

A second criterion for identifying environmental issues of importance concerns their associated economic costs and benefits. For example, a certain resource, may in theory be able to provide long term economic benefits if managed correctly, but if mismanaged these benefits may be reduced, or even disappear. Alternatively a certain environmental problem may bring economic costs and rectifying the problem will reduce these costs. An example of the former would be the cultivatable soils of Syria, e.g. in the Euphrates valley, while an example of the second would be damage to infrastructure from soil erosion.

From these two criteria, reversibility and economic costs/benefits, it is possible to prioritise environmental issues into those that require immediate action and those that do not. The environmental issues of concern identified during the study of Edwards-Jones (2001) and an estimate of their reversibility and economic importance are shown in table 7.4.1 From this table it is possible to argue that the most important issues for immediate action are those with high economic impacts over the whole of Syria, and which are only reversible over the long term.

Table 7.4.1. Qualitative ranking of the reversibility and economic importance of several environmental issues in Syria. ‘Reversibility’ assumes that appropriate management is taken to enable the recovery process.

Environmental issue	Reversibility	Known economic impact of loss per unit area	Known economic loss over all Syria
Extinction of species	Never	Low	Low
Physical loss of soil (wind erosion)	Very long term (>100 years)	Very high	Very high
Chemical degradation of soil with heavy metals	Very long term (>100 years)	Very high	Medium
Pollution of groundwater with heavy metals	Very long term (>100 years)	Very high	Low
Loss of natural ecosystems	Long term (10-100 yrs)	Low	Medium
Depletion of groundwater	Long term (10-100 yrs)	High	Very High
Pollution of water bodies with nutrients	Medium term (4-10 yrs)	Low	Low
Pollution of water bodies with disease organisms	Medium term (4-10 yrs)	Medium	Medium
Salinisation of soils	Medium term (4-10 yrs)	Very high	Very high
Loss of Steppe grazing lands	Medium term (4-10 yrs)	High	Very high

Source. Edwards-Jones (2001)

The physical loss of soils appears to be the most urgent issue to be resolved, followed by depletion of groundwater, salinisation of soils and the loss of Steppe grazing. Thus, the issues of importance for Syria are clear: soil conservation, protection of ground waters, salinisation of soils and the grazing resource of the Baddia. It is worth noting that success in achieving environmental objectives is not necessarily related to any political system. Both laissez-faire capitalist systems, such as the one prevailing in the USA, bring environmental problems, as did the centralised systems of the former USSR and other countries. Indeed it is worth noting that in several developing countries the process of economic adjustment and the withdrawal of Government from central planning role has seen a worsening in their environmental problems. Several analysts now agree that under a more open system, there may be more of a role for Government in managing the environment than some free-market economists had previously thought. One vital part of environmental management is that a government must remove any

signals or incentives, which may be contained within sectoral policies, for citizens to degrade the environment. The removal of such incentives is as important as developing new policies to tackle the identified problems.

7.5 Allocation of Resources Between Crops

About 79 percent of Syria's rainfed land that is devoted to annual crops, is planted to wheat and barley. Some 58 percent of all irrigated land is planted to wheat and a further 21 percent to cotton. To prevent the majority of wheat and cotton producers from making losses, the producer prices of both crops are currently heavily subsidised by the Government. For both hard and soft wheat, the GOCPT has recently been paying farmers prices that are over 60 percent above estimated import parity. For cotton the GOCGM producer price has been about 30 percent above export parity. The GOCPT producer price for barley is currently approximately equal to import parity. However, subsidisation of barley will be required should world prices fall back from their current relatively high levels or should the country return to producing export surpluses once farmers no longer face drought conditions.

Thus, Syria is currently in a position in which two of its three main crops require subsidisation and the third may well need subsidising in the future.¹⁰ This contrasts with other field crops, such as lentils, chickpeas, and a set of horticultural crops which farmers can grow profitably at unsubsidised parity prices.

In the absence of large-scale devaluation, this subsidisation may need to persist for a number of years since, in the short-term, the potential for substituting other crops for wheat, barley and cotton is relatively limited. On rainfed land, other than for the possibility of planting small amounts of sesame and cumin, the scope for substitution is limited largely to lentils in zones 1 to 3 and to chickpeas in zones 1 and 2. There is no alternative to barley in zone 4 other than for use of the land for extensive grazing. On irrigated land, there is scope for planting lentils and vegetables. However, the scope for substitution in the short term is limited by logistical constraints in processing and, in the case of vegetables, by the limited domestic market and the need to develop international marketing capacity.

Thus, while over the long term there is considerable scope for changing land use, in the short term a large proportion of the land under annual crops will need to continue to be planted to wheat, barley and cotton. This, in turn, means that the profitability of these crops, may need to be maintained artificially. If this objective is not met, it will have major adverse consequences for agricultural employment and for the incomes of the nation's farm families, the majority of which rely heavily on producing one or more of these three crops.

The need to support wheat and cotton currently creates two distinct problems. First it has a high fiscal cost for the government; and second it requires a mechanism for delivering the support. The mechanism that has been employed by the Government is direct state acquisition of the crop by public establishments.

In the case of wheat, the situation is exacerbated by the fact that government policy is for bread – Syria's main staple foodstuff – to be sold at less than world price equivalents. This adds to the

¹⁰ The dominance of wheat is a consequence of government policy to obtain self-sufficiency. Cotton production was also deliberately expanded during the 1990s in response to prices in international markets that allowed Syrian cotton to be exported profitably without subsidisation. International cotton prices have subsequently declined. The area planted to barley has more than halved over the past decade but it remains the dominant crop in the drier arable farming areas where there are few alternatives.

fiscal burden and also requires a mechanism for delivery of the subsidy. The present mechanism is the sale of standard flour by a state establishment at a subsidised price.

The situation is further exacerbated by the large strategic reserve of wheat held by the government. Since this stock must be turned over regularly, this requires the Government to be a major buyer and seller of wheat.

The need is for some other means of providing price support to wheat, barley and cotton that has a lower fiscal cost and/or does not require direct government intervention. A proposal towards this end is made later.

7.6 Availability of Domestic Investment Funds and Domestic Savings

Growth needs investments, and especially private ones, in a setting of a more open economy. Investments, in turn need to be financed, and, worldwide, the major source of finance for investments is private savings. According to the results of the rural household survey conducted in 2001, the main constraint to increasing agricultural production was the lack of own savings or credit.

Savings mobilisation has been largely neglected in Syria. The reliance of the ACB on money provided by the Central Bank is evidenced by the fact that with a deposit base of SP 8616 million the ACB's loans outstanding are SP 40187 million, namely 14.6 times that amount, thereby heavily drawing upon the resources of other sectors of the economy.

As in many other respects of banking, the interest rates offered by various banks are uniform for different types of savings, irrespective of the bank in which one keeps the savings. The rates for current accounts have been 4 percent, and for bank deposits of 6 months to one year and those of above one year have been between 7 and 8 percent. The post office savings and investment bonds offer interest rates of 8 and 9 percent respectively.

The nominal interest rate on savings having remained constant for over ten years now, the attractiveness of the rate has varied depending on the inflation rate, and has been negative for the period before 1996. By deflating the dominant savings rate of 8 percent by the index of retail prices, table 7.6.1 illustrates the fact that when the "real" interest rate improved in 1997-98, bank savings deposits increased considerably. This also shows that the opportunity cost of capital in the informal market is not such a heavy counter-force as to dampen the effect of improvement in positive rates of return in the formal system. Although informal lending rates are cited as varying from 24 to 36 %, such markets are not fluid and well organised, access to opportunities may not be easy, and involve higher risks compared to keeping money in an institution having the backing of the government.

The following factors inhibit savings mobilisation. First banks do not have the freedom to design different savings products carrying different rates of return and cash flow features to meet varying savings and income-need characteristics. Second, rates and other terms being standard, there is a sterile uniformity among the banks and this lack of variation dampens any semblance of competition to attract savers. It is to be noted that while there is specialisation about whom each bank can lend to, there is no such limitation on which bank could be approached for a savings deposit. As lending rates cannot be varied by the management, banks are not able to provide incentives for good customers with large deposits to maintain a good account. Where agricultural credit is concerned, the low rate of interest based on 2.5 % discounting by the central bank to meet all lending needs, has taken away the incentive by banks to mobilise deposits costing 8 percent. In the current structure, there is little room for bank management to take the initiative of introducing innovations like "Islamic" banking with

profit sharing and other features to overcome the cultural hurdles to savings, borrowing and banking.

Table 7.6.1 Real Interest on Savings Deposits and Savings Growth

	1994	1995	1996	1997	1998	1999
General retail price index (RPI)	154	170	185	189	188	184
Change of RPI from previous year (percent)	-	10.4	8.8	2.2	- 0.5	-2.1
Savings interest of 8 percent minus inflation (real interest rate in percent)	-	- 2.4	- 0.8	+5.8	+8.5	+10.1
Savings deposits (Banks + Post Office + Investment Bond) (SP million)	141719	159535	179003	20404 1	22867 5	278437
Increase in savings from previous year (percent)	-	12,6	12,2	14,0	12,1	21,8

Source. Parthasarathy (2001)

7.7 Marketing and Processing Constraints

In order to design and implement a coherent strategy for the development of Syrian agribusiness, it is necessary to solve some internal contradictions (as, for example, that existing between a policy for agricultural production aimed at the generation of an exportable surplus, and the lack of any policy for export enhancement), to remove some blocking factors (most of them are situated outside the agricultural and food sector) and to develop some push factors, especially in terms of agribusiness chain organization and offer of services.

The lack of horizontal farmers' organizations and the bad quality of vertical coordination are among the basic problems in Syrian agricultural marketing. The only tool of supply management is presently the annual plan, which concerns only production functions, has decision points far from the individual farmer¹¹ and, also due to gradual liberalization of agricultural marketing, in recent years lost part of its capacity. Concentration of supply is necessary for implementation of standardization and grading and for reaching the "critical mass" needed in order to enter foreign markets and even to differentiate products on the domestic market (with a brand, or an organic foods label, etc.). It is also a way to facilitate vertical relations which, in turn, are necessary for quality management and in order to ensure a good transmission of the price signal through the marketing chain.

A starting point for this process of organization is the reorientation of farmer's co-operatives and agricultural chambers. At best, these structures offer some services, which are marketing pre-requisites, at the worst they are completely irrelevant for marketing. Co-ops have not been conceived as a marketing tool, and their re-orientation will be a difficult task. However, they are structures that already exist and it is more realistic to think of transforming them, through management reorganization, concentration and specialization, into a marketing tool than planning some new network supplanting the present structures.

Another important point for this reorganization is to provide legislative framework, as well as incentives (e.g. fiscal incentives or interest reduction on loans for specific projects) for integration contracts between farmers and processors. These contracts are useful for market stabilization, especially if price control is relaxed, and allow to increase the control on raw material quality, thus improving the competitiveness of processed products through reduction of processing costs and increase of final quality.

¹¹ While the Farmers Union is represented in the SAC, this organisation represents mostly co-operative farmers, and the Chamber of Agriculture, which represents mainly commercial farmers, is not represented.

An important service that is largely missing and needs to be offered to all the actors in the agro-food chain is market information. Now, farmers can choose when to sell or to which market they would carry their products only through direct information from traders. Foreign markets information, search of potential partners, insurance on export operations risk, generic promotion are some of the needs in this area.

The current pricing system for food products, that requires notification and prior permission for any price changes at the production level but even more at the wholesale and retail levels, is a major constraint for the development of an agro-marketing system. Even when official prices are not compulsory, they strongly reduce the flexibility of firm competitive behavior, affect negatively product differentiation and repress the rise of demand for variety coming from consumers. Its liberalization is a necessary factor in order to increase competition among firms, and hence their competitiveness.

Another blocking factor concerns exchange rate and currency access. While recent decisions have led to partial liberalisation, with individuals being allowed to procure their own foreign exchange, this does not concern foreign exchange through banks, which is still unavailable. The government has recently decided to allow the establishment of private banks, a move that would facilitate considerably the financing of private business. However, it will take some time before the first private banks are operational. Present constraints have two main negative effects; namely, they take foreign investors off Syria and are an obstacle for Syrian companies in their trade operations abroad.

Import restrictions are considered a protective factor for domestic industry, and indeed they are. However, they reduce the stimulus for quality and competitiveness, as it is demonstrated by the comparison between Syrian and other countries' products on foreign markets, and reduce the variety on the market, blocking the development of new potential business areas. While, in the present situation, a complete and sudden import ban removal would have destructive consequences; gradual but constant steps in this direction can be beneficial both to Syrian industry and consumers.

Syrian agribusiness sector needs the continuation of the effort started in the '80s aiming at the increase of private – both national and foreign – capital invested in agriculture and, especially, in the food industry. While proposals have been made to amend Law No. 10/1991, increasing incentives especially for foreign capital, analysis of the law and of the projects approved since its promulgation suggests that the constraint is not so much the law or the extent of its benefits, but rather its implementation.

As an example, Law No.10/1991 states that foreign invested capital and profits can be repatriated. While it is clear how this will happen for a project generating an export flow, as export sales returns can be available for repatriation, it is not clear how this would work in the case of projects oriented only to domestic market, as procedures are not defined.

Protection of intellectual property, which is, among other things, a necessary condition for licensing contracts, is almost absent in the Syrian food industry.

