

New Zealand wheat growing : an international perspective

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Introduction

On behalf of the New Zealand Flourmillers Association, thank you for the opportunity to contribute. It is particularly important that the milling and wheat growing industries continue to improve the close relationship to guarantee success for the wheat growing industry. Since 1987 the wheat growing, milling and baking industries have certainly challenged many new boundaries in the production, management and marketing of their products.

Growers have adopted the free market concept and provide to millers' specification. Millers have rationalised, and expanded product range and services to customers' specification, and Bakers have meet the challenges of their market place.

"The New Zealand baking industry is very 'technologically aware'. The spin-off of past research is that skills and knowledge built up in the manufacture of high quality bread are now being shifted into other baked good areas. Exports of 'fine bakers' wares' are increasing rapidly at around 30% per annum since 1988 and the total value in 1991 was \$9.8m.

The range of ports used to export the goods indicates that emerging small business are joining established food processors in entering this value added activity."

- from 1992 Report of R. & D. Output Class 13

Each can be proud of the success in reducing costs and improvements in quality and consistency. Each too faces tremendous competition in gaining desired prices for their products and growth in market volumes.

The paper will discuss, New Zealand wheat growing: an international perspective, in three main areas:

1. comparative advantages of New Zealand versus overseas supplies;
2. consumer specifications and implication to growers; and

3. issues of price, quality, uniformity and stability of supply.

Finally, some opportunities/challenges are presented to the production sector of the wheat industry as we look towards the year 2000.

New Zealand vs. Overseas Supplies

In terms of numbers of advantages, there is favour toward overseas supplies, but in terms of importance to New Zealand and New Zealand millers, the contest levels out.

Industry support

New Zealand growers and their support industries, i.e., breeders, are directly available, able to listen, participate and hopefully understand the needs of the New Zealand milling industry. With off-shore purchases it is usual to purchase through a broker or agent, therefore the ability to influence medium to long term needs will be more difficult.

New Zealand's volume

New Zealand can produce very good wheats and probably equals international harvests in terms of percentage of crop which is high class for our needs; it is just that New Zealand has insufficient production volume, i.e., Australia can produce 15 million tonnes, have a 10% "New Zealand need" success and be able to supply the milling needs of Australasia. New Zealand's 180 000 tonnes total crop at 10% high class wheat does not satisfy half of the South Island needs. Can New Zealand growers grow more wheat "free" and dispose of what New Zealand does not use?

Begin locally

Having wheat grown in New Zealand is important to the New Zealand miller in terms of raw material supply costs. Maintaining a wheat growing industry in New Zealand should ensure that a milling industry in New Zealand can be sustained on an internationally competitive basis.

If New Zealand lost its wheat growing industry the off-shore suppliers may see the opportunity to increase prices of wheat offered to New Zealand. But in saying that, the competition is strong with many sellers keen to include New Zealand miller in their customer numbers.

Fixed price contracts

New Zealand growers favour a fixed price offer for contracting grain. Most millers are conversant with moving prices and the floating New Zealand dollar, as many are importing grain from off-shore. Any fixed price offered up to 18 months in advance is going to err on the side of downsizing risk. Millers have a lot to lose if the New Zealand dollar and world price allows competitors to source wheat at a lesser price. No miller could afford a year of high costs nor afford to give competitors the opportunity to set up the infra-structure for importing of flour.

Growers have an opportunity to achieve world prices for their grain if they are prepared to accept a floating price. I qualify world parity by assuming quality and transport to be equal.

Fixed prices contracts have one winner and one loser.

Importing wheat

Millers purchasing wheat from off-shore have many opportunities to vary quantities and qualities throughout the year. Normally discussion is held once annually where indications of needs are given. From that point, price, New Zealand dollar value, stock levels, flour sales, customer needs are all considered before shipments are ordered.

Purchasing grain internationally is definitely more risky but is very manageable and not labour intensive.

