

3 *Cereals policies in Morocco*¹

3.1 - Introduction

The cereals sector is one of the main sectors of agricultural production in Morocco. It plays a variety of roles with regard to the annual grain-sown areas of arable land, the formation of the Gross Agricultural Product, employment in rural areas and the utilisation of industrial processing capacities. The main cereals grown are common wheat, barley, durum wheat and maize. Sorghum and rice are also grown but are of marginal importance.

Policies connected with the cereals sector have always been integrated into policies on what are known as strategic goods, which include oils and sugar in addition to cereals. These commodities have long been subject to direct intervention by the public authorities throughout the production chains. This intervention can currently be considered to be in its final phase, continuing until the liberalisation measures that are already scheduled or are to be introduced in the context of the country's commitments to the World Trade Organisation and bilateral agreements have been fully implemented.

The purpose of the present chapter is to highlight the main policy measures currently in effect for the Moroccan cereals industry. Section 1 gives an overview of the production chain focusing mainly on production systems, imports, processing and consumption. Section 2 reviews the main instruments of cereals policy during the interventionist period followed by the period of structural adjustment programmes. Section 3 describes current price policy and the trade system and underlines the instruments concerning agricultural production and the marketing and consumption of cereals. And finally, the chapter closes with an outline of the policies which should be implemented for the cereals industry's successful transition to the new context of the Moroccan economy.

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3.2 - Structural data on the cereals industry in Morocco

Agriculture plays an important role in the Moroccan economy. Its contribution to GDP ranges between 15% and 17%, and it employs just over 30% of the working population. The sector also provides indirect support for 60% of the population and generates almost 25% of export revenue. Crop and animal husbandry account for 70% and 30% of GAP respectively. The main commodities grown are cereals on the one hand and fruit and vegetables on the other, accounting for a share of 45.5% and 47% respectively of the gross value of crops in the 2002-2003 farm year (Ministry of Agriculture, 2004). Common wheat contributes almost 47% on average of the gross value of cereals, followed by durum wheat (27%), barley (23%), maize (2%) and other cereals (1%).

3.2.1 - Cereals production systems

Cereal acreage is stagnating around 5 million ha, i.e. almost 60% of AAU. However, if one takes account of fallowing, which is connected mainly with cereals production systems, acreage can amount to 75% of AAU. Cereals are grown in the various agro-climatic zones of the country in rotation with other annual crops, the main ones being legumes, industrial crops and fodder crops. The principal cereal-growing regions are in the rain-fed plains and plateaux of Chaouia, Abda, Haouz, Tadla, Gharb and Sais, where the vast majority of farms grow cereals, irrespective of their size.

In these regions, cereals production is combined with sheep farming in particular, so that farmers can develop cereal fodder resources (barley, straw, stubble, etc.). The zones classed as favourable and intermediate zones where rainfall varies between 350 mm and 450 mm account for 38% of cereals acreage on average, common and durum wheat being the predominant crops (Table 3.1). Crop management is based on the use of inputs geared to intensification, so that these zones produce almost 60% of cereals output (1998-2003 average). The zones classed as unfavourable account for just over 40% of cereals acreage, barley being the principal crop in a more or less traditional crop-growing system characterised by minimal use of breeders' seed, fertilisers and pesticides. The output of these zones oscillates around 30% of the country's total cereals output. The remaining acreage is situated in mountainous regions and regions of the Sahara with an annual share of 10% of cereals output.

Table 3.1 - Distribution of the acreage and output of the main cereals by agro-climatic zone (%)

Agro-climatic zone	Acreage		Output	
	2002-2003	Average 1998-2003	2002-2003	Average 1998-2003
Favourable	30.7	31.0	39.3	41.1
Intermediate	17.0	17.1	20.2	18.0
Unfavourable South	31.5	30.6	21.4	23.1
Unfavourable East	9.8	9.5	8.8	8.4
Mountains	7.7	7.2	8.4	7.2
Sahara	3.3	3.5	1.9	2.3
Total	100	100	100	100

Source: Ministry of Agriculture (2004).

Production structures are subject to climatic, technical and structural constraints, which can impede the development of farmland. Climate conditions, in particular rainfall, are the main factor in the reasoning of farmers' strategies with regard to production risks. And most producers opt to use intensification factors in view of these conditions. When there is no rainfall producers generally prefer to stop spending on pest control and fertilisation, which means in turn that the impact of drought can be aggravated, whereas cautious intervention, in particular weed control measures, can reduce the drops in yield that have been registered.

Furthermore, the diverse forms of legal status² and fragmentation problems are also constraints which do not encourage investments or efforts to improve productivity. The average area farmed, which in the case of 70% of production units does not exceed 5 ha, is not conducive to overcoming these unfavourable factors.

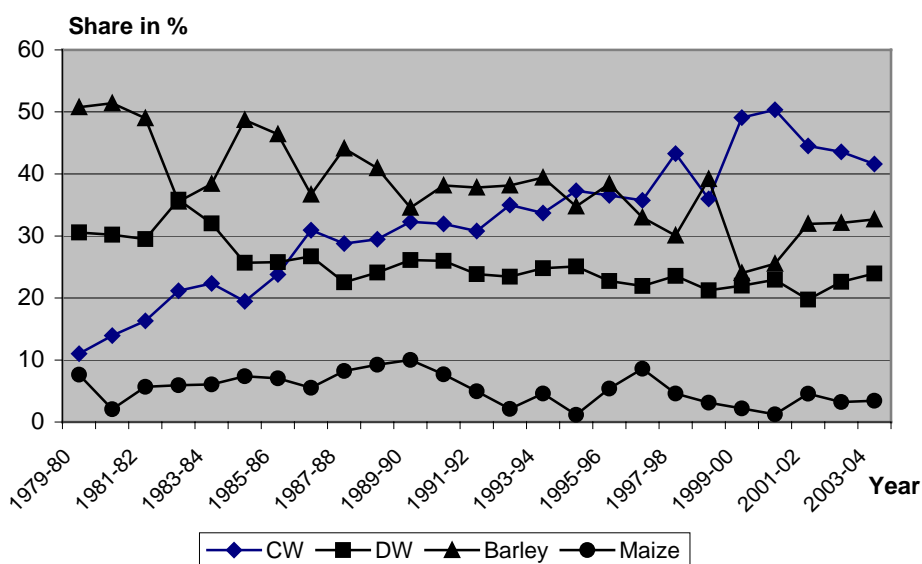
3.2.2 - Cereals production

In the period from 1996 to 2004, cereal acreage amounted to almost 5.1 million ha on average. Over 43% of this acreage was under barley, followed by common wheat (35%) and durum wheat (20%), and the remainder was sown with maize, rice, sorghum etc. At the same time, cereals output amounted to just over 58 million quintals, common wheat being the predominant crop accounting for 42% of total output, barley 31%, durum wheat 22% and maize 3%. Yields vary widely from one year to the next depending on weather conditions and do not reflect the efforts made to intensify production; they have not exceeded 12 quintals/ha on average over the past five years, with 16 quintals/ha in the case of common wheat.

² These statuses include Melk property, which is privately owned, whereas collective land, Guich land, Habous land and State-owned land are subject to fairly inflexible operating rules.

