether these crops are seen as non traditional or not. These difficulties can occur in several areas:

1. Confidentiality

How many crops and technologies exist and would be successful, if they were not tied into confidentiality agreements that are still in force but for which the project has been discontinued? I'm not for one minute suggesting that such agreements should not be in place, but science institutions have, I believe, an obligation to protect the use of their technologies if a project is discontinued because the product is considered a threat to a more profitable line, or there has been a change in position by the client.

2. Expectation

This is an age old problem where the scientist believes he or she is onto a winner, potentially attracting large funding and royalty payments, and therefore may tend to keep the core technology secret. The grower wants prices that are high because of the risk, and the price seen being paid by the consumer, plus the cost of equipment required to tend the crop. The marketer has a problem convincing the others that the costs involved in getting the project going versus the margin return are too slim, and that a consistent and reliable supply must be guaranteed.

All of these comments I have just made are individually often true, but what is required is a joint approach to the project from the outset. By having a team approach which must be lead from the market end, these issues can be resolved, if not, the project viability must be questioned.

3. Infrastructural development

This problem stems from crops being developed where there is little or no equipment to handle the growing and post harvest processing of the crop.

Crops have in the past been grown in New Zealand and met all the requirements of yield and quality, yet because of this issue, they fail (eg., rice and peanuts). It is necessary to make sure that either existing equipment will meet the needs of the grower and processor, or that equipment can be easily adapted.

4. Marketing

This area is often left to the last, once the crop has been produced. It is very difficult to sell a crop on this basis, as the requirements for quality etc., generally differ

from what has been produced, and the cost of reprocessing is often prohibitive and detrimental to portraying a professional approach. First impressions often count most.

I believe a fresh approach needs to be taken toward the role of non-traditional crops, from scientist through to processor as they indeed fill a much needed market within the total industry. Once that market requirement is met, non traditional crops become main stream products, and are grown on the same basis as any other crop in the New Zealand market.

By taking a joint approach, problem solving improves, as does communication. It can be clearly seen that the "pot of gold" doesn't exist at one end of the equation. Crops can be quickly assessed for their viability in the market place, and the lead times for establishing and improving cultivars can be quickened.

The Market

Often there is only a relatively short window into which to introduce new concepts into the market, as the life cycle of a product is normally defined. It is very important that we introduce crops before or at the peak of their use, not on the decline; therefore the pressure on the group to perfect the system can be intense. It will often be necessary to introduce cultivars that may not necessarily be the 100% option, but if we have the confidence that better cultivars are just around the corner then these introductions will be necessary.

In assessing a new crop that replaces an import, we also need to look to see if it is the same as the product we may be substituting. It may be the same by name, but the sensory evaluation and the traditional growing areas may make it inferior. This can be seen with Dhal, in a comparison between Malawi Toover and Indian Toover. Both are a split pigeon pea, but one commands a 30% premium on price. The same is true for red split lentils coming from Nepal compared with the locally produced product. It is therefore important to realise that the price we see for the product in the Supermarket or Ethnic Food Store may be carrying this type of premium; this will inevitably send confusing signals back into the supply chain if this point is not clearly understood.

There are also avenues of the industry that many have tended not to explore. It is interesting to observe the changing trends in the New Zealand market and the consumer's move towards healthy eating. The different

ethnic communities are now very much a part of New Zealand, and this fact must be recognised. Many of these communities require foods that fall very much into the pulse and grain market. Often the products have unusual names; this is important to note, as the buyer may not know what pigeon pea is, but know exactly what Toover Dhal is. Understanding the dynamics of the market, and the client, is very important.

The food industry is by far the biggest user of these food groups that I have been describing. It is an industry that requires innovation within it to maintain the interest of its customers, **us**, the consumer. For a crop to be commercially accepted it must be able to be demonstrated that the product is of good quality and of consistent supply. It is therefore important for the scientist, grower and marketer involved to have all the problems identified and solutions in place. This means, especially for the scientists, (often the plant breeder), that a wider range of expertise may be required, i.e., the involvement of a weed scientist and fertiliser expert to give a total crop management program with the release of the cultivar. Unfortunately the world is not quite a perfect place, and so we must be able to adapt to situations that will arise, not just due to unforeseen problems with the crop, but perhaps because the client has had a mind change or modified a process.

There is an increasing trend in the food industry to companies becoming more aware of the quality parameters of raw materials, particularly as competition in many areas increases. It is necessary for us as marketers and initial processors to have the relevant information available to advise the customer if they experience difficulties. Therefore we need to understand the process being used by our client as well as the crop being used.

To look at all the crops that have a potential to be grown in New Zealand and confidently make predictions is not possible. However the dollar value is high for some of the main ones including snack wheats, coloured grains, processed lentils, corn varieties, buckwheat, adzuki beans, navy beans, spices and medicinal herbs. I conservatively estimate that the value of these crops is between \$10-20 million.

It is important that if we are to realise this value, we form a team approach to new crop development, that the total industry must be prepared to fund the initial research, and that the real gains for all are the realisation of a new crop on the market.