Soft, semi-hard (biscuit) wheats

New Zealand does have soft and semi-hard wheats, i.e., Bounty, Karamu, Brock, Galahad, etc., which are or have proven to meet the needs of the New Zealand biscuit manufacturer. Unfortunately, the tonnage needs are not a large percentage of the crop and now that millers are not all buying such wheats to seek the same market, the tonnages today are probably a good indication of the market size. Growers must become or remain aware of such markets. They have a quality difference to offer and the biscuit market in New Zealand is seeing more and more biscuits manufactured off-shore, filling space on our supermarket shelves. Could this mean New Zealand biscuit eaters will become accustomed to the bite, mouth feel and product eaten in other countries? What will happen to the requirement for the different New Zealand biscuit wheats?

Implication of Consumer Specifications

It is not just New Zealand; the world has changed. End users are more specific, more demanding. End user markets are more competitive, therefore, specifications are tighter. They expect more but do not want to pay more. A wider range of products is demanded and the lead time to supply is getting shorter.

Planning time

From a miller/grower relationship that means less time to plan. Millers need to be very flexible and capable of securing raw materials as and when the new need arises. It is not possible to predict all the changes. Millers may not have the appropriate wheats contracted; it is important millers have access to other than contracted wheats. If they are not available in New Zealand then a potential sale to New Zealand growers is lost. If good wheat is grown, there will be a market. Having a larger crop to choose from will also reduce the problems caused by seasonal variations.

Being different

It is the individual customers prerogative to be different. Some customers require/demand different specifications, i.e., some bakeries want low work inputs because their plant cannot cope with the consequences of high work inputs while others who make similar products do not mind or are able to cope.

Low work input is not consistent with what we currently know of stronger wheats. The greater demand for higher bake scores and protein contents, the higher the work input will be. If the customer continues to demand higher bake scores and also lower work inputs, then millers will have great difficulty in sourcing the correct wheats. Is there a potential for New Zealand to grow strong, low input wheats?

There is the opportunity to add dough relaxants to the flour but adding any ingredient to a recipe is not the correct way these days. The more pure we can keep the product the better.

Some millers choose to buy wheat on protein, others on bake score, perhaps because flours are ordered by the end user on the different parameters.

Many customers are baking what we might say is the same produce, but use very different types of flour. Some responses could be:

- Machinery could be different in design or age
- That is the way that have always done it
- We want to be different to the competitor down the road
- My staff are not so qualified or

- I am prepared to pay for the tolerance.

The reasons are many but the buyer must have the prerogative.

Issues of Supply and Demand

Included in any purchase decision regardless of the industry is the evaluation of difference between supply alternatives. With wheat it can be:

- Red versus white
- New Zealand versus off-shore
- Soft versus hard
- Small grain versus large grain
- Fixed price versus floating
- Container load versus ship load
- Low moisture versus high moisture
- Contract versus free
- NZ\$ versus US\$
- Exposed versus hedges/covered
- 18 months plan versus 3 months plan

Debate over price due mainly to the need for millers to remain competitive. In New Zealand there could be several definitions placed on the term "**competitive**".

- Domestic price of flour versus imported price
- New Zealand co-operatively owned flourmills versus internationally owned flourmills
- Return for wheat crop versus return on investment for internationally recognised cost of milling asset
- Investment in milling versus investment in another industry
- Millers serious about Research and Development and developing people versus miller just milling.

Quality

In terms of quality, I reiterate that New Zealand grows good wheats. It is the need for millers to provide consistency over a full year which creates the challenges. Put simply, if New Zealand millers relied on New Zealand wheats only and set the grist in February each year, that same grist would need to be sustained in order that the end user got proper consistency. This means that individual growers could not expect their wheat to be sold at a certain time of the year. Theoretically, it means delivery over the year. International marketers of grain can set aside future purchases if requested. Could the New Zealand grower offer the same?