Analysis of the evolution of cereals production shows that the share of barley has dropped significantly from just over 50% of cereals production in 1980 to 31% on average over the last five years (Figure 3.1). Durum wheat and maize production have also decreased, losing 7 and 4 percentage points of their share respectively. Common wheat output has grown remarkably on the other hand, from 11% to 42% of total cereals output during the period under review.

Figure 3.1 - Evolution of the share of the major cereals in total output (1980-2004)

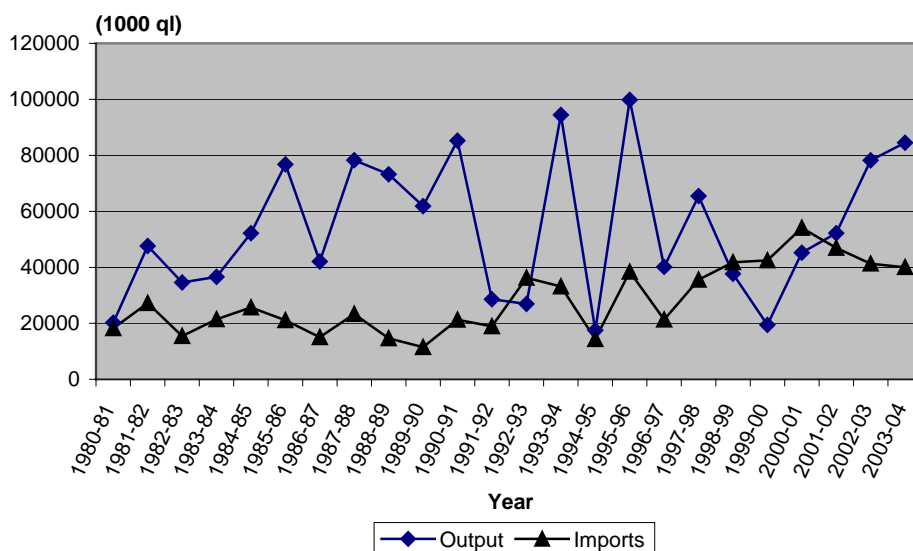


This increase in common wheat output is essentially the result of the extension of acreage stimulated by the intensification policies that have been pursued since the early 1980s. An intensification scheme was launched for this cereal, which is concentrated more in the northern part of the country, by the Ministry of Agriculture in 1985, the target being to sow 1 million ha. The scheme aims to increase common wheat output by adopting new varieties, fixing a guaranteed price for the producer and fixing marketing margins. The results were soon felt in the increase of acreage, which now amounts to almost 2 million ha. The extension of acreage under common wheat seems to be taking place essentially to the detriment of acreage under barley, which is being grown more and more in marginal zones with low agronomic potential. Despite this increase, the self-sufficiency rate is still average for common wheat due to the boom in the consumption of this commodity registered over the last two decades.

3.2.3 - Imports

Cereals imports develop according to the volume of national production. During the period from 1980 to 1995, the average quantities imported amounted to around 20 million quintals. As of 1996, when imports were liberalised, there was an appreciable increase in imports to begin with because the quantities harvested were below average; this was followed by a marked downward trend, and imports continued to decrease from the 2000-2001 farm year onwards (Figure 3.2). During the period from 1996 to 2004, the average quantities imported amounted to just over 40 million quintals.

Figure 3.2 - Evolution of national cereals output and cereals imports (1980-2004)



Analysis of the evolution of imports of the main cereals during the two periods mentioned above shows that before 1996 common wheat accounted for almost 83% of total imports, followed by maize (9.6%), barley (6.2%) and durum wheat (2.3%). After that date, despite the increase in imports the share of common wheat decreased to around 55% (Table 3.2). While this regression was registered for common wheat, the shares of barley and maize practically doubled during the 1996-2004 period. The share of durum wheat increased sixfold over the same period and currently amounts to 13% of total cereals imports. This development is certainly to be explained by the effects of the schemes for intensifying common wheat production.

**Table 3.2 - Evolution of the share of imports
of the main cereals (%)**

Commodity	1980-1995	1996-2004	2003-2004
Common wheat	82.7	54.9	49.0
Durum wheat	2.3	12.8	16.9
Barley	6.2	12.0	3.5
Maize	9.6	20.3	30.6
Total cereals	100	100	100

Source: Ministry of Agriculture (2005).

Common wheat imports come mainly from the countries of the EU (France, Germany), which have supplied just over 56% of the quantities imported over the last five years. The United States accounts for almost 21% of imports, whereas Ukraine, Russia, Canada and Argentina are the main suppliers accounting for the rest of the volumes of common wheat imported. In the case of durum wheat, Canada is Morocco's leading supplier. The share of Canadian durum wheat in the country's total imports actually amounts to almost 78% with a volume of just over 4.3 million quintals on average in the last five years. The US ranks second, supplying almost 670 000 quintals, i.e. 12% of total imports. The contribution of the countries of the European Union is limited, amounting to an average of 250 000 quintals or 4.5% of the total quantities imported.

With regard to barley, the European Union is Morocco's main supplier with almost 4 million quintals (63% of imports), whereas the rest of the world supplies almost 2.3 million quintals on average each year. Looking at individual countries, France supplies the largest volume of imports (37%) followed by Turkey (13.5%), Ukraine (10.2%) and Russia (9%). Maize imports come essentially from the US with a contribution of 53% of total imports, which amount to an average of almost 5 million quintals. Other countries such as Argentina, Brazil and Hungary supply practically all of the remaining quantities imported.

Import prices are generally lower than transfer prices. However, assessment of the difference must be qualified in view of the instability of international prices, supplies under preferential agreements and market distortions due to the export subsidies granted by certain countries of origin. The opportunities for futures buying are also difficult for importers to manage because of the difficulties in forecasting the national supplies of the main cereals.

3.2.4 - Processing

Cereals are processed in a production infrastructure composed of two types of milling plants and semolina factories, which are absolutely privately run. The milling plants in the first category are referred to as industrial plants and are composed of almost 170 production units with a total processing capacity of 65

million quintals (Ministry of Agriculture, 2000). The distribution of these industrial mills throughout Morocco is extremely uneven and they are located at a considerable distance from the production areas. Over 70% of these mills are located on the Casablanca-Kenitra axis. This high concentration of location has certain negative effects, which are reflected by a capacity utilisation rate of no more than 65% of total capacities.

The second category of processing units is made up of an estimated 10 000 small traditional mills, which contribute significantly to covering the cereal product needs of consumers. Jouve & al (1995) estimate that these units are still very active in the field of custom milling, performing almost half of the crushing of all cereals, particularly durum wheat, in a normal production year. The fact that they can keep going is to be explained by the fact that they are better equipped to satisfy consumer preferences and to recover byproducts (bran in particular). However, in the new context of liberalisation and competitiveness action to improve the quality and packaging techniques of industrial mills could influence these preferences and bring an increase in demand for industrial products.

In the period between 1990 and 2004, the industrial mills crushed an average of just over 28 million quintals of common wheat and just under 4 million quintals of durum wheat, i.e. 70% and 26% respectively of the available quantities of these commodities (Table 3.3). Whereas the industrial processing of common wheat remained virtually constant during the period under review, that of durum wheat increased after the year when imports were liberalised, amounting to 30% of the quantities available in 2004.

