# What are the world grain markets telling us?

**Kooi P.**

*in*

**Morand-Fehr P. (ed.).**
**Feed manufacturing in Southern Europe: New challenges**

**Zaragoza : CIHEAM**
**Cahiers Options Méditerranéennes; n. 26**

**1997**
pages 41-45

# What are the world grain markets telling us?*

P. KOOI
PRESIDENT OF CARGILL INTERNATIONAL SA

**SUMMARY** - Which are the trends in supply and demand? The author explains the world situation in recent years, how people consumed more than what was produced, and the present imbalance between demand and production. He emphasizes the role of China. He describes the need for a radical reconsideration of the Common Agricultural Policy in order to satisfy the new needs for grains, deregulating the markets and following the decisions of private agents, such as the farmers.

**Key words:** World grain, CAP, supply/demand.

***RESUME*** *- "Que nous racontent les marchés mondiaux de céréales?". Quelle est la tendance de l'offre et de la demande. L'auteur explique la situation mondiale pendant les dernières années, comment il a été consommé plus qu'il n'a été produit, et le déséquilibre actuel entre la demande et la production. Il insiste sur le rôle de la Chine. Il présente la nécessité de reconsidérer radicalement la Politique Agricole Commune pour tenir compte des nouveaux besoins en céréales, de déréglementer les marchés et de mener un suivi des décisions des agents privés, tels que les agriculteurs.*

***Mots-clés :*** *Céréales dans le monde, PAC, offre/demande.*

Good morning ladies and gentlemen. Thank you for the opportunity to be here with you today. For the next 20 minutes I will discuss the question, 'What are the grain markets telling us?'

I plan to do this by answering 3 questions. First, 'What are the markets telling us about supply and demand trends?' I will follow up with 'Why are supply and demand out of step?' and then finish with, 'What can the world do to make supply catch up?'

By grain, I mean the 1.3 billion tonnes of wheat and the 6 coarse grains; maize, barley, sorghum. oats, rye and millet, that the world produces in an average year.

As you can see from Fig. 1, both production and demand for grain has about doubled over the last 35 years. However, if we look closely at the last 10 years, two things are immediately apparent. Demand continued to rise until this crop year. But supply growth has stagnated.

This means the world has simply been consuming more grain than it produces as Table 1 shows.

This cannot continue. In terms of percent of demand, stocks are down to record lows, even below levels reached in the crisis years of the 1970's (Fig. 2).

In your daily work, as you go into the market place to buy grain for your feed mills, you have all seen what the market tells us about this. Grain prices are soaring. With the poor economic situation and high unemployment here in Europe it is often difficult to pass such increased costs on to the end consumer. Thus margins are being squeezed at many levels of the feed trade.

The tight situation on grains means the price of soybean meal rather than the price of soybean oil is now driving the crush. In 94/95 crop year, heavy purchases of soybean oil by the Chinese meant that mills were basically crushing soybeans for the oil, and meal was aggressively priced as a bi-product. This year, the soybean oil situation is relatively more relaxed, and it is the strong demand for soybean meal and its resulting strong price, that is the key factor in crushers decisions.