Blending. New Zealand millers have established consolidation points, either stand alone or at mills, in order to handle New Zealand wheats. Each miller has

personnel whose responsibility it is to manage New Zealand wheat lines. This is necessary to maximise the use of New Zealand wheat by eliminating as much inconsistency as possible such as occurs when many smaller lines are bought into the mill direct.

Machinery technology. End user processes are becoming increasingly sophisticated; higher volume throughput, faster handling of raw materials, less people, computer controlled. The more computers become involved, the higher the volume throughput increases and the greater the demand will be for consistency of raw material. Computers do not have (yet) the ability to feel the dough, look for the tell-tale signs of under-development or over-development, so the raw materials must be consistent, i.e., the same each day. The pressure for greater consistency can only increase.

End user skills. The largest growing segment of the bread market is in-store bakery type facilities. Baker skills in that area tend toward the use of the bakery-mix product. Once again, consistency is the key. Bakery-mix requires only the addition of water and yeast. Volumes for each are pre-determined. It is not normal for staff who use Bakery-mixes to have the skills to alter any parameter of the recipe.

Price

Wheat price to the miller includes all costs of buying, handling, milling and end user satisfaction.

Buying. Consolidation of wheat in New Zealand has a high capital investment and expense cost to both growers and millers. Growers have investment in on-farm storage while millers have investments in consolidation points, buying and handling personnel and administration of the systems. Buying New Zealand wheat on fixed contract requires 18 months planning time versus as little as three months for purchases from off-shore.

Handling. The same could be said for the handling of grain except that New Zealand growers still receive recompense in the form of "storage increment" for cost of holding grain. Such costs are not incurred by the miller when purchasing from off-shore.

Red wheat versus white wheat. Red wheat bran specks are more visible in a finished flour than white wheat bran specks. White wheats therefore allow the miller to raise the extraction rate of flour from each grain.

If wheat costs \$250 per tonne, each 1% extraction equates to \$4.06 per tonne.

Moisture content. Moisture content effects price in two ways. Firstly by effecting the ability of the miller to add water. In preparing wheat for milling it is necessary to add water. Each 1% of water added at \$250 wheat price equates to \$2.87. Secondly, wheat of lower moisture has a greater test weight (density). Depending on how a miller buys wheat the same unit can hold a greater tonnage of lower moisture wheat. A 1% change in moisture allows between 0.7 and 1.6% increased capacity in shipping terms, depending on the wheat type.

Research and Development. Millers and growers contribute quite substantially to Research and Development through the Research levy and individual company contribution. There would not be too many industries who invest such a percentage of their supply cost in raw material to research and development. It is probably more normal for an industry to invest in the product they sell.

Costs of Research and Development of wheat purchased from off-shore is included in the price paid.

Uniformity

It has been said elsewhere in this paper. Customers are demanding tighter and tighter quality parameters, machinery is requiring consistent raw materials and millers each year will still need wheat regardless of whether the grower decides to grow oats or go back to mutton. Millers require consistent raw materials every year not just each year, because the end user wants the same product every delivery, every year.

Included under uniformity is the need for International Standards Organisation (ISO) accreditation to be recognised as a supplier of consistent product. The future, I believe, will demand that certified seed is used for crop, to ensure strains remain as pure as possible and product from season to season is given the opportunity to be the same. Millers will encourage such moves.

Stability of supply

It is important for uniformity and stability of supply that a stable New Zealand wheat volume is available if it is to be included in a millers planning schedule. What is that volume? If millers get an export order will there be wheat available? Export orders normally have a two month odd limit for delivery; contracting therefore is out of the question. How can the growers help with this opportunity?

A market instance could be: A large user of flour puts their company needs up for tender once annually. In the first two years of deregulation at least three millers would have each contracted sufficient wheat to supply

the user. Obviously the equivalent of two millers were left with a lot of wheat. No only is this costly, but it also disrupts the wheat planning needs for growers in the following seasons. Stability is not possible.

The current system of millers buying wheat in New Zealand does not provide for mills to use New Zealand wheats if they are successful in annual tenders or new markets. Believe me, if millers need wheat they will get it, from somewhere. Are the New Zealand growers able to capitalise in this area?