Table 3.3 - Common and durum wheat processed in industrial plants (expressed in 1000 quintals and as a percentage of the total quantity available)

Period	Common wheat		Durum wheat	
	quantity	%	quantity	%
1990-1995	24668	69,0	1786	19,5
1996-2004	30229	70,0	4934	30,3
2003-2004	32509	60,0	5669	21,0
1990-2004 average	28243	70,0	3810	26,0

Source: ONICL (inter-professional office for cereals and leguminous plants) (2005).

It must be pointed out, however, that 71% and 23% of the quantities of common and durum wheat crushed are imported. The bulk of the quantities of durum wheat crushed is thus processed in traditional mills, which operate mainly in rural areas and working-class urban districts.

3.2.5 - Organisation of the profession

Although a number of regional associations of cereals producers have been set up, there are organisational problems in the cereals sector due mainly to weak marketing infrastructures and the very large number of small producers. Furthermore, the membership of the 11 Moroccan Agricultural Cooperatives (CAM) established in the cereal-growing regions is still limited. However, the measures taken recently to restructure these organisations and to improve their financial situation have been combined with efforts to raise producer awareness and encourage producers to join the cooperatives. Furthermore, the CAM are organised at the national level in a National Union (UNCAM), which represents them in relations with the public authorities and takes part in invitations to tender for cereals imports. The aim is in fact to improve their bargaining power in relations with all of the partners in the cereals chain in view of the new liberalisation conditions.

At the agro-industrial stage all milling plants are affiliated to regional associations belonging to the National Milling Federation (FNM) pursuant to Act no. 12/94 on the ONICL (national interprofessional office for cereals and leguminous plants). These associations are active in production areas but seem to be much more preoccupied with their internal functioning and their relations with the ONICL to the detriment of inter-trade considerations at the various stages in the cereals chain.

3.2.6 - Consumption

3.2.6.1 - Technical characteristics of demand

The survey on household living standards conducted by the Directorate for Statistics in 1998-1999 shows that the demand for agro-food products has increased both in quantity and in quality for various reasons including population growth, higher incomes and the growing participation of women on the labour market. The same survey shows that expenditure on cereals and cereal products accounts for almost 19.5% of household food expenditure (Directorate for Statistics, 2001).

The total demand for cereal products rose from 28 million quintals in 1960 to over 100 million quintals in 2004. Annual per capita consumption is currently around 320 kg. Direct consumption accounts for just over two-thirds of this quantity, essentially in the form of common and durum wheat flours. The quantities of these commodities that are consumed amount to 65% and 20% of cereals intake respectively. Indirect consumption concerns barley and maize, which are used for producing animal products (meat, dairy products, etc.).

Analysis of the evolution of the consumption of the various cereals reveals an increase in the demand for common wheat, whose share has grown from 27% in

1960 to almost 65% at the present time. This increase, which has been registered since the early 1980s, is apparently related mainly to the substitution of durum wheat in rural areas and to the maintaining of consumer assistance for so-called national common wheat flour.³ The self-sufficiency coefficient for common wheat is still average, however, 55% of the needs of the population being covered in the 2000-2004 period.

3.2.6.2 - Consumption projections

According to the Ministry of Agriculture (2000), total cereals demand could amount to 137.5 million quintals by 2020 on a nutritional basis for a population of 40 million inhabitants (Table 3.4). This calculation takes account of the human needs which food intake must cover in terms of both quantity and quality at the lowest possible cost.

Demand for common wheat and for durum wheat would constitute almost 33% and 23% of total projected consumption. On the hypothesis of a national output level of 105 million quintals, the ratio of output to consumption needs could increase from the present 59% to just over 76% by 2020. It must be pointed out, however, that with the liberalisation of the Moroccan economy and the opening of access to foreign cereals imports the projected ratios are difficult to achieve. The cereals industry should nevertheless step up production efforts in the agro-support industries with a view to supplying national milling plants with local commodities.

**Table 3.4 –Projections of the production and consumption
of the main cereals (1000 quintals)**

Commodity	Current situation (2000-2004)			Projection 2020		
	Output	Demand	Rate of coverage	Output	Demand	Rate of coverage
	1000 quintals		%	1000 quintals		%
Common wheat	24 600	45 000	54.7	31 570	45 100	70.0
Durum wheat	14 600	21 000	69.5	24 960	31 200	80.0
Barley	20 500	26 000	78.8	45 000	50 000	90.0
Maize	1 400	11 000	12.7	3 360	11 200	30.0
Total	61 100	103 000	59.3	104 890	137 500	76.3

Source : Ministry of Agriculture (2000a); ONICL (2005); our calculations.

On the other hand, the liberalisation of marketing channels should result in a wider choice of products offered for sale on the market with much more desirable quality standards for consumers. The evolution of consumption as a whole is liable to be less proportional, however, than that of incomes. For according to the

³ See section on price policies for an explanation of the subsidisation system.

Directorate for Statistics (2001), the income elasticity of the demand for cereals and cereal products – estimated according to *the model of the almost ideal system*⁴ on the basis of a sample of 5 184 households – is around 0.65%. Consequently, the increase in the consumption of these products in the future would be much more related to the evolution of population statistics and should also depend on the use of cereals in other production sectors including animal husbandry to satisfy needs other than those of direct consumption.

3.3 - Historical overview of cereal price policy

Agro-food policy in Morocco takes account of both food security constraints and macroeconomic constraints, and more specifically those related to equilibrium in the balance of payments. Import substitution products in general and cereals in particular have always enjoyed massive State intervention ever since the country's independence. However, since structural adjustment programmes were introduced in the mid 1980s the intensity of this intervention has progressively diminished.

3.3.1 - Recapitulation of the main instruments of the interventionist system

During several economic plans following Morocco's political independence, cereals production policies remained geared to the modernisation of production systems and control of the functioning of the industry. The "Operation Ploughing" that was launched between 1957 and 1961 already aimed to boost cereal growing and modernise the sector by mechanising tillage and involved the direct intervention of the local Ministry of Agriculture departments (Tilling Centres in particular). This operation was then followed by intensification schemes based on the use of breeders' seed, fertilisers and pest control products. During the 1960s the producer prices of cereals were fairly low, however, contrary to the spirit of the policy of recovery pursued at the time. With galloping population growth imports steadily increased and Morocco very soon became a net structural importer of cereals.

Then towards the mid 1970s a new line of policy emerged aiming to support consumers and leading to the compartmentalisation of the supply and demand for primary agricultural commodities. The increase in the cost of cereals due partly to the 1973 raw materials crisis subsequently refocused public policies and clear precedence was given to aid to consumption. At the same time, the State invested considerable financial efforts in measures to seek self-sufficiency in the production of staple commodities. As is underlined by Jouve & al (1995), this situation then

⁴ Almost Ideal Demand System of Deaton & Muellbauer.

led to an ambivalent cereals production system in which imports provided the bulk of cereals intended for meeting the needs of the urban population, whereas national production was intended essentially for self-supplier consumption. The creation of the ONICL in 1973 to replace the national interprofessional cereals commission (OCIC) was accompanied by new legislation regulating prices throughout the cereals chain.

Producer and consumer price fixing was thus central to the regulation of markets by the public authorities, which bore the risk of variations in world prices. To a certain extent this systematic intervention in the functioning of markets discouraged investment and efforts to develop certain fundamental activities in marketing channels. Storage activities outside the official ONICL circuit thus remained very hesitant. Similarly, there was simply no such thing as the emergence of importing traders using futures and the risk management tools associated with them, since the Moroccan market is essentially a physical market. On the contrary, the regulation of imports and the guarantee that commodities would be marketed in the country encouraged the emergence of a situation of rent-seeking, particularly in the case of industrialists (Ait El Mekki, 2000).