*Transcribed from tape

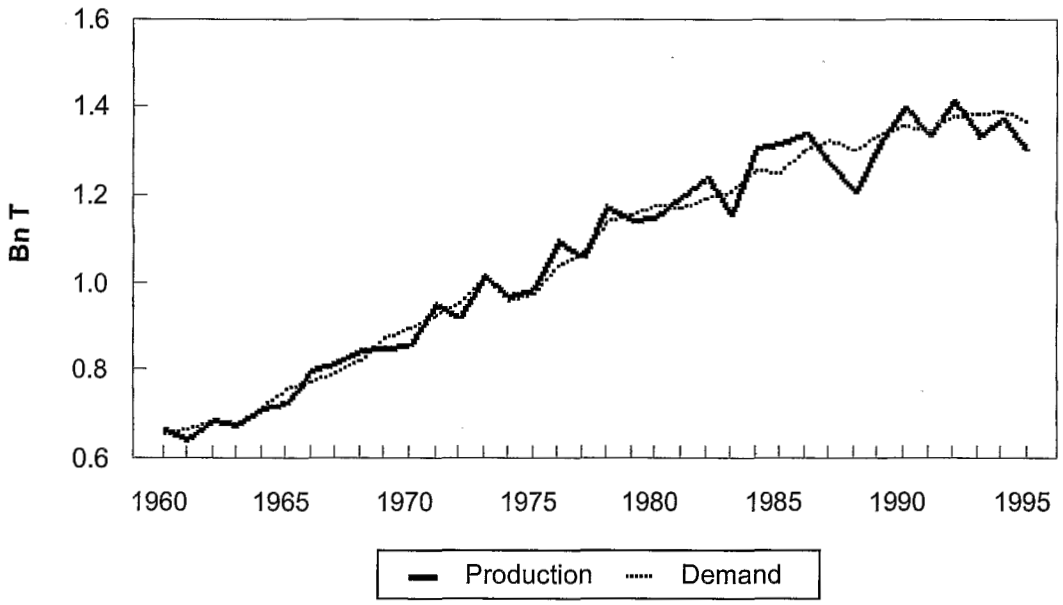


Fig. 1. Production and demand.

Table 1. World grain situation (Mn T)

| | 92/93 | 93/94 | 94/95 | 95/96 |
|---|---|---|---|---|
| Production | 1,428 | 1,352 | 1,396 | 1,326 |
| Consumption | 1,389 | 1,399 | 1,412 | 1,369 |
| Stocks | 284 | 236 | 218 | 176 |

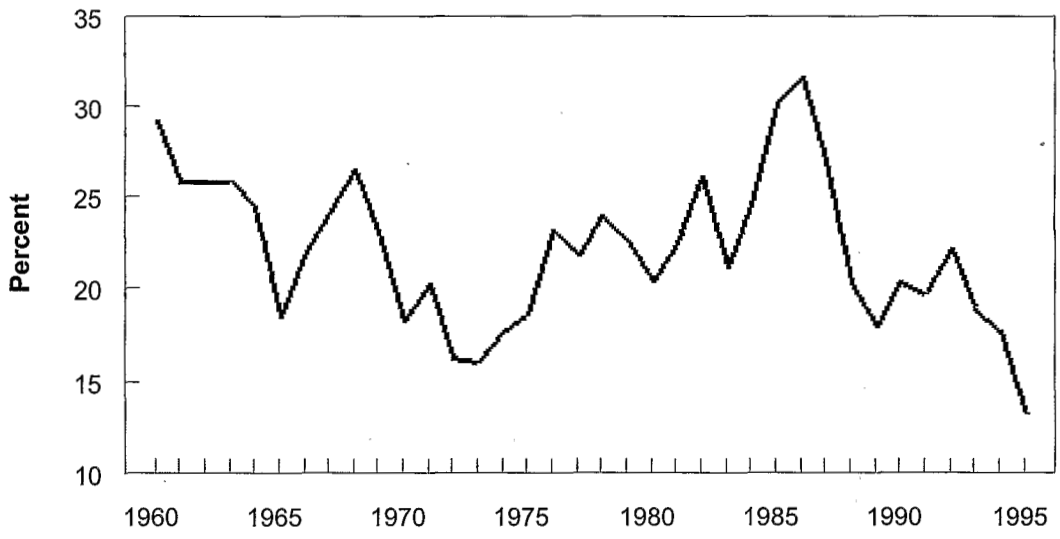


Fig. 2. World grain stocks as percent of consumption.

Turning our attention back to grain, and the tight supply/demand balance. The answer to the first question is, the market is telling us we have got a problem. Flagging production is causing price increases and squeezing margins.

Moving on to the next question, 'Why are supply and demand out of step?' I will begin by looking at factors that drive demand.

The most important factor is obviously population growth. The world population has almost doubled since 1960. There are now 5.7 billion people on the planet. The rate of increase is a staggering 85 million per year. That is the equivalent of having to feed an additional 2 countries the size of Spain every year.

The situation is actually even more drastic. The population increase is mainly in the Developing World. There, not only is the population rising, but also there is solid economic growth. The increasing wealth is leading to major changes in dietary patterns. Rice is being replaced by wheat, but more significantly, consumption of meat is rising very sharply indeed. As you are all involved in the feed business you are aware that it takes around 4-5 kg of feed to grow 1 kg of meat. So if a person in Malaysia starts to eat a kilo of meat instead of a kilo of rice, grain demand will rise around 5 kilos.

A good example of this effect is China, which is also the most important element in the global grain demand picture at the moment. Until recently China was a steady importer of wheat, and was the world's second largest exporter of maize. In the last few years this situation has changed drastically. Wheat imports have surged, and maize exports have been replaced by imports (Table 2).