Limited access to credit, and more generally to financial markets, is a major constraint both in agriculture and, even more, in the food industry. In agriculture, the strict link between the credit system and planning system is a great factor of rigidity and potentially of distortion, if plan provisions are not accurate. It makes it difficult for the farmers to raise the needed capital for crops and livestock raising outside the plan. Loans are often available from middlemen who will trade farmers' products, but this restrains farmers' freedom and is an obstacle towards better horizontal and vertical organization. In the food industry access to bank credit is even

more difficult, as the banking system has been conceived and built in a framework where industrial sector was almost completely public.

While public control of interest rates has probably been beneficial to investors in a time when the Syrian economy presented a high inflation rate, presently it penalizes them, as inflation is zero or slightly negative and the real interest rates are highly positive.

7.8 Demographic and Social Constraints

The high rate of annual population increase, which in the past was 3.4 percent annually, but currently estimated at about 2.6 percent annually puts much pressure on natural resources. The high dependency ratio caused by the high ratio of younger age brackets puts much pressure on the heads of the family, but also results in large supply of young labour. Population less than 15 years of age amounted to 44.8 percent of the total population in 1999.

7.9 Farm Structure Constraints

The average size of holdings is small and has been decreasing over time. 38 percent of all holdings with land were smaller than 2 ha in 1994. The partitioning of a large number of farms into a number of separate parcels bars the efficient utilisation of land resources and the efficient use of mechanical equipment. While this structure has been the result of lengthy land reform policy, it nevertheless, is rigid, because of the legal environment that inhibits land exchange. The consequence is that much land remains fallow.

In addition to this farm structure, there seems to be continuing maldistribution of land. In 1994 about 2 percent of all holders (about 11600 holders with land larger than 50 ha), occupied about 23 percent of all cultivable land, and 16 percent of all irrigated land. There also seem to be a very large number of absentee holders.

7.10 Potential for Agricultural Development

Apart from the various constraints mentioned above, there appear to be several areas of unexploited potential. A strategy needs to take advantage of these. Such areas are:

- Considerable levels of technical expertise in the public sector in various aspects of agricultural administration, research, extension, irrigation, marketing, and planning.
- A large number of young entrants into the labour force.
- Some potential for intensifying land use under supplementary irrigation conditions in rainfed lands.
- Significant room for improving the efficiency of water use in currently irrigated areas, as well as in areas under supplementary irrigation.
- Climatic conditions that favour the production of high valued crops under irrigation (such as several fruits and vegetables).
- Potential for increasing yields of rainfed crops.
- Proximity to markets for products of comparative advantage to Syria. Such markets are the Arab countries, as well as other middle-East countries.
- An apparent capacity of private farmers to adapt quickly to changing conditions.

III. RECOMMENDATIONS

8. The Basic Elements of a Proposed New Agricultural Development Strategy

8.1 Vision and Objectives

A new strategy for agricultural development for Syria must be guided by a vision of the type of agriculture that is desirable and feasible in the medium and long run. The considerable and binding resource constraints that were discussed in the previous section, suggest the following for the future of Syrian agriculture. **Agricultural development in Syria should aim at an agricultural sector that is efficient and productive as well as sustainable in its use of resources, competitive in terms of external orientation, and providing adequate incomes to a large number of holders with equitable distribution of incomes and benefits.** Such a vision, if acceptable to the government of Syria, has considerable implications about strategy and agricultural policies. These will be discussed in the sequel.

Given this vision, and the changing constraints and economic realities facing Syria, it appears that a new strategy should aim at an agricultural sector that satisfies the following objectives, all of which are compatible with previously articulated objectives, as well as the directions of new policy initiatives.

- Promote self-reliance for the agricultural sector and the economy via greater reliance on comparative advantage;
- Utilise fully and improve productivity of natural agricultural resources, especially those of land and water;
- Increase labour productivity in agriculture;
- Achieve equitable levels of income distribution, satisfactory targets of poverty alleviation in rural areas, and contain rural-urban migration;
- Secure adequate levels of employment to the rural labour force;
- Securing adequate food consumption of low income urban and rural populations;
- Provide adequate supply of raw materials at reasonable prices to domestic processing plants;
- Increase the value of agricultural exports;
- Promote private investments as a major instrument for achieving economic development;
- Develop and expand economic relations with foreign countries, with a view to promoting exports, acquiring new technologies, and becoming a regular member of international organisations, such as the WTO;
- Achieve better utilisation of water resources for irrigation and other uses;
- Maintain environmental balance;

These objectives include most of the objectives contained in the “current MAAR Orientations”. However, they do not include certain objectives, which are deemed to be in conflict with both the vision articulated above, as well as the other objectives above. First they do not include the notion of self-sufficiency of main food staples. As indicated earlier, this is in conflict with the notions of comparative advantage, improving productivity, as well as export orientation. It is also contrary to the notion of the best utilisation of natural resources, as increased productivity must be obtained by using each resource in the activity that produces the highest income for the economy.

The objectives also do not include the one about “securing” the supply of raw materials to domestic plants. There is no reason that the supply of raw materials for such plants must all be produced domestically. If it is cheaper to import some raw materials, and domestic plants can produce internationally competitive products with them, restricting supply to domestic sources involves a cost to the processing industry and the economy at large. Protecting domestically produced raw materials is equivalent to a tax on processing industries. Given that many industries that transform agricultural raw materials such as cotton, sugarbeet, fruits and vegetables, etc. are labour intensive, and that a major objective of the government is to enhance labour intensive manufacturing, restrictions on raw material processing to domestic sources only implies considerable loss of manufacturing jobs.

The objectives above are also slightly differentiated from those articulated in the “Orientations”. For instance, one objective there is to improve producer income. This amounts to increasing the value added of agricultural production, and if this happens it implies increases in the incomes of those that produce agricultural products. However, there are many ways to increase agricultural production. If, for instance agricultural production is increased via capital intensive methods, then the increase of incomes will accrue to capital and land owners, while the number of workers employed will decline. This is clearly contrary to the overall objectives of increasing rural employment limiting rural-urban migration and promoting equitable income distribution. For this reason it is deemed more appropriate to aim at increasing labour productivity in agriculture. The latter implies improved incomes for those working in agriculture, and by extension those working in non-agriculture.

Similarly, the above objectives do not include the objective of expansion of cultivated area, through increases of irrigated and rainfed land, as is indicated in the “Orientations”. While some expansion of irrigated areas is possible in water basins that have water surplus, it is deemed that it is more pressing instead to promote better water utilisation and conservation in existing irrigated areas, under current agricultural production technologies. Also expansion of rainfed areas, such as via derocking of hilly and mountainous areas maybe incompatible with soil conservation, which was seen above to be the one of the most pressing environmental problems.

Finally one of the objectives in the “Orientations”, namely the one about an increasing contribution of agriculture in GDP, is inappropriate for a growing economy. In all growing economies, agriculture tends to grow at rates slower than those of non-agriculture, thus decreasing the contribution of agriculture in GDP. This is compatible both with growth in agriculture as well as growth in labour productivity in agriculture. The objective of increasing the contribution of agriculture in GDP, given historical development experience of many other countries, amounts to an objective of overall slower growth of the economy, and is hence not appropriate for Syria.

8.2 The Main Aspects or Principles of the Proposed Strategy for Agricultural Development

A strategy comprises two main parts. First, it outlines the main directions or orientations or principles on the basis of which various policies are designed. Second it specifies in more detail the policies and instruments needed to realise the overall strategy. It is important for a strategy to be based on general principles, as otherwise the policies recommended cannot be easily justified.

Given the overall vision, and the general objectives for Syrian agricultural development, outlined in the previous section, we first outline the basic **strategic principles** on which Syrian

agricultural development could develop in the near and medium term. These principles are basic ideas that are meant to provide the overall framework, and essentially are **the key ingredients of the proposed strategy**. They are meant to indicate **the philosophy** that is behind more specific policies. Such a philosophy or strategy must be based on the objective social conditions of Syrian agriculture, the possibilities for development, and the overall future vision and objectives. The principles outlined below are not all new to the Syrian authorities. Some have already been included in previous strategies, while some others imply a new approach and philosophy. They are all included here, however, in order to provide a coherent framework.

The **first principle** that is proposed as crucial to provide the basis for an agricultural development strategy for the medium term is that future **agricultural development in Syria should be based on intensification of current production structures and methods, along lines of comparative advantage, coupled with more efficient, conservation minded, and labour intensive production methods**. This principle is proposed as an improvement to the principle, embodied in all plans to date, of increasing production via cultivated and irrigated area expansion.

While there is still some room for decreasing the amount of fallow land, and expanding irrigation in some water basins with surplus water, Syria has largely reached the limits in terms of cultivated land and land under irrigation. Hence, the major avenue through which production can increase is through land intensification. The intensification is necessary in order to continue the increase in production that is necessary in order to improve rural incomes. Furthermore, intensification is necessary as resource use and especially water and soil conservation are necessary to preserve the production potential of Syrian agriculture. Efficiency improvements are necessary as the land and water resource bases of Syrian agriculture are reaching their limits of use, and increases in production, and hence incomes can only come through more efficient utilisation of these resources. Land intensification implies considerable technological improvement, as well as extension effort to disseminate the knowledge. Of course, the key question is to provide motivation and incentives to producers to be more efficient and conservation minded.

The idea, embodied in the above principle, that intensification should be labour intensive, is required in order to promote equitable income distribution and diffusion of the fruits of growth to a large number of rural families. This has considerable implications for the type of research and technological improvement that should be promoted in Syria.

The **second principle** on which the agricultural development strategy should be based is that **any planning of production or resource use should be based on providing to farmers appropriate incentives, and not through coercive mechanisms**. It has already been discussed that the current mechanisms for planning are many times not compatible with producers' own desires. The consequence is that producers either do not obey the licenses, or choose not to obtain a license at all. Both actions lead to large deviations from desired plans, to farmers who are not satisfied with what they are obliged to produce, and to unsustainably high water use. Clearly, any signals must be compatible with farmers' own production objectives. In particular, the economic signals that are given to farmers, must not be internally contradictory, and room should be allowed for farmers to adjust to the provided signals. It was already discussed that the current practice of providing farmers with both price signals, as well as quantity signals, in terms of the amounts of land planted to different crops, and inputs to apply, is not internally consistent, and this is what has given rise to non-compliance with the licenses and excessive water use.

The major reasoning behind this principle is the following. First, the current system of planning through production licensing, implies a very high economic cost of enforcement. This cost is first monetary, as a large apparatus of planning, as well as extension must be devoted to the preparation and enforcement of the plan. Secondly, however, and more importantly, the personnel and other resources involved in this type of planning could be much more productively employed in other parts of the agricultural production and marketing system. For instance, the many extension agents could be released from their enforcement tasks and charged more with educating farmers to apply modern production and quality oriented production and post harvest handling techniques. Third, there is a multitude of conditions and constraints that apply locally and are specific to every village and farmer. These are impossible to know by any planning authority, and hence some freedom should be allowed for farmers to optimise their production orientation, as they are the ones who know best the specific conditions and constraints that apply to their case.

Currently, the overall indicative regional area allocations and product mix are set by MAAR, and then translated to the local, district, and village levels through regional, and local planning authorities, by largely asking individual farmers to conform to the same overall area allocation and product mix, as the overall regional plan. This on the one hand negates the specificities of each locality and farmer, and on the other hand, by dictating the area of the major crops, largely obliges the farmers, because of technical reasons, such as rotations, to follow specific production patterns. This is quite inefficient, and must be changed if the agricultural production is to be intensified in the future.

The **third principle** comprising the strategy for agricultural development in Syria should be that **the orientation of agricultural and food production should be organised within a context of an open and export oriented agricultural sector**. This is necessary in view of the planned opening up of the Syrian economy, and the envisioned international and regional agreements. The principle implies that much more attention should be given to products that can either be exported, or can compete adequately on quality and price with importable similar products. This principle implies a fundamental rethinking of many current policies and practices, as until now the major thrust of Syrian policy making and planning was inward oriented and aimed at import substitution as well as providing self-sufficiency for several food products. **The notion of protecting all domestic raw material and food industries, and self-sufficiency of some food staples, are contradictory and incompatible with an open and export oriented agriculture**. It is also incompatible with the quality and marketing improvements that are needed to enhance exports. Furthermore, a more open economy is incompatible with the command and control type of production system, currently in operation in much of Syrian agriculture. Hence the explicit strategy of the Syrian government to open the economy and make it more export oriented, implies that these various previous principles, on which many current policies are based, must be redefined.

The **fourth principle** of the strategy that is proposed is that **agricultural development should be seen as part of an overall rural development, and labour employment strategy**. It was seen earlier, that the rural sector of Syria is characterised by excess labour, and by considerable poverty. If the objective is to improve the incomes of those in rural areas, and to contain migration out of rural areas, the main avenue is the provision of rural based adequate income sources. Such sources of income do not necessarily have to be agriculture based, but agriculture, via modernisation, intensification and increased value of output, can provide the impulse for other labour intensive rurally based activities that can provide increased incomes to rural residents. These increased rural incomes, in turn can provide the stimulus for non-agricultural and industrial activities in non-rural areas, so as to promote overall growth. This agriculture led

industrialisation strategy has been applied in the past very successfully by many currently developed countries, with initially large agricultural populations and low income low technology agricultural sectors, such as Japan, Taiwan, and Korea, and is currently applied with considerable success in countries such as China and India.