3.3.2 - Reforms carried out in the context of the structural adjustment programmes

The range of public measures for intervening in the operation of the staple commodity sectors had contributed to a particularly and disastrous economic situation by the beginning of the 1980s. In 1983, the government had to implement the first structural adjustment programme (SAP) in collaboration with the World Bank and the International Monetary Fund. The aim was to restore the major economic balances in the short and medium term by improving the incentive system (elimination or reduction of subsidies), improving productivity and building up the capacities of private institutions. The economic and social importance of the agricultural sector then warranted the introduction of agricultural structural adjustment programmes (ASAP) from 1989 onwards. The main reforms undertaken in the context of the ASAP focused on deregulating the various subsectors and opening them to the world market.

3.3.2.1 - Deregulation of the producer and consumer prices of cereals

The main objective targeted within the framework of ASAP I, which was launched in 1985, was to liberalise marketing channels and gradually eliminate the subsidisation of agricultural inputs. Fertiliser subsidies were thus reduced for the first time in 1986 before being completely eliminated in 1991. The prices of this input thus rose by 50% during that period, and, once liberalised, fertiliser imports followed the trend of world rates. Cereal seed subsidies were frozen between 1985 and 1988 in nominal terms. The amounts of the subsidies were evaluated during that period at 45 and 20 dirhams per quintal of seed for common and durum wheat respectively.

In 1988, the cereals harvests were relatively good with a total volume of 78 million quintals, almost 29% of which was constituted by common wheat. So it was not surprising that a drop of 11.5 million quintals was registered in imports the following year. There was thus a considerable decrease in import duty revenue, whereas the subsidisation of flour consumption remained stable. The conditions registered in that special year were consequently one of the factors which induced the government to introduce reform policies. The support prices for barley, durum wheat and maize were thus eliminated as of the month of August 1988, and importers of those commodities had to obtain import authorisation from the ONICL.

The public authorities introduced two main reform measures at consumption level: the first was to fix the subsidy on 10 million quintals of so-called national common wheat flour in 1989⁵, and the second measure led to the elimination of the subsidy on so-called luxury flour in 1990. However, the price of that flour was still the subject of agreements on price restraint between the State and producers so as not to prejudice consumer purchasing power.

3.3.2.2 - Revision of protection measures

Before the second ASAP was introduced in 1987, quantitative restrictions constituted the bulk of cereal protection measures. The programme in question replaced these restrictions with a reference price system based on mobile averages of world prices and with the application of tariff equivalents. The concept of international market reference prices was intended to help to integrate the cereals sector into the world market. The Foreign Trade Act (no. 13/89) thus allowed the principle of the liberalisation of imports and exports from the late 1980s onwards while granting the right to protect national production. At the same time, the World Bank recommended that Morocco eliminate the major distortions in the reference price system in order to allow the private sector to seek the best value for money. With regard to producers, as well as recommending a complete overhaul of the statutes of the ONICL⁶, the World Bank also recommended measures to build up the capacities of producer organisations so that they could play their role to the full in the dissemination of information and in dialogue with the authorities (World Bank, 1994). Then, with regard to the replacement of quotas and import licences by tariff protection, an Order of the Ministry of Foreign Trade of 19 April 1994 cited the rules for applying tariff equivalents to strategic agrifoodstuffs including cereals as of the first quarter of 1995 (Centre Marocain de Conjoncture [Moroccan economic observatory], 1995).

⁵ The industrial milling plants manufacture two types of common wheat flour. So-called luxury flour contains in particular a lower amount of bran than the so-called national flour, which is intended for poor population groups.

⁶ This overhaul was then regulated by Act no. 12/94 on the ONICL.

All of these measures have currently been included – sometimes with more marked adjustments – in the negotiations of the World Trade Organisation and in the negotiation of bilateral agreements, in particular with the European Union and the United States.

3.4 - Current price policy and trade system

After the structural adjustment programmes and the signing of the *Uruguay Round* agreements, the complete deregulation of the cereals sector was postponed several times due to the socio-economic importance of the commodities concerned. But deregulation was finally brought about in accordance with the provisions of Order no. 1800-95 of the Ministry of Foreign Trade of 26 June 1995 (Official Gazette of 1 July 1995), which announced the abolition of all cereals import licences as of 1 May 1996. Since that date cereals policy has been tending more and more towards opening the entire production chain to competition. The following sections review the principal features of that policy, beginning with the objectives pursued and then highlighting the various instruments connected with the production, marketing, protection and consumption of cereal products.

3.4.1 - Objectives of cereal price policy

The main objectives of cereals policy currently focus on the following issues:

- making agricultural production more efficient while safeguarding the incomes of cereals producers,
- revising the consumer assistance schemes, thereby taking account of food security constraints, and
- stimulating the industry throughout the cereals production chain.

These objectives are pursued against a background of efforts to strengthen the foothold of the cereals industry on the world market and compliance with Morocco's commitments to its trade partners. For it has been recognised politically that measures to liberalise the agricultural sector in general and the staple commodities industries in particular should offer the Moroccan agro-food economy new prospects for more efficient allocation of resources. This also applies to the cereals sector, despite certain quantitative restrictions still applying to imports, particularly common and durum wheat imports.

3.4.2 - Agricultural production

The main measures relating to the agricultural production of cereals concern in particular seed prices, producer prices for common wheat, and programmes for improving production security.

3.4.2.1 - Seed price support

The subsidisation of certified cereal seed aims to encourage producers to use it and thus to improve per hectare yields. The level of subsidies granted depends on the constraint of Agricultural Development Fund (ADF) balance; it is generally between 5% and 20% of the per quintal sales prices. For the 2004-2005 farm year the support paid for the use of certified cereal seed (R1 and R2) amounted to 100 Dh/ql for common wheat, 80 Dh/ql for durum wheat and 95 Dh/ql for barley (Laassiri & Lakhal, 2004)⁷. In the case of seed producers the ADF covers storage costs at a rate of 5 Dh/ql/month for a maximum term of 9 months. The quantities of seed concerned amount to 220 000 quintals distributed in proportion to the sales of approved operators.

These interventions are part of the National Seed Plan, which aims to strengthen the profitability of both the seed sector and the cereals sector as a whole. This plan takes account of the new biodiversity requirements (Plant Varieties Act) and the organisation of the profession in the various subsectors. The volume of the total amounts granted (production and use) generally ranks second or third after the development of properties and the equipment of farms. Amounting to almost 47 million dirhams each year on average, support for breeders' seed production and use has accounted for almost 15% of the annual budget of the ADF over the last five years. It must be noted, however, that the extent to which certified seed is used is still very inadequate. The utilisation rate in fact does not exceed 11% for all cereals together, with a rate of 24% for common wheat, 13% for durum wheat and 1% for barley (Ministry of Agriculture, 2003). The main reasons cited concern the lack of funding, the relatively high cost of seed, and sometimes the fact that seed is not available on the market despite the efforts made by the SONACOS (national seed marketing company).