Table 2. Chinese grain trade (Mn T)

| | 93/94 | 94/95 | 95/96 |
|---|---|---|---|
| Wheat imports | 4.9 | 9.0 | 12.7 |
| Maize exports | 10.3 | 1.1 | 0 |
| Maize imports | 0 | 3.6 | 3.1 |

The problem facing China is that it has 25% of the world's population but only 10% of the agricultural land. The agricultural area is about stable, with new land opened up by irrigation about offset by land lost to urban development. However, population is growing at 13 million per year, and there is a steady migration of people from rural areas to cities in search of jobs. Double digit GDP growth is also creating demand for a more varied diet, specifically more meat. Meat consumption is rising at about 4 million tonnes per year. China has historically been able to produce 1 kg of pork from about 2 kg of grain as many pigs are reared in farmyards and eat other things. However, incremental growth will be basis industrial farming, and normal western conversion factors will become the norm. Projecting forward these conversion rates and the growth in meat consumption lead to scenarios of China becoming an importer of very substantial quantities of grain in the early 21$^{st}$ century.

The opposite has been happening in the Former Soviet Union. Average grain production in the 5 years before reforms started was around 180 million tonnes per year. Production fell to 150 million t in 1994 and to a disastrous 120 million t last year. Average imports in the late 1980's were about 40 million tonnes per year. Despite the decline in production imports have not risen to compensate. In fact the reverse is true. Imports for the last 2 years have been close to 5 million tonnes annually. Lower production and lower imports means FSU grain consumption has collapsed. The fall in demand has been almost completely in the feed sector as animal herds have suffered extensive slaughter.

Now things are changing fast. Russian GDP is forecast to grow 2-4% this year. As the economy recovers demand will recover. Russia also needs to rebuild its exhausted stocks. Hopefully much of

the increased demand will be met by a recovery in domestic production. But the world can no longer count on a further contraction in FSU demand to shield us from falling production.

So we face a problem. World grain stocks are at rock bottom. FSU demand is set to recover. Double digit economic growth is causing a surge in Chinese grain needs, and global population continues to grow.

We must conclude that grain demand will grow. So it is urgent that the decline in production be reversed. Thus we must address the factors influencing grain production. These include area, weather, irrigation, fertilizer use, pesticide use, seed varieties, and in the future, genetically modified organisms or GMO's.

Figure 3 shows how harvested area has contracted over the last 15 years. Some of this contraction is due to loss of land due to urban development or to desertification, but the major loss of land is due to government programmes. Last year there were around 28.5 million hectares, or 5-6% of the global harvested area tied up in different programmes in the US and the EU.

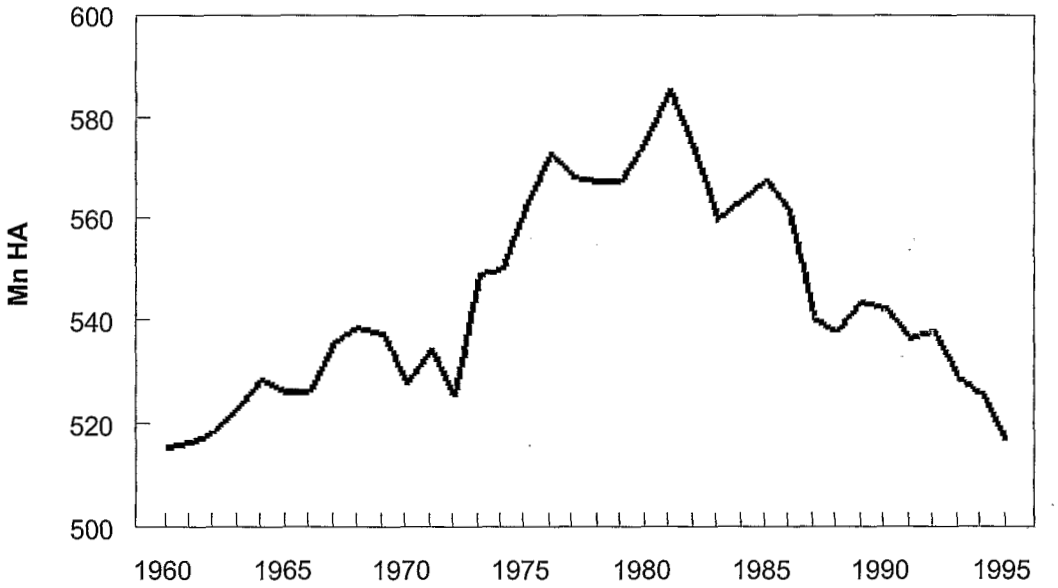


Fig. 3. World harvested area.