The **fifth principle** of the strategy that is proposed is that **the organisation of production, marketing and processing of agricultural products should allow in the short and medium term, both private as well as public agents to participate in a non-discriminatory way in all aspects of the agrofood chain.** Currently, while private agents have been allowed, alongside the publicly owned enterprises, in several areas of marketing and distribution, the public sector has kept the monopoly of marketing, processing and distribution of cotton, sugarbeet, and tobacco, and still keeps a dominant position via import and other domestic restrictions in several other areas of the food chain, such as wheat. This is incompatible with the objective of opening up the economy, and the envisioned transition to a more mixed economy. The current policy regime discriminates against private companies that compete with public ones, for instance in the provision of bank credit, and is merely protective of the public sector companies, without any other economic rationale. In fact it seems that it restrains the development of much needed private investments. It will be very difficult to attract domestic and foreign investments in the agrofood sector if it is perceived that the public sector discriminates against the private sector. The principle proposed does not imply the closing down or sale of any public companies. However, simultaneous operation of both private and public enterprises will provide incentives for public companies to become more efficient, and competitive, something that is needed in the context of a more open environment.

The **sixth principle** is that **the role of the public sector should be gradually redefined to include correction of market failures, regulation (not control) of markets, and redistribution.** In the past the attitude towards agricultural markets was one of direct control of every aspect of production, marketing, and distribution. Much of this attitude is still present today, as evidenced by the emphasis on detailed production planning, area and production targets, and price controls. It is proposed that as a matter of principle and strategy **the role of the public sector in the organisation of agricultural markets should be reoriented as one of regulation, rather than one of command and control.** This aspect of the strategy does not necessarily imply a reduction in the size of the public sector that is concerned with agriculture. However, it implies a thorough re-examination of the functions of the public entities involved in the various stages of production, marketing and processing, and **reorientation towards provision of public goods, and services to producers and other market agents,** rather than direct control of decision making of private agents. This will restore to farmers much of the responsibility for making independent production and marketing decisions, an ability that has been weakened through the operation of the licensing system. The current rigidity of farmer decision making that is imposed by the plan needs to be loosened in order to allow a transition to a more intensive and quality based agricultural sector. This of course implies **a fundamental change of current policy thinking from one that assumes that the government knows best, to one that acknowledges, trusts, and respects the wishes of the individual farmers.** The farmers should not be regarded as production units to be guided and controlled from the center, but as self-interested producers that can promote the development of the country through the increase in their own incomes and welfare.

There will always be a significant role of the public sector in trying to correct market failures (such as the failures occurring in the water sector, or the grazing areas of the Badia), in regulating markets (so as, for instance, not to allow exorbitant price increases or major price declines of key foods), and redistribution (so as to favour the poorer segments of the

population). However, none of these functions requires the monopolistic control of any market, or the detailed control of production and marketing.

The seventh and final principle concerns **the timing of any proposed reforms**. Given the fast changing international environment and the increased competitive pressures from internationalisation, one can envision a faster pace of reforms for the agricultural sector of Syria compared to the past. One could argue that given the considerable inertia inherent in the current structures and system of planning and control in Syria, suggested in the “Orientations” document, it is not prudent to make sudden and large changes. Sudden changes, one might say, can lead to unexpected and undesirable consequences, as the experiences of the transition of formerly centrally planned economies in Central and East Europe and the USSR to a market oriented economy have shown. However, Syria does not start from such a totally controlled economy. A process of transition has been in operation since 1985, and there already is considerable private sector activity in many areas. This implies that many aspects of the economy of Syria are already operating under a mixed private public system. Furthermore, the fast increase in population creates an urgency for changes to improve income opportunities, and the external pressures will become larger if Syria desires to integrate further with the world economy. This suggests, and it is proposed as a matter of strategy, that **the process of adaptation and transition to a more market oriented but regulated agricultural sector proceeds at a fast pace**.

The above seven main principles constitute the core of the proposed strategy that is suggested as crucial for the future agricultural development in Syria. They set the framework and principles on the basis of which subsector strategies can be designed and implemented.

8.3 Who will Produce the Marketed Surpluses of Agricultural Products in Syria?

Agricultural strategy and policies must be aimed ultimately at producers. The government of Syria is correct in being concerned about agricultural production growth as well as adequate income for the many rural participants. The policies of area controls, coupled with the system of input and credit subsidisation via licensing and monopolistic public procurement, have assured in the past that many smaller farmers, would be eligible for short term production loans, and that any producer price subsidies could reach the smaller producers. However, the evidence presented in part 1 of the report, and discussed earlier in this report, suggests that over time, with the weakening of the system of area controls, there has been a significant decline in the number of loan recipients from the ACB, coupled with an increase in the average size of loan. This suggests that over time there are fewer loan recipients and the average loan of ACB is becoming larger. These developments must be judged against the facts that both the total number of farms has increased over time, and the average size of farms has decreased. Also the allocation of subsidies, which is tied to the amount of area planted and area irrigated, seems to be highly regressive, with the larger producers receiving the bulk of the subsidies. All this suggests that the current system is over time benefiting a smaller number of larger farmers, and this is contrary to the government policy of redistributing income and benefits to the rural poor.

It is interesting and important in this context to inquire as **to who are the major producers of marketed agricultural surplus** in Syria, and **who are the producers likely to increase marketed production in the future**. It is clear, that while small producers might be able to obtain some income from farming, their production may be not more than enough to satisfy domestic consumption needs. In other words, one would expect that small producers would sell a smaller share of their output, compared to the large ones, in order to satisfy home consumption needs. This is indeed verified by the results of the farm household survey done for this project. According to these results among farms of size less than 1 Ha (10 donum) the share

of wheat produced that is sold is zero. In other words all the wheat produced by these small farms is consumed by the households and not sold. Hence no matter how high the wheat price is, these farms cannot benefit since they do not sell any product. The share of wheat produced that is sold for farms of the next size class, namely those with area between 1 and 5 Ha is 0.58. The shares of the next three size classes, namely those with area between 5-20 Ha, 20-50 Ha, and larger than 50 Ha, are respectively 0.77, 0.85, and 0.98. In other words it is larger farms that market the bulk of their product, and hence produce the largest amount of marketed wheat production, and consequently obtain the largest benefits of the supported prices. The same type of result obtains for most other food products, as was seen earlier for cotton.

Similarly, one would expect that larger farmers who produce large amounts of food products would be able to satisfy larger shares of their home consumption requirements from their own production. Table 8.3.1, however, does not support this hypothesis. In the table it is shown that except for few products, such as poultry meat, fruits, and vegetables, for most other products, the households with smaller farms satisfy a larger share of their home consumption from products produced on their own farm. This suggests that the small farms in Syria are not the main suppliers of several strategic products to the market, and that the bulk of production that is marketed comes from medium and larger farms. However, it was seen earlier that the number of small farms has increased over time. This suggests that **over time a greater number of farm households are operating smaller average amounts of land, and they produce mostly for home consumption, at least as far as strategic products like wheat are concerned.** This does not appear to be the case for fruits and vegetables, which are two classes of products where Syria appears to have comparative advantage. This suggests that the bulk of marketed production for products such as fruits and vegetables comes from small farmers, while the bulk of wheat and (as was seen earlier) cotton production comes from larger farmers. This suggests that **if the Syrian government desires to support the incomes of smaller farm households it should concentrate on intensifying and increasing the value of production of products such as fruits and vegetables in which Syria has comparative advantage, and which are produced and marketed by smaller farms.**

Table 8.3.1 Shares of household consumption of major food products that are produced on the household farm (percent)

	Farm size classes (donum)					Total
	0 – 10	>10 - <=50	>50 - >=200	>200-<=500	>500	
<i>Average proportion of home consumption produced on farm (%)</i>						
Wheat	100,0	28,3	15,9	7,2	10,2	20,1
Other cereals		70,0	58,3	13,6	34,8	40,8
Mutton, lamb, goat meat		2,0	66,9	77,5	4,0	60,8
Poultry meat		50,0	75,3	62,5	100,0	70,2
Milk	58,8	88,8	71,0	57,8	9,0	69,2
Cheese	100,0	88,0	74,3	44,8	20,0	69,2
Eggs		92,5	94,1	100,0	100,0	95,4
Fruit excluding olive oil	27,1	48,9	71,4	100,0	100,0	62,2
Vegetables	48,8	77,5	83,2	86,1	50,1	77,2
Potatoes	100,0		8,5	2,0	0,1	19,4
Olive oil	90,0	65,7	70,3	32,9		63,1

Source. Farm household survey 2001.

On the other hand it is not to be denied that **the medium and larger farmers are those that are likely to produce the bulk of marketed surplus of agricultural products in Syria in the future.** These farmers are largely commercial ones, namely with large shares of their products

that are sold. The strategy towards these farmers should not be one simply of income support. Income support for these farmers has the tendency to increase their overall farm profits, without increasing efficiency, and tends to make them more capital intensive. Evidence for higher capital intensity among larger farmers was exhibited in the first part of this report, and a hypothesis is that this tendency has been the result of the specific products support policies followed in the past. The approach towards these operators should aim at making them efficient in their use of resources, technologically advanced, environmentally sustainable, and internationally competitive. It is only in these terms that these farmers can contribute in the overall growth of Syria and not drain financial and other resources from other sectors of the economy.

8.4 Instruments and Policies in the Product Markets to Implement the Proposed Strategy

In this section the major policies and instruments that are proposed to implement the proposed strategy discussed in section 8.2 will be outlined. The recommendations are based on a **fundamental principle of policy design**. This is that **the best effectiveness of policy instruments obtains when each policy instrument is designed to deal with only one policy objective**. A corollary to this principle is that **the government needs at least as many policy instruments as objectives**. In other words there could be more than one policy instrument that targets a given objective, but it is not possible to utilise one policy instrument to target two or more dissimilar objectives. **Another fundamental aspect of policy design is that a policy instrument should try to operate directly on the target that it seeks to affect, and not indirectly**. For instance, if the desire is to increase production of a product, the first best instrument is a production subsidy for that product. A tariff, for instance, on the imports of that product is an indirect way of subsidising production, and is inferior to the direct policy. These are fundamental principles, which, however, seem to have been violated in the past by Syrian policy makers. For example, the current system of planning areas planted, is designed to control water use, but it is utilised both as a way to control water use, as well as a way to direct production, and also to increase farmers' incomes. In other words there is one policy instrument that tries to achieve two or three objectives simultaneously, and it is no surprise that it cannot achieve any one of them well.

8.4.1 A New System of Production Planning and Water Use for Strategic Products

As analysed earlier, the major rationale for the current system of production, which is based on an annual license to produce, is both to guide agricultural production towards desirable targets, and at the same time to control the utilisation of water, as well as support incomes of producers. This system puts very harsh restrictions on individual farmers, and cannot possibly be compatible with the myriad of technical specificities that exist in each farm, nor with the overall desires of farmers. It was seen that it has created a culture of non-compliance, which undermines the credibility of the government and the MAAR. The major problem with the current system is that it is not compatible with individual producer incentives, and it has a very high cost of enforcement. It is also very expensive in terms of financial resources, which makes it unsustainable financially for a country of the level of development of Syria. Nevertheless, the producers obtain the licenses, as these are the only way with which to obtain subsidised inputs and credit. However, the system has tended to be utilised more by the larger farmers, who end up obtaining the bulk of the subsidies, while not complying to a large extent with the terms of the licenses. Hence it is inequitable. This suggests that there is a need for a better system of guiding area allocations, production, and water use.

The current system dictates both areas planted as well as prices for the strategic products. The producer prices are defined on the basis of national costs of production calculations, and do not

take into account the supply responsiveness of farmers. In other words they do not consider the question, which is fundamental from an economic perspective, of “how much area are the farmers likely to plant, and what amount are they likely to produce with the given prices?”. The planning process does not even pose this question, and tries to set independently the areas that should be planted to various products. This is again evident in the “Orientations” document that has been produced by the MAAR, which includes detailed planned areas and production for all crops. However, it must be realised that **area and production targets and prices cannot be both independently specified in an agricultural economy characterised by individual private farmers**. This is because there are many independent decision-makers whose production decisions cannot be controlled in an open economy system. The attempt to specify independently both areas and prices has resulted not only in non-compliance, but also in a very high cost of enforcement, a cost that could be easily avoided and made available for other productive uses. Hence **it is of fundamental importance to the proposed strategy that the current system of area and price controls for strategic products be redesigned**.

It is generally acknowledged by the government that if the area controls were abandoned, and only the prices were set at the current levels, then farmers would rush to produce larger amounts of products such as cotton that are heavy water users, and hence would violate the water control objectives of the government. This is prime evidence that the government acknowledges the incompatibility of current prices with current area targets.

There are several options to coming to terms with this major problem. One would be to abandon area controls, but lower the producer prices of strategic products that are offered by the public purchasing agencies to levels where areas allocated and production would not be above the targets desired for sustainable water use. In other words the offered prices would become compatible in the aggregate with the production decisions of farmers. The government would not have to maintain the monopoly of purchasing under such a scheme, but if the offered prices by public agencies are still above parity international ones, the producers would obviously prefer to sell to the public enterprises.