3.4.2.2 - Producer price support

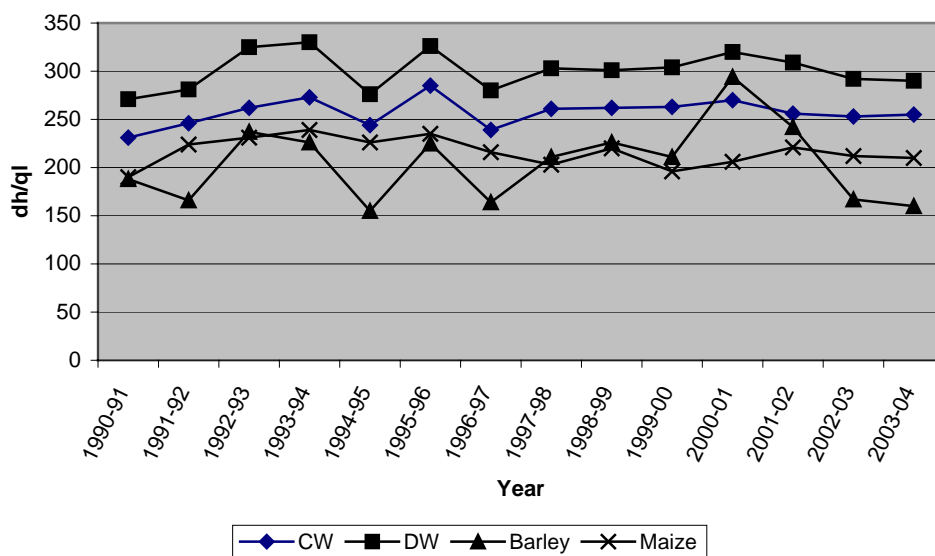
The producer prices of durum wheat, barley and maize have been liberalised and are thus determined according to market conditions. Common wheat production has been subject to a support price fixed at 250 Dh/ql since the 1994-1995 farm year. This fixing normally targets the quantities intended for the production of national flour from the standard quality common wheat delivered to the utilisation centres (ONICL, 2004). Apart from this marketing channel, which is considered the official channel, the producer price for common wheat also varies according to the law of supply and demand.

Figure 3.3 shows the evolution of the prices registered in souks and grain markets by the ONICL departments for the major cereals in the 1990-2004 period, during

⁷ Laassiri M. & Lakhal M. (2004) - Aides financières accordées aux investissements agricoles (*Financial support for agricultural investments*). Ministry of Agriculture; Directorate for Training, Research and Development.

which the average price of common wheat was around 257 Dh/ql. The price of durum wheat is still more expensive in relative terms, averaging 300 Dh/ql. The average prices of barley and maize, which are used mainly in animal feed, are 205 Dh/ql and 216 Dh/ql respectively.

Figure 3.3 - Evolution of the prices of the major cereals (1990-2004)



Analysis of the data in this figure reveals relative price stability despite a slight upward trend from the year when imports were liberalised (1996) onwards. The double import tariff systems certainly played a major role in maintaining this stability for the benefit of agricultural producers⁸.

In the case of common wheat, maintaining the support price at the level of the price in the industrial channel means that producers are in a better position to make reasoned crop choices. This price is a theoretical average price paid as a lump sum to producers throughout the country. It does not take account of any regional variation in production costs and is therefore a means of promoting economically efficient production techniques to a greater extent than others. This political measure accentuated the importance of prices as the main production incentive, particularly since producers have the guarantee that their crops will be purchased, in particular by the Moroccan agricultural cooperatives.

⁸ See section on imports below.

3.4.2.3 - The scheme for enhancing production security

This scheme was launched during the 1999-2000 farm year with a view to compensating for the inadequacies of another cereals production guarantee programme, which had been running since the 1994-1995 farm year. As its name indicates, it aims essentially to reduce the effects of drought, which has become a structural phenomenon for the agricultural sector in Morocco. The objective is to implement an action plan with which an output level of 16 million quintals can be guaranteed on 300,000 ha of cereals, irrespective of the weather conditions prevailing during the farm year, even in a year of drought, by:

- adopting a technically efficient cultivation itinerary, possibly using complementary irrigation,
- encouraging producers to take out agricultural insurance on their cereals production, and
- organising training sessions for producers and agricultural technicians with a view to improving their technical expertise.

The insurance system linked with the measures to enhance cereals production security has been designed by the Ministry of Agriculture, the Ministry of Finance, the Crédit Agricole (agricultural credit bank) and the Mutuelle Agricole Marocaine d'Assurance (MAMDA) (Moroccan agricultural mutual benefit insurance company) for three types of technical itineraries (traditional, intermediate and intensive). It provides a means of covering direct production costs rather than production itself linked to yields, which can vary between 7.5 ql/ha and 24 ql/ha. The premium paid by farmers is subsidised 50% by the State. During the period from 2000 to 2004, the insurance support scheme cost almost 42 million dirhams on average each year for a cereals acreage of around 230 000 ha.

According to the Ministry of Agriculture (2002), the production security scheme achieved satisfactory results particularly in the regions where the regional offices for agricultural development operate. Improvement of technical itineraries has been observed, particularly as regards the mechanisation of tilling and the use of certified seed.

In the final analysis, the drought insurance is the main contribution of the production security scheme, despite the constraints of budgeting and of the monitoring and assessment of the action carried out, which have been observed since the scheme was launched. A growing number of producers are adopting the insurance system in connection with the loans contracted at the beginning of the farm year.

3.4.3 - Marketing of national output

The cereal marketing season begins around the first week in June each year. The CAM and the souks play the main role in supplying the mills. The collection and marketing of commodities can concern the industrial milling industry or the traditional mills, which are particularly active in rural areas and in the working-class districts of urban centres. The ONICL is responsible for monitoring the marketing season as a whole, however, and it is much more demanding in the industrial sector.

3.4.3.1 - Internal trade system

Market organisation, which was governed by the Dahir with force of law of 24 September 1973 and by the relevant implementation instruments, has been changed as the result of the reforms carried out in the marketing of cereals. The Dahir had laid down the rules for commercial transactions in the cereals and legumes sector and had established the mandate of the ONICL as well as the financial compensation system introduced by the public authorities for common wheat flour. Act no. 12/94 repealed those instruments in order to bring legislation into line with Morocco's new commitments in the liberalisation of the cereals sector. The main features of the new law focus on two essential issues: the establishment of a new system for organising the cereals market on the one hand and the revision of the mission of the ONICL on the other. The cereals trade has been liberalised pursuant to this law, which was passed in 1995, but the ONICL still retains a decisive role, particularly with regard to monitoring the cereals sector in general and the common wheat sector in particular.

At the present time, cereal producers can deliver their commodities to cooperatives, private traders or directly to mills. The commodities delivered are subject to a marketing tax levied by the ONICL to help to cover its expenditure, in particular storage costs. By virtue of a decree of 30 June 1996, the level of the tax has been fixed as of 1 July 1996 at 1.9 Dh per quintal of common or durum wheat and 0.80 Dh per quintal of other cereals. It is levied at the level of the processing industry.

3.4.3.2 - Performance of the main cereals on the market

Cereals marketing varies according to two main criteria – the importance of the commodities in the various regions and self-supplier needs at farm level. It is difficult to evaluate the shares allocated to marketing since sales are transacted on a virtually occasional basis, particularly on the part of small and medium-sized farms. Marketing by such farms can in fact be spread over the entire farm year following a harvest, depending on liquid asset needs and the forecasts of possible yields for that farm year. However, it is estimated on the basis of the results of a survey conducted by the Ministry of Agriculture on cereals marketing in 1998 that only 20% of farms market part of their cereals output (Ministry of Agriculture, 1999).