Short term market view. Wheat prices have moved lower from the early February highs, as the potential for significant production losses in the northern hemisphere winter wheat crops has declined. The high price levels saw an easing of demand as a season progressed (particularly from China), which also dampened prices in late 1991/92. The market is now focusing on the 1992/93 season, with the current prospects being for an increase in exporter availability, in the face of declining demand from major importers.

The USDA is currently forecasting 1992/93 world wheat production at 548.6 million tonnes (mmt), versus 541.6 mmt in 1991/92. Although this increase is not substantial, it is more than accounted for by increased production amongst the five major exporters (of 10.5 mmt to 206.2 mmt). Global consumption is expected to decline slightly, by 4.4 mmt to 550.2 mmt, which will result in a small reduction in carry-over stocks. However, stock levels amongst the major exporters are expected to increase by around 4 mmt - this will be largely in the EC.

Assuming the major winter crops reach their current production potential and average yields are achieved in spring wheat and summer crops, wheat prices are expected to continue their downward movement into the second half of 1992.

Key Supply/Demand Factors for 1992/93 are:

- Higher US spring wheat plantings and lower abandonment in winter wheat regions (higher harvested acres) will lead to a larger US crop. This will result in a small rebuilding in US stocks. Whilst the US has experienced some yield losses as a result of frost damage and dryness in late April/early May, the overall condition of the crop has been fair to good, without substantial problems occurring through the season.
- The potential for US stocks to increase is relatively small assuming normal conditions and eventual demand - it will not take much to see US stocks decline further this year. The development of problems in the US spring wheat crop or in the corn

crop (subsequently increasing wheat feeding) would see US stock contract from their already extremely tight level.

- Slightly higher wheat sowings in Canada (+4%) and EC (+1%) combined with the increased carry-over stocks from 1991/92, will lead to large export availabilities from both origins. Production in both the EC and Canada is expected to decline slightly from 1991/92 levels assuming yields return to normal levels (from the high yields of last year).
- Production in Argentina and Australia will increase. Plantings in Argentina are expected to increase by 6-10%, while Australia acreage is expected to increase by 20-30%. Normal conditions in Australia will see yields rebound from the drought reduced levels of 1991/92.
- Minor exporters (Turkey, Saudi Arabia, etc.) will continue to have exportable surpluses above historical norms.
- Higher planted acreage (+10%) and normal growing conditions should result in an increase in grain production in the CIS. Current USDA forecasts for the former USSR production are low at 85 mmt, and the eventual production may be much larger. Higher internal prices may also discourage waste. These factors combined with continued cash flow problems are likely to result in sharply lower wheat imports in the Baltics and CIS.
- Chinese wheat acreage has increased by around 10%. Timely rains have arrived in the PRC in early May and are likely to assure close to average wheat yields, despite prolonged dryness through winter and early spring. Imports are likely to fall sharply from 1991/92 levels which increased to compensate for losses due to flooding.
- Possible bright spots for increased imports around the world appear few at present. Drought through most Africa is likely to increase import requirements by 3-4 million tonnes. However, at present this is the only region which appears likely to significantly increase wheat imports.
- Overall, it appears that a slow-down in trade in 1992/93 will lead to stock building amongst the exporters, which will pressure wheat prices through the season.

Wheat price outlook. Despite the generally negative outlook for the world wheat market, US wheat prices are not expected to weaken significantly from current levels, due to the historically low level of US stocks. The development of problems in the US/Canadian spring wheat or corn crops still has the potential to cause prices

to move substantially higher - in terms of both commercial and subsidised prices.

The outlook for world (subsidised) values is potentially more bearish than the US outlook. New crop prices (basis EC) are already close to US\$110 per tonne, and are expected to further decline once new crop supplies become available. This year all exporters are likely to have availabilities greater than 1991/92 and will be competing for slices of a smaller export market.