This indirect system of production control is the one utilised in most industrialised countries, not always with desirable outcomes, as it is difficult to predict the supply response of farmers both in the short term, but also in the longer term. The experience, for instance, in the EU, with this type of control has been that farmers, when given prices far above those prevailing in world markets, without any area or production quantity control, rushed to increase production of these products (such as cereals, beef meat and milk, sugarbeets, cotton, wine, and others). The result was the various surpluses that have been experienced periodically since the late 1970s and 1980s in the EU. These surpluses had to either be stored at high cost, or exported with expensive export subsidies, a fact that has created all kinds of trade problems with EU trading partners. In an effort to control production without reducing prices, the EU has instituted “guarantee thresholds”, namely maximum aggregate production levels at which the prices to producers are guaranteed at certain high levels. The individual producers are not required to produce specific amounts, but are free to produce whatever they want. It is only in the aggregate that the production guarantee level is set. When in an EU country these maximum guaranteed production levels are surpassed, then the prices to all producers in the country are reduced by some formula, according to the degree of surpassing the aggregate production quota. In other words the “punishment”, in terms of lower prices is collective. The individual EU member countries try to institute some system of allocation of production quotas so that the ceiling is not surpassed.

Given that currently the domestic Syrian prices for the main strategic products are far above parity international prices, abandoning area controls but maintaining the existing price levels

would inevitably lead to expansion of production of the two most important strategic products, namely cotton and wheat. Hence under such a policy the government would have to lower considerably the prices offered to producers if it wants to maintain or lower the area allocated to these two crops. This may not be desirable, given the objective of maintaining incomes of farmers of these products. Furthermore, given the uncertainty about the supply response behaviour of producers, it will be difficult to estimate the domestic price that would be compatible with the desired areas planted.

Another policy option to deal with the water control problem, would be, just as in the previous option, to rely only on prices but instead of directly setting domestic prices, concentrate only on trade controls, and let the market determine the domestic prices and quantities produced. In other words, with this approach, all the government would set is import tariffs and/or taxes for each type of agricultural product, or in the case of exportable products, export taxes or subsidies. Private and public trading companies could be allowed to both purchase crops and compete for supplies.

If trade in these products was then free, namely subject only to the various tariffs, subsidies and taxes, and without any other quantitative controls, such as import or export bans, or import and export quotas, then the operation of the market would ensure that the domestic prices (after transport and other transaction costs are taken into account) would be in line with the international prices plus the various tariffs and taxes. Given that international prices are variable, and fluctuate from year to year, such a policy, if the various taxes and subsidies are fixed over time, will imply variable domestic prices, which may not be desirable for some Syrian products, but such a system already exists in several products that are exported, like lentils, chickpeas and fruits. If it is desirable to have fixed domestic prices, then the trade taxes and subsidies would have to be variable, much like the variable levy for most agricultural products that has been instituted in the EU, precisely to keep domestic prices fixed in the presence of variable international prices. However, the WTO rules forbid this type of policy unless it operates within the maximum tariffs which the countries have agreed to apply (the so-called “bound tariffs”).

The third option would be to maintain only area controls, as is currently the case, via the current production licensing system, but liberalise the trade in strategic products, by allowing private traders to operate alongside public ones. Under such a system, licensing would not oblige the license recipient to sell to public enterprises only. Also domestic prices would be free to find their equilibrium level via supply and demand. A system of minimum support prices could be instituted, namely so that prices do not fall below a predetermined floor. The public enterprises would be authorised to buy unlimited quantities at these floor prices. Under this system, the role of public trading companies would be transformed to one of supporting the minimum prices, but otherwise would not change much. The advantage of such a system would be that it would ensure that areas planted would not expand beyond what is deemed desirable by the government, subject, of course, to the problems of enforcement and control that currently exist. However, domestic prices will tend toward international parity ones, which for the main strategic products are much lower than current domestic producer prices. To avoid this, the system could be combined with the system of indirect price control via trade instruments, to keep domestic prices at desirable levels. This system would be quite similar to what is done currently, except that it would abolish the monopolistic control of trade in the main strategic products by public enterprises, and would substitute trade measures to control prices, rather than the direct method of monopolistic purchasing currently employed. The proposed system would not, however, avoid the problems of enforcement and non-compliance that are inherent in the current system.

A final option, and the one that is proposed here, is a **transformation of the current system of agricultural production, which is based on a license to produce, to a system of agricultural production based on a license to sell for the main strategic products**. This basic idea, which in practice will be shown to be not far from what is currently applied, but is conceptually quite different, and avoids several of the problems of the current system, will be elaborated in the sequel.

The proposed system is similar to the system of the so-called **guarantee quotas** or **maximum supported production** that is in place in the European Union, but with some key differences. The idea is that each farmer will obtain each year a **license** that entitles him to **sell** a quantity of a supported product up to a certain amount at given prices to the official public marketing agency for the product. In other words the farmer will be able to sell at the guaranteed price, which normally will be above the international parity price, but only up to the amount specified in the license. If the farmer produces more than the amount indicated in the license, then he would have to sell it in the private market, at whatever price the private market achieves. This free market price does not have to be equal to the international parity price, as the institution of trade measures could ensure that there is a difference between domestic and international prices.

A **minimum guaranteed floor price** could also be established, that is slightly below international parity prices (including whatever trade measures are in place), at which the public marketing agency could buy any offered quantities above the specified maximum amounts for each license holder. In this way for each product for which the government intends to maintain a strategic interest, there would be **three prices in each year**. The **guaranteed price**, at which the public agency will purchase amounts smaller or equal to a maximum specified amount, the **open market price**, at which all other transactions can take place, and the **minimum support price**, at which any amounts offered would be purchased by government agencies.

A key aspect of the system as envisioned is that the **licenses to sell should be tradable in the open market**. However, the **total amount of product for which selling licenses would be issued would be specified on a regional basis by the boundaries of the water basins**. In other words the licenses to sell would be issued to producers based on regional capacities to produce, especially as far as water use is concerned. Each license would be specific to a water basin or region. However, the purchasing agency in a given region could buy, say wheat or cotton with licenses from any region. If a person brings say wheat for sale in Aleppo, with a license issued in Aleppo, then the agency would pay the agreed guarantee price. However, if the same person brings in wheat to sell but with a license that was issued in Hassakeh, then a penalty could be imposed, in terms of a reduced price. This penalty should be higher than the average cost of transporting wheat from Hassakeh to Aleppo. In other words the prices paid by the various regional agencies would be highest only for the license issued in the given regions, and lower for products brought in with licenses issued in other regions. This would not totally prevent, but certainly discourage the sale of product in a region with licenses obtained in another. The discouragement would be high or even prohibitive if the price differential are high. This aspect of the proposed sale licensing system implies that a license does not have to indicate the name of the recipient, but only the region in which it is issued. Otherwise it would be a tradable piece of certified paper. This would simplify considerably the administrative cost and the bureaucracy of the proposed system.

Another key aspect of the proposed system is that **all licenses to sell would be valid for only one marketing year**. This is necessary to allow the government the flexibility to adapt the system given exogenous and unforeseen developments, as well as other objectives.

A producer obtaining a license to sell could either sell his license to others who decide to produce more than their licenses, or in turn if he desires to produce and/or sell more product at the guaranteed prices, he could try to buy in the open market enough licenses to achieve the quantities desired. One aspect of this system would be that a trader could purchase licenses from the farmers, at the same time as purchasing their crop, and could deliver the product to the purchasing agency. Of course in such a case the farmer would not sell his crop to a trader unless he receives a price close to the one offered by the public marketing agency. This would ensure that farmers would concentrate on producing, and traders would continue doing what they know best, which is trading.

The fact that licenses would be traded among producers and/or traders does not guarantee that production for sale in one region would occur only within the specified region. It could happen, for instance, that a producer that has a license to sell a given quantity of wheat in Al-Hassakeh produces more wheat than what he can sell at the supported price. If there is a producer in another mohafaza, say Aleppo, who has not been able to produce the maximum amount specified in his license, and has not been able to sell his license for the excess amount that can be sold, then he could sell his license to the producer in Al-Hassakeh, and wheat from Al-Hassakeh would be sold to the marketing agency in Al-Hassakeh, but with a license to sell in Aleppo. Of course, as indicated above, such a producer would lose, as the sale in the agency of another region would bring a lower price, but that price could still be higher than the open market price. This would prevent cross hauling of wheat, but also ensure that wheat from the most profitable and efficient regions would be produced there.

The proposed system would help develop an open market for these sale licenses. Such a market would help to correct for the errors that are inevitable in the current planning system, namely those involving the precise allocation of areas. Planning would concentrate on the aggregate aspects, where planning can be quite useful, and which the individual farmer cannot see. On the other hand the open market for licenses would give freedom to the system to find the optimal allocation of areas and production, within the given water basins. Furthermore, it would help economise on land resources, and would contribute towards intensification, as the incentive for a farmer with a license to sell a given quantity, would be to produce this quantity with the smallest possible area, and with the minimum cost. The current system obliges farmers to allocate certain amounts of areas planted to given products, but cannot oblige them to produce efficiently on these areas. Hence the consequence is that there is a misuse of areas allocated. The same amount of production could most likely be produced with smaller amounts of area, thus economising on productive resources, and allowing an increase in national productive efficiency. This is probably one of the major ways in which agricultural growth in the next decade could come from.

The idea of the proposed system is that on the one hand the total amount of purchases of the public agency would be known. If a fiscal constraint arises, then the government could decide either to restrict the amount of quantities for which the price would be guaranteed, or could lower the guaranteed price.

The advantages of this system, compared with the existing system are the following. First, the government could plan the maximum amount of money needed for total support. It would be maximum, because if there are production discrepancies between the issued sale licenses desired and actual production in some regions, then the actual prices paid by the purchasing agencies would be lower than the maximum guaranteed ones. Second, the government, by planning the maximum amount of the strategic products that could be supported, would guarantee that production would indeed take place, as it would be advantageous for the holders of the licenses to produce primarily only if they could obtain the guaranteed price. Third,

production of the supported products would take place at the lowest possible cost. This would be achieved because the free trade of the licenses would ensure that the most efficient farmers would make larger profits, and hence would try to obtain licenses for as large quantities as possible. This is very important for the future of agricultural production, as it is imperative that overall productive efficiency is improved, so as to increase production without wasting resources. Fourth, the proposed system would ensure that there would be enough production to supply the raw material needs of the domestic processing plants. This, because the government could issue sufficient sale licenses to accommodate the demands of the processing plants.

The allocation of the licenses to individual producers could be utilised to achieve income transfer objectives. Since the guaranteed price will be above the equilibrium market price, which for most products will be related to the international parity price of the commodity, each license entails a benefit to a recipient. Hence, allocation of licenses to producers can be used as a redistributive device. For instance, the smaller and poorer farmers could be allocated licenses irrespective of whether they could indeed produce the full amount. If they cannot, then they could sell the licenses to bigger farmers for a price. Similarly the government could put a limit to the amount of licenses allocated to bigger and richer farmers. In this way, bigger farmers, who currently receive the bulk of government supports, would have to obtain licenses from smaller farmers for a price, thus transferring a portion of the subsidies to smaller producers.

Fifth, the incentives would be to increase yields on both rainfed and irrigated areas, so as to achieve the desired quantities with minimum area use. This would tend to increase land productivity. Sixth, the proposed system would maintain a large part of the current planning structure of the MAAR and the Supreme Agricultural Council, and would avoid costly reorganisation. This is because the government would still need to guide agricultural production to areas of appropriate water use, and because there would still be a need to monitor the areas planted to different crops, although the planting decisions would not now be compulsory. However, the bulk of the planning mechanism would be geared toward analysis of the appropriate production targets, as well as the criteria for allocating the licenses, rather than control.

Seven, the proposed system would allow the farmer freedom as to what to produce. He could take advantage of all the signals given to him, including price signals without fear of being penalised. Eight, the proposal would release the bulk of the extension agents from the burden of enforcing the area plan, a task not related to production improvement, and would make them available for truly production related tasks. Finally, since there would be no incentive to produce amounts that could not be sold at the supported prices, and since the incentives would be to increase land productivity, the total water use could stay within ranges that do not produce unsustainable draws of water from the water basins. In other words the license to sell would play the role of a license for water use.

A major additional advantage of the proposed system is that it could easily be gradually reduced to a market based system, whenever the government decides that the agricultural sector and the economy are ripe for such a move. This could be done by either decreasing the levels of supported prices, or by reducing the total amounts that would be eligible for purchase at preferential prices by the public marketing agencies. The pace of reform would be up to the government to decide.

One might argue that if a system of licenses to sell allows open trading, then this does not guarantee that water use would be sustainable and that producers would conserve. This is because a license to sell could be transferred between water basins, so that production would not take place according to planned licenses. It was already mentioned that the prices for

product offered for sale to a regional marketing agency, but accompanied with a sale license in another region could be lower than the maximum guaranteed prices. This in itself would discourage or even prevent both production over quota for each individual producer, as well as cross hauling of products among regions, especially if the price differentials are above the average transport costs.

The tradability of the proposed licenses may invite the observation that markets do not work well in Syria, and that the larger farmers would end up obtaining all the licenses. The first comment does not seem to be borne out by the experience. Syrians appear to be characterised by a very old and deeply rooted trading mentality, and markets operated in all regions and villages, and for all products. In fact the government distrust of traders goes against one of the oldest attributes of the Syrian population. The field observations of both this consultant as well as others, amply manifested that both information as well as all other aspects of trading are well spread in Syria, and that there is a very competitive trading sector, that would ensure that the open market prices of these licenses would be appropriate.

Concerning the idea that it will be only the larger farmers that would obtain all licenses, this may be correct, but in order for a large farmer to obtain a license he would have to pay for it. In other words he would have to purchase it from smaller farmers. This would ensure that the smaller farmers would obtain the rent implicit in say cotton or wheat production, without having to actually produce the product. As there seem to be significant economies of scale in producing some of these field crops, the system, by concentrating production to larger farmers, would guarantee that production would indeed be concentrated on more efficient farms, but at the same time a part of the rent would be obtained by smaller farmers. As it is now, all the rents are captured by the larger farmers as indicated earlier.