Furthermore, the ONICL estimates that during the period from 2000 to 2004 the share of cereals marketed in the industrial channel amounted to an average of 21% of total cereals output (Table 3.5). The rest of agricultural supply is marketed in the traditional milling channels or consumed by the producers themselves. Traders account for an average of 50% to 55% of the quantities marketed, followed by cooperatives and mills, which account for equal shares (ONICL, 2003 and 2004). Common wheat and maize are the cereals most concerned, 44% and 11% of output being marketed on the industrial market respectively. The shares of durum wheat and barley that are marketed in that channel are very low and do not exceed 2% of national output.

Table 3.5 – Marketing of the major cereals in the industrial channel (2000-2004)

Commodity	Quantity produced	Quantity marketed	
	1000 quintals	1000 quintals	%
Common wheat	25 219	9 670	44
Durum wheat	12 718	168	2
Barley	17 316	103	1
Maize	1 275	108	11
Total	56 528	10 049	21

Source: ONICL (2005); our calculations.

With regard to the marketing of common wheat, it is observed that the elasticity of supply was insignificant compared to the support price. Intervention in the price of this commodity thus constitutes income support for farmers and has no effect on the quantities supplied. Conversely, supply in the industrial sector would be stimulated by good rainfall conditions. For a 10% improvement in rainfall compared to the annual average would increase the quantity sold to milling plants by just over 13% (Ait El Mekki, 2000). Consequently, farmers' response to supplying mills would be guided essentially by the level of annual rainfall in production areas and in particular in areas of rain-fed agriculture where rainfall is favourable.

3.4.3.3 - The storage system

The total capacity for storing cereals using appropriate modern techniques amounts to almost 25 million quintals, almost one-third of which is stocked by industrial mills (Ministry of Agriculture, 1999). The storage infrastructure is not only inadequate compared to the quantities available each year but also suffers from poor geographical distribution, which can generate additional transport costs. The facilities are often located in major urban centres, and there is sometimes and glut in supplies, and the commodities are consequently stocked in the open air.

In the project for reforming cereals marketing in Morocco (PRCC) it was considered that there were numerous opportunities for investing in the storage infrastructure. The analysis of this project by Wilcock & Salinger (1994) induced the Moroccan government to give real precedence to resolving the storage problems in cooperatives and facilitating and encouraging private investment initiatives near production centres. The ADF currently awards a grant for building and equipping grain storage units (outside port activities), which ranges from 100 Dh to 150 Dh per tonne depending on the capacity of the storage unit to be built.

In addition, in the case of common wheat intended for the manufacturing of so-called national flour, the ONICL grants cooperatives and cereal traders a warehousing, maintenance and management premium fixed at 2 Dh/ql per fortnight. Furthermore, the ONICL pays the stocking organisations a resale premium fixed at 8.80 Dh/ql, which brings the price of resale to the industrial milling plants up to 258.8 Dh/ql. In the allocation of wheat to the milling plants, the programmes set up by the ONICL are taken into account according to the size of the quotas they are granted. It must be pointed out that what is known as a security stock of common wheat has been introduced by the ONICL amounting to a volume of 5 million quintals. It corresponds theoretically to a quantity which would cover crushing needs for a period of 3 months.

3.4.4 - Import trade system

Since the liberalisation of imports in 1996, the cereals tariffing system has been changed several times as the result of the requirements of the domestic market and WTO commitments. In all cases the system is based on double tariffs on the Cost, Insurance and Freight (CIF) price, account being taken of a lower limit established by the authorities for each commodity (floor price) and of a price targeting producers within the country. A basic rate and an additional rate are then applied according to the value of the floor price and the registered price. Simply applying an ad valorem tariff to imports would in fact have inevitably resulted in the accentuation of domestic price fluctuations following variations in the world rates. This type of possibility is not yet on the agenda, particularly as far as common and durum wheat are concerned, for which domestic price stability is still sought for socio-economic reasons.

The cereal protection system varies according to whether imports fall under the most-favoured-nation (MFN) regime of the WTO or under bilateral agreements signed with partner countries, in particular the European Union (EU) and the United States (US).

3.4.4.1 - Protection within the WTO framework

The current data on the system for protecting the four major cereals within the MFN framework of the WTO are set out in Table 3.6. Comparison of these data with the data on tariffs which should be bound reveals that the differences are great and

thus reflects the degree of actual commitment to access to the Moroccan market in the multilateral context.

Table 3.6 – The cereal protection system in the multilateral context (2004)

Commodity	WTO commitment				Protection applied		
	Basic tariff	Bound tariff	Tax	Total tariff (2004)	CIF floor price	Basic tariff	Additional tariff
	%				Dh/T	%	
Common wheat	190.0	144.0	15.0	159.0	1000.0	135.0	2.5
Durum wheat	224.0	170.0	15.0	185.0	1000.0	75.0	2.5
Barley	148.5	113.0	7.5	120.5	800.0	35.0	2.5
Maize	160.5	122.0	7.5	129.5	800.0	35.0	2.5

Source : Customs Department, ONICL (2004).

The value of the final tariff applied to cereal imports thus varies according to the variation in the world rates. Where the registered CIF price is lower than the CIF floor price, the import duty corresponds to the basic tariff. Where it is higher, an additional duty is levied on the slice above the floor price, and this generates a unit return on the final customs tariff calculated according to the following formula:

$$\begin{aligned} \text{Return on final tariff (in dirhams)} = & \text{CIF floor price} * \text{basic tariff} \\ & + (\text{registered CIF price} - \text{CIF floor price}) \\ & * \text{additional tariff} \end{aligned}$$

In the case of common wheat, for example, the CIF floor price is 1000 Dh/ql. Since the basic tariff and the additional duty are set at 135% and 2.5% respectively, the importer who pays the CIF price of 1400 Dh/T for his common wheat has to pay the Customs Department the following amount for the specific tariff equivalent:

$$\text{Final tariff} = 1000 * 1.35 + (1400 - 1000) * 0.025 = 1360 \text{ Dh/T},$$

which gives an ex-port price of 2 760 Dh/T with a customs tariff amounting to almost 50% of this price or even 100% of the CIF price. The difference between this and the tariff which could have been applied according to the WTO provisions is thus quite significant, a fact which shows the relatively high degree of openness of the Moroccan cereals markets with respect to the commitments made in the multilateral context.

When one considers the levels of the customs duties applied to imports, common wheat is still the most protected cereal with a nominal protection coefficient (NPC) estimated at 1.65 during the 2000-2003 period. It is followed by maize, for which

the NPC is around 1.50. Barley and durum wheat are the least protected cereals with respective NPCs of 1.28 and 1.12.

3.4.4.2 - The preferential agreements with the EU and the US

In the context of the Association Agreement with the EU and the Free Trade Agreement with the US, Moroccan cereals imports enjoy preferential treatment, which differs according to the commodities concerned (Table 3.7).