The world simply cannot afford to keep this land idle, especially as the doubling of grain yield achieved over the 30 years between 1960 and 1990 has ground to a halt. Intensive use of fertilizer and pesticides that helped drive the so called green revolution is running up against the law of diminishing returns. There is some scope for continued progress in hybrid seeds, but this takes time. There is also some limited scope to increase irrigation, but again this takes time and is costly. Water is becoming a precious resource. GMO's hold promise, but they are in the future.

So we can now answer our second question. The main reason why grain supply has not been able to keep up with growing demand is that government programmes in major producing areas have purposely kept land idle. Planting decisions have been shielded from market forces.

We can now recap the problem, and try to answer the last question, 'What can the world do to make supply catch up?' Demand will rise because population is growing at a rate of 85 million per year. This means an additional 20 million tonnes per year of grain demand, even with no dietary improvement. But economic growth, especially in Asia, is driving up meat consumption. Worse, the world needs to restock. Grain stocks are around 90 million tonnes below levels of a few years ago. "Supply must be increased. How, and when?"

World stocks are at a record low "now", demand is growing "now", China and other areas of the developing world are competing for grain that is needed for your mills "now". The EU has already imposed export taxes on wheat and barley to protect its dwindling stocks. We just cannot afford another small crop in the US. The EU has set a dangerous precedent with its new barrier to trade. The problem is "now". Production must be increased "now". Supply could be increased by stepping up fertilizer and pesticide use, or new seed hybrids, but these take time. However, the 28.5 million hectares of land under government programmes could be brought into production "now".

However, it takes price to encourage a farmer to take the risk to plant a crop, especially when he must buy expensive fertilizers to achieve the required yield. But since 1985 the US joined the EU in subsidizing grain exports. The objective was to compete in export markets but keep domestic prices high. The high domestic prices did indeed stimulate production in the US and EU, but the low, subsidized export prices inhibited grain production elsewhere. It was more attractive for nations to import cheap grain than to struggle to produce their own crops. Export subsidies are temporarily not necessary because of high world prices, but it is important that we remember what their effect has been.

The fact that Brussels is now in the difficult position of having to impose an export tax on wheat and barley is another clear message from the market. Government set prices for grain simply do not work. European and American feed millers have in the past been forced to pay an artificially high price for grain which has stimulated the production of expensive grain mountains. These were exported with costly subsidies, which were paid for by tax payers. So again the feed miller suffered as disposable income was withdrawn from the economy. Governments also intervened to try to limit the grain mountains while maintaining artificially high prices by introducing set aside.

Thus grain production in the EU did go down but at the same time, production outside the EU had been hindered, and consumption encouraged by the cheap, subsidized exports. The result - a world grain shortage and a price explosion - so again the feed miller suffers.

It is time for a radical rethink of government policies on agriculture. Manipulation of production via prices, set asides and export subsidies and taxes does not work. Not only should the farmer be allowed to plant on the set aside, but he should then sell the crop at a free market price rather than at a government set level. Only then will he get a clear price signal from the market as to how much or how little to plant. Obviously, this raises the concern of income security for the farmer. After all, providing a reasonable living is a basic foundation of agricultural policy. However, support to farmers can be delinked from production and based solely on social need.

These 3 items, elimination of set aside, free market prices and delinking support from production are the cornerstones of the exciting, new 'Freedom to Farm' policy in the US. This will replace most subsidies and support for crops such as wheat and maize with direct payments to the farmer. These payments will be phased down over 7 years, giving the agricultural community time to react.

Freedom to Farm will force further changes in Europe's Common Agricultural Policy. But the CAP will need to evolve anyway prior to the expansion of the EU eastwards in the next few years. Membership negotiations should start with Malta and Cyprus when current Inter-Governmental Conference at Turin ends mid-97. Negotiations with the Czech Republic, Hungary and Poland should quickly follow. Membership has also been promised at some later date to Rumania, Slovakia, Estonia, Latvia, Lithuania, Bulgaria and Slovenia.

So, to conclude, the answer to how to get production up, and bring supply back in line with demand, and thus solve the problem that the market so clearly signals is:

- Get the land idled under government schemes back into use.
- Let the market guide farmers' decisions.
- Delink rural support from grain production.
- Eliminate export subsidies.
- Remove barriers to trade.

The world has sufficient resources to feed itself provided free markets are allowed to do their job. Thank you.