Note that the proposed system is based on indirect regulation, and on providing appropriate incentives to farmers, rather than coercive mechanism. Hence it is consistent with the proposed strategy outlined earlier.

The major potential technical and political problem with the proposed system may appear to be the allocation of the licenses among farmers. This, however, is not the case and **the proposed adaptation of the current to the proposed system** will now be described.

As the current system operates, farmers at the beginning of an annual planning cycle express their desires as to areas they would like to plant to different products. These areas are aggregated at the nahia, mantika, and governorate levels, and compared against the targets dictated by the central planning authorities for each governorate. Deviations between the desired levels of planting by farmers, and the indicative targets set by the center are corrected by adjusting the areas of every mantika, nahia, village and farmer, largely in proportion to the overall desired adjustment. In other words if the area that farmers desire to plant in wheat in a given governorate is larger than what is desired at national level, then all villages and farmers in the mohafaza area asked to adjust downwards their actual areas planted. This then dictates the licenses that are issued to the farmers, and also dictates the amount of loans they receive and the amounts of other input they can obtain.

Within each village, all farmers must allocate the same percentages of their irrigated land to specific crops. For rainfed land, the village is divided into sectors, each of which is allocated to a particular crop group or to fallow. Farmers must grow the crops specified for the zones into which their rainfed plots fall. This system leaves little flexibility to farmers, and is certainly inefficient from a production perspective, as it does not recognise the peculiarities of individual plots and farmer skills. Nevertheless, it could provide the basis for the proposed system of sale licenses.

The envisioned system could easily be adapted from the present system, and it would work as follows. At the beginning of the annual planning cycle all the current steps involved in the current annual planning exercise would be taken. In other words the farmers would still express their desires concerning areas planted at the village level, and these desires would be aggregated to the governorate level, and subsequently adjusted according to targets that are found on the basis of desired water use. At the final planning step, namely when farmers are issued licenses to produce, **these licenses could still be issued, but only for the purpose to obtain inputs and loans**. In other words, the current system could still operate in order to plan inputs and loans extended.

However, **and in order for farmers to be able to sell their products to the authorised agencies at prespecified prices, they would have to be issued separate and additional licenses to sell**. In other words the area allocations that have been authorised for each farmer, would be transformed to production quantities, on the basis of the experience of each locality with yields (for instance a three year average of yields in the three most recent normal years could be taken). The farmers would be issued licenses to sell the given quantities of each product for which the system would operate. In other words while the planning may be done on the basis of several products, and used for input use, the products for which the proposed sales licensing system would operate are the ones for which the government has a strategic interest. These, for instance, could be all the current strategic crops.

Licenses would be issued separately for each strategic product that is supported, or desired by the government, and would take the form of standardised quantity pieces of paper. For instance all licenses for wheat would take the form of a given amount of paper licenses (much like money). **Each one of these standardised pieces of paper, which would bear no name on it, would specify only the product and the amount, as well as the region (e.g. governorate) in which it is issued, and nothing else**. So if, for instance, the minimum wheat license is a paper for the sale of 100 kg of wheat, then a farmer who is allocated or authorised to produce 1 ton of wheat, would be issued ten of these licences amounting to a total of 1000 kg. It is these papers that would be tradable in the open market. The standardisation of these papers would ensure that it would be cheap to print all these in every year. It would also avoid any costly monitoring system based on the names of farmers. It would also make the sale of the standardised licenses very easy, thus facilitating, without any cost to the government, the development of this type of market. It must be also mentioned that **a potential side benefit of introducing such a system of sales licenses and their open market, is that it may facilitate the development of an organised futures exchange market**, namely a formal market for contracts to deliver products in the future, which is exactly what these licenses would be. Such organised exchanges and markets are well developed in many developed economies, such as the USA, Australia, Canada, the EU, Japan, Argentina, etc., and in most cases these markets started by open trading of this or similar types of contracts.

Under the proposed system then a farmer at the end of the planning cycle would obtain the following papers. First a license to produce, much like the current license. This license would state primarily the areas to be planted to various crops, and would be utilised only for procurement of inputs and ACB loans, but for nothing else. Second the farmer would be issued a certain number of paper sale licenses to sell the quantities of the strategic products that are implied by the production license. In other words if, for instance, a farmer in a given region is authorised to plant 4 Ha of wheat, 3 Ha of cotton, and 1 Ha of sugarbeet, then these areas would first be transformed to production on the basis of the average recent normal year yields, and subsequently he would be issued enough paper licenses for wheat, cotton, and sugarbeet, that will allow him to sell the authorised amounts at given prices and in his specific region.

Once these sale licenses are given to each farmer, there would be no more monitoring or enforcement of areas planted for the crops in the farmer's license. He would be free to plant other products, with the inputs procured, or he would be free to exchange or sell his sale licenses to others. Of course, the disincentive to doing this would be that in the subsequent years, the licenses may be adjusted, should the government desire, according to the areas actually planted. On the other hand, the government may not wish to do this. The reason is that the distribution of the licenses to sell would amount to a system of income supplements. If the government wishes to maintain its redistributive role, and especially to favour weak producers, then it could keep giving sale licenses to small farmers, even though they do not produce the products. The idea would be that these farmers would sell these licenses and obtain some income from them. The advantage of the proposed system is that there would be no need for micromanagement of production, or detailed planning by the government. The market itself would take care of both product allocation, as well as redistribution, after the initial allocations.

As envisioned, the proposed system would offer to all farmers in the country the same support price for the amounts under sale licenses, if they are delivered in the region for which the sale license is issued. Price discounts would be specified for products delivered to a given region if they were presented for sale with a sale license from another region. For instance, assume that in a given year the government decides that the national support or purchase price for wheat will be equal to p . If the government deems that there are seven major water basins, then there would be six discounts for wheat delivered in one water basin, say one in Hassakeh, but produced in any of the other six water basins. These discounts would be specified so as to cover the average transport cost between the two regions.

So for instance if the transport cost between a region i and a region j (say Aleppo and Hassakeh) is equal to a value equal to $m_{ij} = m_{ji}$ (under the assumption that it costs the same to transport from Aleppo to Hassakeh as it costs to transport from Hassakeh to Aleppo) then the discount for wheat would be specified as m_{ij} . In other words a farmer in region j who delivers to the purchasing center of his region wheat, but with a sale license issued to region i , would obtain a price equal to $p - m_{ij}$. If he chooses to haul his product to the same region from which his license to sell was issued he would still obtain a price equal to $p - m_{ij}$ as he would have to pay himself the transport cost. If the farmer delivers the product in the same region for which he has a sale license, then he would receive the price p . In this fashion a farmer that produces in region j but with a license from region i would obtain the price $p - m_{ij}$ irrespective of whether he chooses to deliver to the region of production or the region from which his license derives. Hence he would always receive a price lower than the price he would receive if he produces and delivers in the region in which he obtains a license. This is meant to discourage the production in regions for which sale licenses have not been issued.

If the government deems that the proposed system is not enough to guarantee the optimal utilisation of water, then it could utilise one or both of **two further instruments**, that could be superimposed, namely used simultaneously with the proposed system.

The first one involves **introducing on non-metered irrigation systems, per-hectare water charges**, the rates of which are a function of the estimated water requirements of the crop grown, and which are also a function of the scarcity by water basin. The idea is that since the water requirements per hectare and per crop are broadly known, prices per hectare of crop grown could be specified on a national basis, and then adjusted to individual water basins according to the seriousness of the water shortage in the basin. The advantage of this system is that it would discourage production of water intensive crops in water basins that face depletion problems.

The water charges would be levied not on the basis of actual areas planted, but on the basis of areas specified on each farmer's production license, namely the license that authorises him to obtain inputs and loans, and is also the basis for the issuance of the sale licenses. The rationale for having water charges levied in this way is first that it would avoid the expensive, in terms of extension manpower, task of monitoring each farmer's areas planted. On the other hand the proposed system would provide motivation for farmers not to overstate their desired planted areas, with the logic of obtaining more licenses, as they would be penalised for excessive production of water using products.

Of course, once irrigated areas are fully metered, as is currently planned, the government could introduce water charges per cubic metre, the rates of which could increase to high amounts once the farmer uses more than is estimated as optimal for the crops that he is growing.

The second option is that for each region a water discount charge would be levied on the sale of products with a sale license issued in that region. This water charge would be specific to each product and water basin. In other words a discount w_i , different for each product in accordance with its water demands, would be subtracted from the price obtained when the product is sold with a sale license issued in region i . This charge would be levied on all licenses for the product issued in a given region, and it would be higher for regions with water scarcity problems. For instance if in a region (say the Al Khabour basin) it is deemed that water shortage is very critical, then the licenses issued for this basin would provide not only for just enough product so as to accommodate the water limitation, but also for a water discount that is to be applied to all products delivered to any purchasing center but with a license issued in Khabour, and any amount of the product delivered to any purchasing center but with a license from this basin would obtain a price diminished by a discount specific to the basin or region in which the license is issued.

We must assume that at the open market prices, namely those at which the products not accompanied by sale licenses could be sold, the farmers would not find it optimal or profitable to produce. If they do then this implies that some farmers in that region could produce without any support from the government, and hence they have comparative advantage in producing. Otherwise, farmers would not produce more than what is decided at the aggregate regional level by the government. Aggregate overproduction in such a basin of a strategic crop, say cotton, by the farmers could be achieved only if these farmers obtained sale licenses from other regions in the free market. With these licenses they could produce and deliver more product than what their own licenses would allow. They could sell this excess product in another region, but as already discussed this would be discouraged by the regional price differentials. If they sold it in the same region for which the license was issued, then they would obtain the price p minus the water charge, but they would have to incur the transport cost applied by the purchasing agency to this region. In the accompanying box, the system is exhibited and it is shown that the incentives would be such as to keep the production in the regions where the licenses are issued, unless there are large production cost differentials.

Box 8.1. Pricing in a system of sale licenses.

Consider the sale licenses for a product issued in regions k and j. Anyone holding such a license can sell the product to authorized purchase centers in various regions in the country. The problem analyzed here is the one of where the product will be produced and where it will be sold. The following table exhibits the various options and prices received by the person delivering the product under different production assumptions and different sale points. In the table the symbol m_{kj} indicates the actual transport cost between regions k and j, while the symbol m^*_{kj} indicates the discount subtracted from the purchasing agency in region j for crop delivered there but with a license from region k. The symbol l_k denotes the cost of obtaining in the free market a license to sell the product issued in region k. The symbol w_k denotes the water discount discussed above.

	License issued in			
	Region k		Region j	
Product produced in	Product delivered for sale in		Product delivered for sale in	
	Region k	Region j	Region k	Region j
Region k	$p-w_k$	$p-w_k - m_{kj}$	$p-w_j - m^*_{jk} - l_j$	$p-w_j - m_{kj} - l_j$
Region j	$p-w_k - m_{jk} - l_k$	$p-w_k - m^*_{kj} - l_k$	$p-w_j - m_{jk}$	$p-w_j$

It can be first be seen that if the farmer produces in a region where he obtained a license, then it is never profitable for him to deliver to another region. These is indicated in the shaded boxes. If the discount applied by the purchasing agencies is equal to the actual transport cost, then the farmer producing in a region, but with a license issued in another region, which he has to purchase in the open market, he is indifferent whether he delivers to the regional purchasing center or the purchasing center of the region from which the license is issued. Finally the best price that a farmer who obtains a license issued in a region can get, is the price from delivery to the same region. It is only if the costs of production are very different among regions, or the water charges among regions are quite different, that it may be profitable for a farmer to obtain a license in another region in order to produce profitably in his own region. For instance consider the farmer who is situated in region k, and desires to produce more than his own sale licenses. If he purchases in the open market a license from region j, then, assuming that $m^*_{jk} = m_{kj}$ so that he is indifferent whether he sells in the same or the other region, then it would be profitable for him to purchase the license and produce above his own quota only if $p-w_j - m_{kj} - l_j > 0$. This cannot be guaranteed, however, because under a free trade in licenses the price of the license would be the highest possible and this would be the largest value such that the above inequality holds with equality for some k. Clearly this would obtain only if licenses are sold to neighbouring regions, where the transport cost is small, or the same region where transport costs are nil. This would ensure that the licenses would not be traded over a wide regional area, and hence that the water basins would not be overexploited.

The advantage of the combined system proposed above is that it uses two different policy instruments to achieve two different objectives. The first instrument, namely the licenses to sell at support prices, are aimed at maintaining incomes and production at levels decided by national food security and other objectives, such as full utilisation of public ginning plants. The second instrument, namely the per-hectare or per unit of product water charges, is aimed at water conservation. The system of sale licenses would also contribute towards water management, but it would be primarily aimed at production control and support. Currently, the government uses only one instrument, namely the planned areas, to achieve multiple objectives, and it is no surprise that it has difficulty achieving them all.

One might argue that the proposed system might be too bureaucratic, and centralised. The answer is first that the government cannot escape planning the water utilisation of each water basin, given the intense water scarcity. Second, given the government objectives for food security and income support to farmers, it has to plan the aggregate quantities in the near future, as it needs to plan spending. However, government should still allow the farmers the freedom to produce whatever they deem most profitable, within the overall macroeconomic and water conservation framework.