Common and durum wheat are subject to tariff quota restrictions, whether they are imported from the EU or from the US. Over-quota imports will continue to be governed by the MFN tariff. The importing of quotas is subject to a procedure of invitation to tender, which is fairly close to the import licensing system. This system is described in the Special Instructions (SP) drawn up by the ONICL with a view to *"defining the conditions for distributing the preferential tariff quotas for cereal and legume imports granted by Morocco in the context of Protocol no. 3 of the Association Agreement concluded with the European Community on 5 December 2003"*. The quotas in question are allocated by means of an invitation to tender for imports at preferential tariffs in return for the payment of a compensatory levy by the importers. This levy is intended on the one hand to help to reduce the forgone revenue resulting from the tariff quota restrictions, and, on the other hand, to help to protect national production indirectly. No preferential measure is granted for the import of either of these two commodities during the months of June and July.

**Table 3.7 – The preferential cereal protection system
in the context of the bilateral agreements with the EU and the US**

Commodity	Association Agreement with the EU	Free Trade Agreement with the US
Common wheat	Tariff quota of between 400 000 T and 1 060 000 T depending on the volume of national output 38% reduction of the tariffs applied to the quotas. No preferential measure during the months of June and July.	Tariff quota of between 280 000 T and 700 000 T depending on the volume of national output and increasing to 400 000 T and 1 060 000 T respectively after 10 years 38% reduction of the tariffs applied to the quotas. No preferential measure during the months of June and July.
Durum wheat	Annual tariff quota of 5 000 T. 25% reduction of the tariffs applied to the quotas. No preferential measure during the months of June and July.	Tariff quota of 250 000 T in the first year, increasing by 10 000 T each year. 25% reduction of the tariffs applied to the quotas during the first 4 years, followed by the reduction of the remaining 75% over the following 6 years. No preferential measure during the months of June and July.
Barley	Tariff quota of 100 000 T with a 20% reduction of import duties.	Reduction of the MFN duty over 15 years in equal slices.
Maize	Tariff quota of 2 000 T with a preferential rate of 2.5%.	50% reduction of the MFN duty the first year and 50% reduction over the following 5 years in equal slices.

Source : European Commission; US Department of Agriculture (USDA) (2005).

In the case of common wheat, the import quotas are determined according to the levels of national output, ranging from a minimum of 280 000 T to a maximum of 700 000 T within the framework of the Free Trade Agreement with the US. The import quotas will have to increase, however, during a 10-year transitional period in order to reach the levels agreed with the EU, i.e. between 400 000 and 1.0 6 million tonnes. Thus, if the harvest is higher than or equal to 3 million tonnes, the sum of the quotas from the EU and the US can amount to 680 000 T during the first year in which the agreement with the US enters into effect and 800 000 T after the 10th year. Conversely, if the harvest does not exceed 2.1 million tonnes, the sum of the quotas can amount to 1 760 000 T and 2 120 000 T respectively.

In the case of durum wheat, the free trade agreement with the US makes provision for a quarter of 250 000 tonnes with an annual increase of 10 000 T. This quota is lower in the context of the Association Agreement, being fixed at only 5 000 T each year. The sum of the quotas from both trade partners could amount to 345 000 T once the agreement with the US has been in effect for 10 years.

With regard to barley and maize, imports from the US will enjoy total exemption from customs duties after a transitional period of 15 years for barley and 6 years for maize. The Association Agreement with the EU, on the other hand, makes provision for annual tariff quotas of 100 000 T for barley with a tariff reduction of 20%. In the case of maize, this agreement introduces a quota of 2 000 T, which is subject to an import duty of 2.5%. As is the case with common and durum wheat, over-quota imports of barley and maize are subject to the MFN duty.

3.4.5 - Consumer assistance

Consumer assistance concerns national common wheat flour for a quota fixed at 1 million tonnes managed by the ONICL. This quota is opened to competition by means of an invitation to tender addressed to milling plants according to the provisions of the interministerial circular of 31/7/1996, which defines in particular the obligations of the various actors. The volume that is subsidised is distributed throughout Morocco according to regional quotas established by provincial committees.

The subsidy on national flour is estimated at 1 430 Dh/T, i.e. almost 44% of the cost price. The share of this subsidy has steadily increased since 1975, when it amounted to only 4% of the price received by the milling plants. Even if the price is officially fixed at 2 000 Dh per tonne of national flour, the pressure of excess demand leads to price increases of up to 35%. Furthermore, the national flour production and marketing system has always been described as fertile ground for fraudulent practices concerning the quality of the commodity. Supplies of poor quality grain and the application of crushing rates sometimes close to 90% are often cited as means used by millers to maximise their profits. The fixing of the price of bread manufactured with national flour also impedes the efforts to improve quality at bakery level.

In these circumstances, the subsidisation of the consumption of national common wheat flour creates an environment of speculation, which develops as soon as the commodity leaves the mills. Theoretically, the millers themselves, wholesalers and retailers should all benefit from the revenue related to the quota restrictions. The fact that needy population groups are not the exclusive target further exacerbates the inefficiency of the subsidisation system as a whole, since all consumers, including the most wealthy, can obtain supplies of this type of flour and bread at the subsidised price.

3.5 - Conclusions and recommendations: what should be the line of cereals policies in the future?

The Moroccan cereals industry has gone through several successive stages as political, economic and even climatic factors have evolved. After a long period of State intervention in production and consumption a phase of disinvestment was initiated within the framework of the structural adjustment programmes, involving in particular the establishment of a new vision of national production support and protection. In the course of these two phases the cereals production system was structured as the result of the policies pursued and the intensification programmes, which eventually led to **a marked imbalance in favour of common wheat production.**

Since the year when imports were liberalised (1996), the cereals sector has been at a decisive crossroads. With the WTO commitments and bilateral agreements on the one hand and the burden of structural and socio-economic constraints on the other, the mission of the administrative officers in charge of the sector, who are called upon to respond to the concerns of producers regarding the future of the industry, is no easy task. The last Free Trade Agreement signed with the US complicates this mission further in view of the importance of that country on the world cereals market.

Morocco's commitments to its trade partners do, of course, open new horizons for the economic efficiency of the country's agro-food production systems. They require a new vision of the structural reforms to be carried out with a view to strengthening the foothold of the Moroccan economy on the international market. In view of the socio-economic importance of cereals these commodities must be an integral part of any deliberations conducted in accordance with the requirements of such a vision. It is also difficult to give a clear-cut answer to the questions raised, however, since it is impossible to predict how political, macroeconomic and also natural factors will change in the future. The question of how to resolve contradictory questions from producers, consumers and the State itself can only be addressed in a context of consensus, which could involve in-depth examination of the issues at stake along the following lines:

1. Regionalisation of cereals production policy

An approach that endeavours to standardise agricultural policies cannot be efficient in the new context of the Moroccan economy. As far as cereals are concerned, the new approach must take account of the assets and constraints of the various production regions in order to arrive at an effective definition of any intervention. For the regionalisation of agricultural production must play an important role, particularly in the field of land use and the development of resources. The choice of cereals zones should be discussed again in the light of the new factors of access to the Moroccan market, and the commitments undertaken in

the context of preferential agreements must thereby be taken into account. This choice must be made on the basis of in-depth spatial studies with a view to highlighting the aspects of the profitability and economic efficiency and competitiveness of cereals in the various production regions. Measures should then be taken to consolidate the role of agronomic research, food technology and the industry throughout the cereals production chain in order to provide a sound basis for achieving better performance. The results obtained should also help to formulate proposals on alternative production possibilities which could protect producers' incomes in rural areas if cereal-growing is not economically profitable.