Prices are expected to work higher in late 1992, as the market moves out of the seasonal harvest lows, and as the market begins to focus on the 1993/94 season.

Long term view. International standards for all aspects of purchase, manufacturing and supply, and free-trade are the issues we should be planning for in our immediate and three to five year reviews.

Mr Peter Davenport, CEO of Standards Association of New Zealand said.

"New Zealand is at the leading edge of free trade standardisation. As one of the most deregulated economies in the world and dependent on international trade, New Zealand has been one of the first to tackle the problems and opportunities for standardisation in a free market. Because we are small, we are at the whims and fancies of larger countries and larger markets. We cannot demand importers meet a unique New Zealand standard because no one would bother to supply our market. Likewise, we cannot tolerate that sort of regionalism in overseas markets which forces our manufacturers to produce to man different standards on requirements."

He went on to say:

"Access to traditional markets has been controlled and limited by quota systems or technical barriers to trade. Technical barriers world-wide are disappearing - successive GATT rounds have eroded the quota system".

I quote Mr Davenport because I believe that quota systems and world subsidies will be eliminated. It could take ten years, but it must happen.

Furthermore, there is a need to understand Globalisation and International Standards, because regardless of what we want for our selfish interests, International trade is very necessary. New Zealand is only big enough on an international basis to be a test market. Substantial growth in our domestic market is not possible, unless our population increases dramatically. Even if we were to invent/create something else which

uses high volumes of wheat or flour, it is not likely that anything could be exclusive to New Zealand for too long. Furthermore, we do not have an advantage in lower price wheat or flour production compared to our international competition.

New Zealand millers must keep an open mind toward off-shore markets, if they wish to increase their competitiveness on a unit/tonnage cost basis. Exports would add the necessary production volume benefits to enable supply off-shore. Export flour could be either raw material or value added.

Globalisation will also provide opportunity for the New Zealand grower. New Zealand must be a very competitive grower of wheat in terms of cost, because growers have already done most of the hard work. Do New Zealand growers know if their production costs are lower than their Northern Hemisphere counterparts? I would be surprised if New Zealand growers were not more cost effective.

Therefore when assistance to international growers is withdrawn, there must be potential for growth in volume terms for both New Zealand and Australia.

Strategic Partnerships. From the millers point of view "being local", parochial and interested were probably the main catalysts for establishing of this document and the continued effort to progress the objectives and actions agreed. But longer term there is a need to ensure we remain competitive internationally if we wish to increase flour milling production in New Zealand. If we are required to import wheats the chances of being internationally competitive with flour or flour products will be much reduced.

Millers can be proud of the efforts they have made in establishing a strategic plan for their raw material needs. Not too many companies include an Industry Plan for their purchases. Normally it is their sales that gets the effort.

The short term gain for the millers is in developing a trust relationship between grower and miller. Longer term it is the wish to compete in the world market. A world market free of support or trade barriers.

Opportunities/Challenges

1. Will our white wheat research succeed? Is everyone thinking of the opportunities when it does?
2. Have growers set a target to supply all of the New Zealand market? Is there a plan?
3. Do breeders know how much New Zealand wheat is to be grown in the year 2000? Are they planning for growth?
4. How much more valued added product can be expected?
5. New Zealand is nuclear free. Can we use it?
6. Can New Zealand be a supplier of pesticide free wheat? Think about it?
7. Do we know what the world price needs to be before we can export wheat?
8. Do we know what is the NZ\$ needs to be before we can export

I guess the challenge to the growing industry is to consider this question: "If you could have it just as you wanted it, how would that be?"

Having considered that, plan for it. But be careful to maintain the "How would you want it" vision and work back. I am sure the milling and baking industry would be only too keen to help and participate.

Editors Note

The author would like it noted that the content of this paper is a personal statement so it may not gain consensus from the entire New Zealand milling industry nor indeed from the G.F.W. Milling Division. However, it will hopefully create some positive thinking for future planning of our industries.