Another argument might be that the proposal does not promote quality. This can easily be accommodated by making the guaranteed prices for delivered quantities functions of quality. Similarly, one might argue that the system does not guarantee that production would be restricted to the planned amounts of sale licenses. This is correct. However, if the strategic crops can be produced profitably at parity prices without government support, which is what the open market prices would tend to, then this would imply that Syria has comparative advantage in the particular product, and the government in such a case may decide to lower the support, or reduce the guaranteed production quotas.

Note that one could argue that it might be more efficient from a water conservation viewpoint to allocate to farmers tradable water quotas or licenses for water use rather than licenses to sell products, as proposed above, and let the farmers decide what to produce with the water they are allocated. This system, however, is not workable without full metering of all water use, and hence is not applicable with the current production structure.

The system outlined above is meant to be applied largely to the strategic products, and especially those that are heavy water users like wheat, cotton, sugar and tobacco. For the last three of these products, there is a public monopoly of marketing and processing. Hence one might also think that an alternative approach to organising production of the raw materials for these processing plants would be to **issue contracts between the responsible organisations or processing plants and farmers**. For instance, the General Organisation for Sugar could contract with interested farmers certain volumes of output, at specific prices, adjusted for sucrose content. In fact most sugar processing factories in the EU and other developed countries work in this fashion. **The sale licensing system outlined above is very much like a contracting system between factories or marketing organisations and farmers.**

Once the sale licensing system is in place, and given that the public purchasing agencies are the only ones that would buy these products, then these organisations could determine the total amounts of raw material they desire to process. In collaboration with the MAAR and the Ministry of irrigation concerning the water basins in which these quantities could be allocated, these processing organisations could take on the task of allocating the sale licenses directly to the interested farmers of these raw materials. In other words, the main agents in the decision of how much raw materials to produce, would be the processing plants. **They could in fact take on the whole task of issuing the sale licenses for the various products.** All the above points

concerning tradability of the licenses would still hold. If more processing plants, including private ones, are allowed to operate, then they could be allocated a certain amount of licenses, or could be allowed to operate outside the licensing system, namely offering the farmers whatever lower prices they could offer.

Concerning the **timing of implementation** of the envisioned system the following timetable of activities is recommended.

Short term. Year 1-2. Complete study of the proposed system of sale licensing, with design of the types of licenses that are to be issued, the regional differentials, water charges, and all administrative details. Design of a monitoring and evaluation system.

Year 3-4. Pilot implementation of the proposed system in one or two water basins. Implementation of the monitoring and evaluation system in the same regions. Study of the outcomes, and adaptations and corrections as needed.

Medium term. Year 4-10. Implementation of the full licensing system, as well as the monitoring and evaluation systems, on a national basis.

Long term. After year 10. Liberalise the licensing system, by utilising mostly trade measures to regulate domestic prices. In other words the long-term objective should be to find the domestic equilibrium production and prices under a market system, that will ensure a sustainable utilisation of water resources, while at the same time providing adequate incentives to producers, and adequate domestic value added.

8.4.2 Pricing Policy for Supported Crops

The proposed system of production planning must be accompanied by a system of pricing for the products that are to be procured at prices above international parity ones. The current computation of prices of strategic crops in terms of production cost is fraught with problems. First, the national average costs of production for the various crops do not reflect the actual costs of production. The Directorate of Agricultural Economics of the MAAR aims to provide the Cost Calculation Committee with a weighted per-hectare cost that takes account of the various natural conditions and production techniques encountered in producing areas throughout Syria. Since accurate up-to-date regionally based survey data are not available systematically for this exercise, it relies principally on averaging the per-hectare costs generated by a detailed set of models first developed by MAAR in 1994 with technical assistance from FAO/UNESCWA.¹² The Directorate also uses its own experience accumulated over the years. These models refer to agro-ecological zones and embody a detailed analysis of costs into quantities and prices. Over time, the Directorate has adapted these models as required to reflect changes in production methods, such as the adoption of a new planting technique, and to take account of changes in input costs. To arrive at mean national costs for each crop, the Directorate combines models for agro-ecological zones, for rainfed and irrigated land, and for particular types of irrigation, by weighting unit costs on the basis of the planted area estimated to be represented by each model.

The Directorate summarises the mean per-hectare cost data into ten agricultural operations categories and six production requirement categories and then sums these to give a basic per-hectare cost. To obtain a figure of total per-hectare costs, interest is added, calculated on costs at a rate of 4.5% per annum, and 5% is added for incidental expenses. Finally, an amount is added for land rent that makes rent equal to 15% of total cost inclusive of rent.

¹² These models are available in the form of a handbook: *National Farm Data Handbook of Syrian Agriculture*, E/ESCWA/AGR/1994/8, United Nations, New York, 1995.
Final and Cleared Report on Agricultural Sector Strategy

The average national unit cost of production gives little indication of how a particular price influences these variables in any particular year. This is because unit costs of production vary enormously between governorates, between regions within governorates, between villages and between farmers within a particular village. Moreover, for each farmer, unit costs vary from year to year, especially on rainfed land, principally as a result of weather-induced variation in yield per hectare.

To come to a well-informed judgement on an appropriate level of price, it is necessary to employ information on variability in unit cost both over space and over time, and this can only be done on the basis of farm level surveys, which are not available. Thus, the present system of seeking to arrive at and base decisions on a single average unit cost of production is inadequate.

Secondly, the official yields used in the various annual producer price reviews are not representative of the actual yields. For instance, the yields used for the past three annual price reviews have been above the estimated mean national yields from 1988-99. This is because extraordinary years (good or bad) are excluded from the calculation of average normal yields. But how can one judge what is an above or below average year for yields? As it is more likely to have a below average year in terms of yields than an above average one, because of drought, the process gives a downward bias to estimates of costs per unit.

Third, cost of production calculations are not appropriate as a means for tariffication of existing policies in the context of WTO. In that context what is required is to exhibit the differences between domestic and international prices for Syrian agricultural products, and use this to set the bound tariffs.

Given that the government wishes and will continue to support the production of a certain number of strategic products, and given that the government is concerned about covering the cost of production for the major crops, it is therefore, recommended, that the government considers as a **benchmark for the setting of domestic support prices a mixture of domestic cost of production estimates together with a moving average of international parity prices.** The domestic cost of production calculations, however, should be based on farm management field surveys of actual production practices and costs. **It is recommended that such a baseline survey is first done, so as to obtain a valid benchmark for one year, and then for every subsequent year, smaller surveys of actual costs are done in the various regions.**

Concerning the moving average of international border (namely parity) prices, this could be over a period of 3-5 or more years. Such an average would take into account both the changes in world production and trade, as well as the competitive environment facing Syrian producers. The actual level of annual price support could be decided on the basis of both costs of production, as well as international parity prices, as well as on the basis of domestic income objectives for farmers, and fiscal constraints. The advantage of the proposed mixed system, is that it would immediately point out any growing divergences between the domestic cost situation in a given product, and the international price trends. This could be utilised in order to assess the evolving competitiveness of Syrian products, and to adjust the pricing policy accordingly.

The **minimum reservation prices for the products for which such support is deemed appropriate, and for quantities above those for which sale licenses are issued, should be specified on the basis of a moving average of international parity prices.** However, the minimum support prices should be set below these averages, at levels about 10-20 percent lower. This will guarantee that there are no undue declines in domestic prices. The existing marketing organisations could be authorised to be the buying agencies for these reservation quantities, if there are any.

In terms of timing the following is recommended.

Short term. Year 1-2. Benchmark national farm management survey to determine the actual costs of production in various regions for various products and under different production technologies. Also in the same period a study should be done concerning, the calculation of border prices of the major products which are to be supported. Furthermore, the formulas for the implementation of moving averages should be studied, and the levels of minimum prices at which products should be supported should be studied and prepared.

Medium term. After year 2. Implementation of the new system of pricing of products.

There have been additional recommendations for the strategic products (not on pricing) made in the report by Westlake (2000). Most of these recommendations are additional and independent from those made here, and will not be repeated.

8.4.3 Policy Towards the Non-strategic Products

The above system concerned mainly the products that the government deems essential to support, while at the same time not allowing unlimited expansion of area planted and production because of water resource limitations. However, there are other products, that are not strategic, and which do not currently come under the control of the government. In some of them there exists a mixed public private marketing and processing system, while others operate purely within the private sector. The government interferes in much of the marketing of these products, especially in terms of pricing. However, it is impossible to control these markets, as there are many producers, and marketing agents. **For such products, it is recommended that the government utilises only trade controls for indirect regulation of the markets.** Such controls could include tariffs, export taxes or subsidies, but not import or export bans. One might also think of import tariff quotas, or export quotas, but the implementation of such quantitative arrangements is fraught with implementation difficulties, and invites corruption, hence they are to be avoided. **It is recommended that all current quantity controls and price regulations for the marketing or pricing of these products are simplified and expressed in terms of one tariff equivalent of subsidy equivalent.** This could be done very soon, possibly within one or two years.

8.5 Strategy and Policy in the Agricultural Input Markets

If the price of the products is supported in the manner suggested above, there is no need to support the price of inputs as well. This is because the allocation and use of any subsidies on inputs is distributionally inequitable, given that larger farmers are much more intensive users of fertiliser and other inputs. Furthermore, there is no reason to limit the imports of fertiliser to the government. This, basically has the effect of protecting the domestic publicly owned fertiliser plant, which can become efficient and internationally competitive with appropriate restructuring (see Parthasarathy, 2000). Hence the decision of the government to allow the private importation of fertilisers in 2000 is correct and in the right direction. The best strategy on inputs, in the context of the proposed overall strategy, is to **allow the private sector to import and distribute fertilisers and other inputs, alongside the public entities similarly engaged, and to abolish any import restriction on imports.** This policy could be implemented in the short or near term.

Furthermore, since subsidies on inputs will not be necessary under the proposed system, it is proposed that the ACB gradually disengage from the trade and distribution of fertilisers, and other inputs, and subsidies on inputs be eliminated since they can be incorporated in the proposed guaranteed prices. Finally, the government, while not abolishing its own seed production units, should allow the private production and marketing of both seeds as well as

other inputs. The more detailed recommendations for the reorganisation of input production and marketing that are included in the input study report of Parthasarathy (2000) are compatible with the proposals here, and are endorsed here.

8.6 Strategy and Policy for Agricultural Finance

Credit and financial services are major impediments to agricultural sector growth in Syria. The rural financial system is dominated by the ACB and by private agents who charge high rates. On the other hand, there are very few ways in which rural households can save, and the majority of savings seem to go into gold, and land or houses. Thus it is not available for productive investment. The need is therefore for improved savings mobilisation, as well as improved credit delivery mechanisms.

Suggestions for the improvement of the performance of the ACB have been made by Parthasarathy (2001) and will not be repeated here. The one-size-fits-all approach to lending has caused considerable dissatisfaction among farmers. The bank cannot be expected to exercise any initiative as all changes and improvements have to go to the controlling Ministry. Loan terms should be designed for each group of situation. Terms should be flexible with a pre-defined limit of authority to the loan officer to vary them to suit any individual peculiarities. The medium term loan, for instance, does not necessarily match the needs of fruit planting where bearing on a commercial scale starts much after the maturity of the standard loan. Loans to small and marginal farmers in lower zones should cover their basic consumption needs also during the period of waiting for the income from the harvest, as without this, in any case, they would give priority to consumption, neglect the crop and find themselves unable to repay. Rebates for prompt and early repayment, concessional lending to time deposit holders and special treatment to borrowers with consistently good record of repayments over a specified number of seasons are other possibilities.

There are three major strategic suggestions that are made here to improve the rural financial situation. The first concerns the **development of micro-finance groups**. Agricultural lending is presently concentrated upon zones 1 and 2 with a very small portion for zone 3. The average loan size has been increasing and the number of beneficiaries dwindling, suggesting that smaller farmers may be gradually left out. For smaller farmers with no collateral, and for zones 3,4 and 5 the **group-lending concept, through micro-finance groups**, could be tried out on a pilot scale, in order to see if it could be generalised throughout Syria. Group lending has worked in many countries with small-scale farmers, both in Asia, as well as in Africa, and the concept is particularly suited where communities have strong group cohesiveness and are ready to assume responsibility for supervising their funds. Joint liability and peer pressure make up for lack of individual collateral. Wherever possible, the group's small savings are mobilised and, as an incentive, matching funds are provided by the bank for lending to individuals of the group. This way local savings and credit groups are strengthened.

The second idea that can be promoted at the same time as the micro-finance groups, is the promotion of **rural savings and loans associations along the Raiffeisen model** (see box 8.2 below). The idea here is to allow rural residents to pool their savings and recirculate these among themselves in the form of loans. The main institutional element that makes these associations viable is control of the association by its members. Just like for micro-finance, it is proposed to try this modality on a pilot basis the creation of a number of these associations throughout rural Syria.