2. Revision of consumer assistance policy

The policy for supporting the consumption of national common wheat flour should be reviewed in view of its inefficiency in terms of the objectives pursued. Given the problems of fraud which can arise in a system of targeted subsidisation, alternative action could be taken in the context of eliminating the manufacturing quota for this type of flour. The quantities marketed could increase, and this could have a beneficial effect on consumer prices.

3. Action to strengthen the industry

If the institutional measures for steering the cereals industry are to be successful, it is imperative that steps be taken to strengthen the dialogue amongst all of the economic operators involved in this sector. They could be designed on the basis of deliberations on the regionalisation of cereals production. The establishment of regional cereal-grower committees would be an initiative which could organise the industry with a view to coping constructively with the constraints of the sector. At the same time, action should give precedence to the circulation of information in order to stimulate competition.

Appended tables

Appendix 3.1 - Evolution of the major cereals output in Morocco (1000 quintals)

Agricultural campaign	Common Wheat	Durum Wheat	Barley	Maize	Total
1979-80	4 800	13 310	22 097	3 327	43 534
1980-81	2 817	6 105	10 390	897	20 208
1981-82	7 772	14 062	23 338	2 469	47 640
1982-83	7 318	12 385	12 277	2 584	34 563
1983-84	8 182	11 713	14 046	2 640	36 581
1984-85	10 166	13 416	25 414	3 210	52 206
1985-86	18 278	19 813	35 629	3 068	76 787
1986-87	13 019	11 255	15 433	2 400	42 107
1987-88	22 534	17 659	34 540	3 580	78 314
1988-89	21 604	17 665	29 986	4 028	73 284
1989-90	19 972	16 167	21 376	4 356	61 871
1990-91	27 232	22 158	32 525	3 351	85 266
1991-92	8 804	6 818	10 807	2 156	28 585
1992-93	9 417	6 313	10 268	923	26 921
1993-94	31 809	23 423	37 199	2 000	94 431
1994-95	6 520	4 387	6 077	505	17 489
1995-96	36 460	22 700	38 311	2 351	99 822
1996-97	14 349	8 816	13 242	3 745	40 152
1997-98	28 341	15 444	19 700	2 005	65 490
1998-99	13 540	7 995	14 740	1 364	37 639
1999-00	9 533	4 274	4 668	950	19 425
2000-01	22 776	10 388	11 552	536	45 252
2001-02	23 252	10 315	16 690	1 989	52 245
2002-03	35 383	18 367	26 066	1 400	81 216
2003-04	35151	20248	27603	1500	84502

Sources: Ministry of Agriculture, Directorate of Vegetal Production (2005) ; National interprofessional office for cereals and leguminous plants (2005).

Appendix 3.2 - Evolution of the output prices of the major cereals in Morocco (dh/quintal)

Campaign	Common Wheat	Durum Wheat	Barley	Maize
1979-80	146	153	127	137
1980-81	163	185	147	168
1981-82	180	131	94	113
1982-83	150	181	135	145
1983-84	185	215	150	152
1984-85	182	250	153	176
1985-86	190	222	129	172
1986-87	200	236	128	174
1987-88	193	232	123	182
1988-89	211	253	129	188
1989-90	220	269	150	191
1990-91	231	271	188	190
1991-92	246	281	166	224
1992-93	262	325	237	231
1993-94	273	330	226	239
1994-95	244	276	155	226
1995-96	285	326	225	235
1996-97	239	280	164	216
1997-98	261	303	211	203
1998-99	262	301	226	220
1999-00	263	304	211	196
2000-01	270	320	294	206
2001-02	256	309	242	221
2002-03	253	292	167	212
2003-04	255	290	160	210

Source: National interprofessional office for cereals and leguminous plants (2005).

Appendix 3.3 - Evolution of cereal imports in Morocco (1000 quintals)

Campaign	Common Wheat	Durum Wheat	Barley	Maize	Total
1980-81	18 210	1	1 244	1 456	18 211
1981-82	22 441	382	2 430	1 963	27 216
1982-83	13 692	0	97	1 654	15 443
1983-84	19 615	0	58	1 774	21 447
1984-85	23 049	74	1 245	1 295	25 664
1985-86	19 224	0	96	1 777	21 097
1986-87	13 124	0	0	1 901	15 025
1987-88	20 905	0	36	2 383	23 324
1988-89	13 396	0	0	1 207	14 603
1989-90	10 605	0	0	898	11 502
1990-91	17 608	411	1 649	1 612	21 280
1991-92	14 748	379	1 768	2 032	18 927
1992-93	24 942	2 506	6 111	2 676	36 235
1993-94	23 281	3 202	3 308	3 342	33 133
1994-95	7 800	288	1 629	4 622	14 339
1995-96	25 908	3 478	3 249	5 751	38 386
1996-97	11 855	3 602	294	5 591	21 342
1997-98	21 786	5 416	1 878	6 469	35 549
1998-99	20 699	4 345	9 872	6 941	41 857
1999-00	22 540	5 297	6 768	7 883	42 488
2000-01	30 036	6 712	8 242	9 129	54 119
2001-02	23 386	5 484	7 699	10 381	46 950
2002-03	22 998	5 249	4 109	8 983	41 339
2003-04	19 624	6 772	1 395	12 265	40 056

Source: National interprofessional office for cereals and leguminous plants (2005).

Appendix 3.4 - CIF prices evolution of the major cereals in Morocco (dh/ql)

Campaign	Common Wheat	Durum Wheat	Barley	Maize
1980-81	92.08	114.64	93.68	85.46
1981-82	91.57	150.12	98.29	84.75
1982-83	114.14	172.88	136.21	122.47
1983-84	135.41	122.80	118.35	132.40
1984-85	125.88	126.46		131.49
1985-86	81.34	131.59		73.62
1986-87	82.35	119.76		77.33
1987-88	126.08	150.62	74.92	120.96
1988-89	143.23	97.70	77.33	110.63
1989-90	101.90	111.53	85.86	111.73
1990-91	102.74	110.95	82.71	81.84
1991-92	101.60	127.12	100.10	110.00
1992-93	113.80	130.00	98.50	100.70
1993-94	109.10	200.00	97.00	115.20
1994-95	109.90	210.50	100.20	109.30
1995-96	167.10	241.30	140.00	160.00
1996-97	150.00	222.00	131.00	141.00
1997-98	129.10	216.30	110.00	119.10
1998-99	123.90	148.90	95.00	119.20
1999-00	142.00	150.10	128.30	125.10
2000-01	162.00	148.30	137.00	133.90
2001-02	155.10	180.10	122.70	137.40
2002-03	148.00	200.20	142.30	129.80
2003-04				

Sources: Office des Changes (2005) ; ONICL (2005) ; Klonic Morocco (1993).

**Appendix 3.5 - Evolution of the IPC (Consumer Price Index)
in Morocco (1989 = 100)**

385 items

Year	IPC
1990	107.0
1991	115.6
1992	122.2
1993	128.5
1994	135.1
1995	143.4
1996	147.7
1997	149.2
1998	153.3
1999	154.4
2000	157.3
2001	158.3
2002	162.7
2003	164.6
2004	167.1

Source: Direction de la Statistique (2005).



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Annual report
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Centre International de Hautes Etudes Agronomiques Méditerranéennes

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