Box 8.2 The Raiffeisen model of financial co-operatives

The idea of a financial co-operative to benefit its participants originated with Friedrich Raiffeisen 130 years ago in Bavaria, Germany. As mayor of a small town, Raiffeisen organised a co-operative savings institution to permit the people in his district to pool their money and make loans among themselves. The idea spread throughout Europe and North America, and in 1901, Alphonse Desjardins, started the first credit Union in North America, in Levis, Quebec, Canada. The primary difference between credit unions and other financial institutions is that members, not customers, control credit unions. Each owns a part of the credit union, and has the right and responsibility of ownership. Benefits of credit union membership have traditionally been higher interest paid on savings balances and lower interest rates charged on loans. Such benefits are possible because credit unions are non-profit organisations and their income is therefore returned to members. The management of credit unions is composed of a Board of Directors, a Credit Committee, and a Supervisory Committee. The first sets policies, approves plans and budgets, assumes responsibility for the health and growth of the credit union, the Credit Committee acts on each application for a loan made by a member, and the Supervisory Committee audits the books and examines the affairs at frequent intervals to be certain that it is operating in accordance with the laws and bylaws. Credit Unions are also known as Savings and Credit Co-operatives, Credit Societies, and “Caisses populaires”.

The third suggestion concerns **the restructuring of co-operatives to make them operate more like farmer marketing and input delivery associations**. Farmer associations can do excellent work in providing physical intermediation without involving themselves in money or stock keeping. They can disburse the loans on behalf of the banks, distribute inputs, collect and store the produce, see that the crop is not diverted to avoid repayment of the loan, help the farmer in having their graded properly and distribute the proceeds after deduction of loan. Farmer associations in Syria could play a similar valuable role and work synergistically with the private sector as well as with the banks. Co-operatives could be encouraged in this direction and be given the necessary training to project themselves as an invaluable rural intermediary for services with direct and intimate knowledge of farmers and prepare them to accept the increasing role of the private sector as an opportunity and not as competition.

Associations that have a good track record could be selected and given the necessary training to become savings and credit associations with shares of farmers, deposits from farmers, seed money from the government and matching refinance from ACB, the ratio of the refinance increasing in graduated steps according to the managerial capability and proven record of timely repayments.

Given that a large number of rural households hold gold as a form of savings, another suggestion is to institute a **scheme for mobilising that gold**. Rough estimates by Parthasarathy (2001) suggest that there could be about 234 tons of gold among Syrian households. Households motivated to hold gold as a store of value may be more susceptible to part with its physical possession if it could be regained and if, in the interim, it could generate an income. Gold deposit programs have been tried successfully in other countries, and their specifics have been outlined in the report by Parthasarathy (2001).

8.7 Strategy for Processing and Foreign Investments

The analysis of the foreign investment regime by Maletta (2001) has suggested that there are several improvements that are needed in order to attract more foreign investments. These can be summarised as follows.

- Create and implement an autonomous Syrian Agency for Private Investment (SAPI) instead of the current Investment Office. The current Investment Council should become the Board of Directors of the SAPI. A body of representatives of the private sector should be appointed as an Advisory Council. A charge of up to 0.5% should be applied to all investments effectively accomplished by authorised projects, to cover the expenses of the Agency. The functions of the agency should include not only processing tax exemptions and other legal benefits for private investment projects, but also promotion of investment opportunities in Syria; advice and consulting services for the development of investment projects, services of market information, finance sources, monitoring the development of investments, and other related functions.
- Simplify the application and authorisation process for investment projects under Law No.10. Previous and posterior approvals in the concerned ministries should be eliminated, since the Ministers would give their approval within the Investment Council.
- Investors should be given legal access to foreign currency, especially for input procurement, profit remittances and capital repatriation in the case of projects producing for the domestic market. Also, Syrian investors with capital in local currency should be given legal means of acquiring currency for importing equipment and inputs. If the foreign exchange regime is not directly liberalised, then at least it should be relaxed for authorised investment projects.
- The current regime of time periods allotted for construction and for tax exemption should be replaced by a tax credit system, applicable to all investments made under the project at any time. After establishing a tax credit rate, for instance 40%, any investment would generate a tax credit equal to 40% of its value. Any income tax on profits obtained after that investment, should not be paid but deducted from the tax credit, until the credit is exhausted. Further investments in the same projects would generate additional tax credits. Also, reinvestment of profits should be income-tax exempt, and importation of equipment should be duty-free at all times. Zero customs duties for capital goods as a general measure is recommended, but even in the absence of such a general policy, at least authorised projects should have the possibility of importing capital goods at no tariff, to foment incorporation of foreign capital and its embodied technology.
- Steps must be taken to simplify and made more clear and transparent the conditions to obtain State-owned land on lease or freehold for the purpose of building facilities for investment projects.
- Land for industrial investment projects should be pre-allocated in industrial zones near important cities, with provision of basic services (industrial-strength electricity, telephone, water, sanitation, roads or railways). Any project licensed under Law No.10 should be given easy access to industrial zones.
- Eliminate any requirement for private companies to request authorisation for changing the price of items that do not carry a fixed official price, or are not specifically regulated for some reason. Once controlled prices are realigned, gradually establish bands of permitted variation in the indicative or obligatory lists of prices, and proceed towards further liberalisation of prices and final abolition of official and indicative prices.

8.8 Export Promotion

It is clear that there are considerable prospects for agroindustrial exports in Syria. However, there are several limiting factors that must be removed, and there are several domestic policies that need to be instituted to achieve this. The basic assessment by this study has been that the

major constraints to exports are related to domestic production and trade. Hence the policies and measures suggested below are aimed at removing those domestic constraints.

The major macroeconomic constraint for exports is the **foreign exchange market**. This market **should be fully legalised and gradually liberalised**. The next step after the recent authorisation to convert domestic currency into foreign currency for personal purposes at the Commercial Bank should be a similar authorisation for private companies licensed under Law No.10, for legitimate operations such as import of equipment, repair parts and other inputs, profit remittances and capital repatriation. The next step would be full authorisation to all banks to exchange currency. Dealing in foreign currency should be totally de-penalised.

The current taxes on the exports of processed agricultural products constitute a disincentive to investments in processed agricultural products. It is also not compatible with an export orientation of the agricultural sector. The speedy abolition of all such taxes should be considered seriously.

An export strategy must be combined with a reasonable import policy. The aim should be to **establish a simple tariff system**, with relatively few categories of goods. **All quantitative or otherwise non-tariff restrictions should be converted into tariffs**. The list of prohibited items should disappear, or include only dangerous items (such as weapons, illegal drugs or other similar items). The list of imports that can be brought in freely and the list of goods that can be imported with export proceedings only should also be cancelled. Items whose importation is not desired may be assigned a very high customs tariff. Initially, tariffs might be as high as desired, as long as quantitative or otherwise non-tariff restrictions are all converted into tariffs. The current "unified surcharge" should be integrated with the tariff, so that only one concept (the tariff) is applied. **Duties should be computed** on the dollar value of the imports at CIF level converted into domestic currency **at the market rate of exchange**. In the context of WTO negotiations, the tariff structure would then gradually converge towards lower levels for trade agreements with other countries and for eventual membership in the WTO.

Export licenses should be abolished, and also most import licenses. Only import licenses for a few sensitive and very specific products may be retained. Anyone should be able to import or export, with the only requirement of going through the necessary banking and customs formalities. Any tax, charge or surcharge on exports should be abolished. Any tax on imported items that are re-exported should be rebated.

In order to export agroindustrial products, it is of paramount importance to have a **reliable system of grading and standards**. Such a system currently does not exist in Syria. Hence in order to promote exports, the government must develop a serious and competitive system of grading and standards, applicable equally to imports, exports and domestic uses. The policy should promote modern systems for ensuring quality for raw and processed products such as ISO certifications and HACCP (Hazard Analysis and Critical Control Point) certification.

An integral part of an export strategy should be to continue negotiations for a trade agreement with the European Union. The main policy objective should be to complete the agreement as soon as possible, letting certain specific and sensitive points of disagreement to be adjusted later once the agreement has been signed and ratified. **The political and commercial importance of actually reaching the agreement is much more important than any specific point of negotiation**. Concessions not won at the time of signing the agreement may be negotiated afterwards, from the better position of a member of the partnership, even if they take a long time to negotiate.

It appears that many areas in Syria offer possibilities for production of raw materials for processing (e.g. in fruits and vegetables or dairy products). Currently, a processing plant operates without any guarantee of supplies of the raw material, which essentially depends on the production of a multitude of small farmers. The processing plants rarely give extension advice to the providing farmers, and their market is limited to some extent by the amount of appropriate raw material procured (as well as by other factors). A production organisational method that has been applied in several countries (e.g. Madagascar, Mexico, Philippines, etc.) is for a **(generally multinational) company to organise a large number of small farmers to produce under contract on their own (the farmers') land specific qualities of a raw material (e.g. tomatoes, or asparagus, etc.), which in turn are processed or marketed to specific external markets.** These markets in turn are where many of these large companies have comparative advantage, and hence can guarantee an outlet. Such companies offer several advantages to small producers, such as a guaranteed income.

If such type of organisation is to be promoted in Syria in the context of an export oriented strategy, then several aspects of the current planning mechanism must be changed for the specific areas where such companies can operate. It appears that there is a willingness from MAAR that if such proposals were offered to Syria, MAAR would be amenable to revising or even suspending the application of the plan to such areas. The sales licensing system proposed above is clearly compatible with this organisational structure. This is an area that merits further consideration by the Syrian authorities, as it has considerable potential to enhance production as well as exports, while at the same time improving small farmer incomes. The recommendation made here is for considerable promotion of this institutional structure, starting with an appropriate law by the Syrian authorities, and subsequent advertising of the possibilities in international markets, so that the interested companies can become aware of the possibilities. In terms of timing the study of the system and the appropriate laws could be done within a year, and appropriate advertising and promotion could be done afterwards.

A final recommendation on export promotion concerns **the institution of an export promotion organisation.** Such an organisation would be responsible for organising international exhibitions, arranging for the participation of Syrian companies in international fairs, exploring market opportunities for Syrian products in various foreign markets, organising information for prospective exporters concerning markets and products, provide links between foreign buyers and Syrian firms, and other similar related services for export promotion. A key function of relevance to Syrian agribusiness exports, could be the promotion of the Syrian label of origin for specific products, such as for instance, Syrian cheese, or Syrian apples, etc. Many countries have organised such organisations with considerable success over time.

8.9 Strategy for the Agricultural Land Market

As seen earlier, the public sector still controls a vast amount of agricultural land. Of the original state land 445 thousand ha have been sold, while 794 thousand ha have been distributed to farmers or rented. Of the land expropriated through land reform, only 5 thousand have been sold, while 1003 thousand ha have been either distributed or rented to farmers. All of this land is subject to considerable restrictions for production, as well as transfer. As indicated earlier, this uncertain ownership and exploitation regime is not conducive to long term farm investments, such as adopting modern irrigation systems, despite the fact that the farmer normally keeps his land unless he violates the contract..

Despite the restrictions, there is an active market for land but part of it is in the informal sector with high levels of risk. Relations between owners and operators of farm land are often strained.

The tendency to give short contracts reflects the persistence of precarious situations. Illegal occupation of land is a widespread practice.

In the *badia*, pressure on pasture and open access policies facilitate free riding, thus resource deterioration is at a critical stage. The potential role of the co-operatives as local organisations representing the range users is emerging as one way to redefine traditional land tenure within a legally recognised user rights system. Employment opportunities in agriculture are not growing at the same rate as landless and semi-landless households.

The strategic areas for action in the land sector are the following (for some more details on these and other policies see Forni, 2001):

Distribute the state land currently under rental agreement to farmers in the same fashion as before, namely with ownership like contracts. The state should not be acting as a landlord. The MAAR has already started distributing the largest part of the land cultivated by State Farms to farmers. This is a welcome development. However, **the land should be distributed in a way that after the farmers have paid for it they can obtain a full title, with full transfer rights.**

On public land rented out, or sold but not yet paid, allow more freedom of farmers to plant whatever they want, subject to the system of sale licensing proposed earlier.

Restore full ownership rights, including the right to transfer, of former state or land reform land that has been fully paid by the beneficiary.

Monitor current production structures in land reform areas. This could include areas covered, differences between original beneficiaries and current *de facto* operators, differences between land reform beneficiaries and state land distribution beneficiaries, And co-ordination of technical (MAAR) and financial (Peasant Union/Co-operatives) monitoring of land reform implementation.

The importance and spread of the communal agricultural land system needs to be clarified and whenever necessary written titles for rights of use established. **Recognition of access rights to communal lands in pastoral and forest area, and pastoral commons**, which are officially part of state land, needs to be further studied and established in the interest of sustainable management of the *badia*. Conservation of resources could be further discussed in conjunction with responsibilities and participation of populations claiming traditional access rights, under the general framework of state's ultimate property.

There is increasing realisation in Syria as elsewhere that social capital and local institutions are important in the evolution of property rights formation and in negotiation on the use of land resources. Social capital is mainly expressed in the traditional system, *'urf*, developed over time to suit societal needs. But *'urf* and official land tenure patterns sometime differ. Greater attention is needed to make them complementary. An **increasing emphasis on local institutions'** role particularly at the village level would facilitate this co-ordination. For instance, officially recognising the functions of village level councils in arbitration may help decrease the excessive burden now placed on the *Mohafaza* level arbitration courts.

Government strategies need to be based on an improved knowledge of the current situation as well as on forecasts of anticipated change. As an example, large scale eviction of squatters may send waves into the labour market where squatters may join the already growing group of landless agricultural workers. **Thus, stricter rules to protect ownership rights may have to be accompanied by programmes promoting rural employment to avoid any side effects.**

A recommendation is to **establish in each Mohafaza a centre of legal information to assist and advise owners/tenants/squatters on their legal position** and possible changes. This might

promote conciliatory processes. In addition efforts should be taken to promote the integration of traditional ('urf) social regulation of access to land into the broader legal system.

8.10 Marketing of Agricultural Products

The idea of MAAR that the current marketing organisations of agricultural products must be maintained, can be accommodated if the purpose of these organisations is modified within the overall system of sales licensing proposed earlier. First, **the monopoly role of such organisations must be abolished.** This should be done quite rapidly so as to allow the investments needed by private agents. There does not appear to be a clear argument in favour of allowing only the publicly owned companies to purchase certain products. If private marketing of all agricultural products is allowed, then this will certainly offer more possibilities to farmers. At the same time there is no clear rationale for allowing only public processing of agricultural products, including cotton ginning, tobacco and sugar. If changes are made so as to allow the participation of private companies in such processing activities, then **the role of the public marketing organisations should be on the one hand to guarantee prices for certain amounts, as outlined earlier, and at the same time to act as buyers of last resort (at much lower prices) for unlicensed amounts.**

Another recommendation relevant to proper marketing, is to **design a system for collection, clearance and public dissemination of market information for agricultural and food products,** with the exception of those products where official mandatory pricing systems exist.

A major factor blocking the improvement of marketing of agricultural and processed products is the pervasive official pricing system, and the rigidity this imposes on private firms. The liberalization of pricing is a necessary condition to promote product differentiation, improvements in quality and more competitiveness. **It is therefore, recommended, that the MAAR, in conjunction with the Ministry of Supply and internal Trade, work towards abolishing in the near times all price controls at the retail and wholesale levels for all agricultural and food products.** Any price regulation could be implemented via trade controls, and not directly. The joint operation of public as well as private food firms can ensure that there will not be any unnecessary increases in prices. **Liberalization of import trade, especially the abolition of import bans, and the free permission of imports, subject to whatever import tariffs are instituted, can ensure that there will not be any monopolistic pricing by any domestic firm.**

Syria has considerable opportunities for producing and marketing agricultural products of reasonable quality both domestically and in foreign countries. However, while production of many of these products is quite adequate, the quality deteriorates due to inappropriate post-harvest handling, such as storage, packaging, grading, etc. This is especially acute with products that could be exported in fresh form, such as fruits and vegetables. In most countries there is an important role that co-operatives play in marketing of such products, as there are clear economies of scale in such activities. However, in Syria co-operatives have not been conceived or designed as marketing and service organizations. Hence, if their role is to be enhanced in this direction, considerable training, management reorganization, and specialization are needed.

If co-operatives are to perform such tasks, the most important organizational aspect is that **co-operatives must belong to the farmers and be accountable to the farmers.** It is the farmers that will contribute capital for further marketing and other activities, such as storage, packaging and grading, etc., and hence the farmers must control the organization and its revenues and profits. As they are currently organized, however, co-operatives are quite bureaucratic, and have more of a role in making sure that the plan is implemented, rather than a service role. The recent proposal to found 24 new marketing co-operatives, one for animal products and one for

vegetable products in each governorate, is indicative of the top-down, and bureaucratic way co-operatives are regarded in Syria. A marketing co-operative must be based in a given locality, have a relatively small number of members that are similar in their production and needs, and be controlled by the members' assembly. Hence governorate based co-operatives are bound to be very bureaucratic and not responsive to the particular needs of members. By comparison, a smaller country like Greece, with a smaller agricultural sector has more than 8,000 primary co-operatives, most of which are engaged in storage, packaging and grading, and processing.

Nevertheless, apart from more private enterprises, the co-operatives are the most promising way for farmers to improve on marketing and processing. However, the whole legal structure governing the organization and operation of co-operatives needs rethinking. **It is thus recommended that a thorough study of the reorganization of the co-operatives, and the laws governing the operation of co-operatives is undertaken.**

In terms of timing, the following steps are recommended:

Short term. Year one. Allow the operation of private enterprises in all areas of production, marketing and processing, where currently only public companies are allowed.

Implement a study of the reorganization of co-operatives along the lines of European similar law.

Year one-two. Study and implement a system of publicly available agricultural market related information.

8.11 Strategy for Consumer Subsidies

The basic current problems with consumer subsidies, such as the ones for bread, rice, and sugar, are that they are expensive, and horizontal, in the sense that all citizens benefit irrespective of income level. Hence there is significant leakage to non-intended beneficiaries.

There is nothing wrong with efforts to subsidise deserving households. It is the organisation and type of subsidy that are at issue. The major problem of the current system is the lack of targeting. However, there can be no targeting, unless detailed household surveys are conducted, and clear criteria are established for the support. Hence the first recommendation is that **a detailed national level household survey is conducted**, with the objective of identifying criteria for targeting consumer subsidies.

The second issue has to do with the kind of subsidy. Currently the subsidy is in the form of low food prices. However, this is inefficient. It would be more efficient to institute a **system of transferable food coupons**. This is like the food stamp system that has been applied to many other developed countries, and along with better targeting has the potential of both saving money, as well as better targeting. **It is imperative that a study of a new system of subsidy delivery is made before any changes.**

8.12 Strategy for Restructuring Agricultural Production Along Lines of Comparative Advantage

Syria is not at a stage of development, where it can subsidise heavily the production of agricultural products. This is not only costly financially, but also tends to tax exactly those primary and processed products that could be promoted for export. Hence, in order for Syria to develop an export oriented agricultural and food processing sector it must reorient its agricultural production along lines of comparative advantage. The price analysis of Westlake (2000) showed that with the current price policy, of all strategic products, Syria could export profitably only three, namely barley, lentils, and chickpeas. All these are products that are actually exported. For all other products, the current producer prices are more than 30 percent

above international parity ones. Even if international prices are depressed due to developed country protective policies, the level of decrease due to these policies is not more than 10 percent. Hence at the current domestic prices Syria is not competitive in any of the other five strategic products. This is not to say that Syria does not have comparative advantage in these products, but rather that the current domestic price policies make it difficult to export. It also makes it difficult for agroprocessing enterprises that utilise domestic raw materials to produce internationally competitive processed products.

The first best policy for becoming internationally competitive in agricultural and food products is to revise the domestic price policy. This could be done directly, by bringing the domestic prices closer to international parity ones, or indirectly by further devaluation of the exchange rate. Given the recent apparent appreciation of the exchange rate that has been pointed out by the IMF (IMF, 200a, 200b), it seems that the best strategy for improving international competitiveness, may be a general further devaluation of the exchange rate. Apart from this, however, or revising domestic price policies, it appears that there is considerable room for improving the domestic irrigated and rainfed yields, as well as improving production practices so as to diminish the cost of production for producers. This suggests that **a major part of the general strategy for agricultural development should be considerable emphasis on further technological improvement in agricultural production and practices, so as to improve yields and decrease production costs.**

Another aspect of the strategy for becoming internationally competitive should be to restructure domestic agricultural production towards products where Syria can have comparative advantage. Needless to say this necessitates making detailed studies of comparative advantage so as to determine the priorities for further improvements. Earlier studies of comparative advantage were seriously flawed as indicated by the detailed analysis of Westlake (2000) and must be redone. Hence **it is recommended that as a matter of priority for agricultural research as well as price policy the MAAR undertake a thorough study of comparative advantage of the currently produced products in Syria under different technologies and irrigation structures.** It is only if some idea of comparative advantage is obtained that agricultural research can be reoriented towards those products and technologies where Syria is internationally competitive.

Whatever is the outcome of a comparative advantage study, it is imperative that further effort and resources are devoted for agricultural research. Past research efforts in Syria have produced considerable successful results, in terms of increased yields, and biological pest control. However, considerably more is needed to make the agricultural sector internationally competitive and to find alternative products and techniques of production so as to increase value added. **It is therefore, recommended that the current thrust of the government towards emphasising agricultural research is continued and enhanced.** However, the increase budgets for research should be supplemented by a thorough re-examination of research priorities. In the past the priorities for agricultural research were dictated by objectives such as self-sufficiency in food staples, and self-sufficiency in the provision of raw materials for the domestic publicly owned processing industry. **In light of the recommended strategy, which advocates a much more export oriented agribusiness sector, it is recommended that a study on medium term agricultural research strategy be done in the near term.**

The enhanced role for research must be accompanied by continued and enhanced emphasis on agricultural extension. Syria is one of the few developing countries with a well-developed and organised agricultural extension network. It is notable and of considerable importance that all producers have regular contacts with extension agents. However, as was pointed out earlier, considerable amount of the time of extension agents is currently spent on enforcement of the

plan, or in essence policing the farmers, so that they conform to their licenses. This is a waste of a valuable resource, but will change considerably if the proposed new strategy is adopted. Nevertheless, there will still be considerable need for extension for a long time to come, as many Syrian farmers are not well educated. Furthermore, if a policy of export promotion rather than self-sufficiency and import substitution is adopted, if new production techniques for the traditional products are adopted, and if new products that are profitable, and can substitute for some of the more water consuming ones currently utilised, then there will be a very important role for extension. **It is therefore, recommended that the recent increase in resources devoted to extension continues and is further enhanced. It is also recommended that in light of the proposed strategy of export promotion, a study is done on the reorganisation of the extension functions, tasks, and training, with the objective of recommending a reorientation of the activities of extension agents towards more export oriented products, and water saving and cost reducing production techniques.**

8.13 Strategy for Rural Development

While the Syrian government has made many improvements in rural areas, in terms of infrastructure and services, there is a continuing immigration to urban areas as well as to neighbouring countries. The major reason, of course, is lack of employment opportunities in rural areas. It was seen that agricultural production is not likely to improve the employment prospects in rural areas, as the tendency is for more mechanisation of agricultural activities. Nevertheless, there is a pressing need for employment opportunities.

The major strategy that is proposed here, which has been tried successfully in many other developing countries, is to **promote the establishment and operation of rural based non-agricultural small-scale companies**. Such companies do not have to be included under the provisions of investment law 10, as the capital requirements for such companies and the bureaucracy involved are prohibitive. The idea is that such companies could produce a range of domestically demanded non-tradable products that would be demanded by rural residents. Given the density of rural areas in Syria, there seem to be ample opportunities for the establishment of such small enterprises. While the specifics of such a strategy are not indicated here, as they need to be studied further, it appears that this is the most promising way to create a viable and thriving rural sector, as it would promote labour intensive enterprises with little initial capital requirements. **It is, therefore, recommended that a study is done on the possibilities, prospects, and institutional needs for the promotion of rural non-agricultural based small-scale activities.**

8.14 Guidelines for the Allocation of Responsibilities Among Different Ministries and Public Entities

Currently in Syria the agricultural sector is influenced by a variety of public institutions and ministries, each with a different agenda and objectives. This necessitates considerable energy and effort in co-ordination and implementation of policies by the officials of the MAAR. The main ministries, besides the MAAR, that influence considerably the agricultural sector are the following:

- The Ministry of Economy and Foreign Trade which is responsible for exchange rate policy, and trade policies, as well as some processing activities;
- The Ministry of Irrigation;
- The Ministry of Industry which is responsible for most agroprocessing activities, as well as for the sectors that provide agricultural inputs, such as fertilisers;

- The Ministry of Supply and Internal Trade (MSIT);
- The Ministry of Planning;

Clearly the main concern of the MAAR is with agricultural production and with the incomes and welfare of farmers. However, it appears that there is often a conflict of objectives between the MAAR and other organisations. For instance, the Ministry of Industry desires low prices for raw materials for agroprocessing, while the MAAR desires high prices for farmers. The MAAR may desire agricultural products that are more export oriented, while the MSIT may desire production to satisfy self-sufficiency objectives. In fact it appears that the self-sufficiency objective is more in line with MSIT objectives, rather than MAAR objectives. Also it is not clear if there are conflicts relating to production objectives. In other words it is not clear whether the production objectives of the MAAR for strategic products are in line with the objectives of the Ministry of Industry.

The current conflict resolution mechanism is the Supreme Council (for agriculture or other sectors), where decisions are made concerning these conflicting objectives. There is nothing one can do about the existence of these conflicts, as they will be present in any economic system. In industrialised countries, the conflicts are similar, except that the lobbies are different. For instance it is always the case that ministries of agriculture advocate higher prices for farmers, while ministries of industry advocate lower input prices for food processors, as they represent the interests of the private processing industry, and ministries of finance advocate lower overall public expenditures. There are different conflict resolution mechanisms in place in different countries, and many times the decisions concerning a particular policy have to bear the signatures of many ministers, to highlight the fact that they are joint responsibility.

It is one thing, however, to make decisions taking into account of many interests, and another to make joint decisions. In the latter case considerable bargaining must be made, and substantial resources, in terms of time of scarce professionals and politicians, may have to be spent.

However, one thing that can be done is to streamline the process, in terms of the types of decisions that must be made. In other words there is no reason that each and every decision that affects agriculture must be joint responsibility. There may be considerable room for streamlining the process, so that there are only few key decisions that require co-ordination and joint resolution, while for other decisions mere consultations may be sufficient. To identify, however, these institutional and administrative problems is a major task, that is much beyond the current exercise. **It is therefore, recommended that a study is carried out in the near future, focusing on the types of responsibilities of the MAAR in relation with other ministries, with a view of identifying areas where more efficient decision making can be pointed out.** Such a study will be much more effective if the strategy and policies of the MAAR are clearly set out, and the areas where MAAR decisions affect sectors where other ministries have a voice are clear. **It is, therefore, recommended that such a study is carried out only after the type of strategy and policies that are to be followed in the next ten years in the agricultural sector are identified and adopted.**

A matrix for a time phasing of programs and actions towards the implementation of the proposed strategy is indicated in the next few pages.

Matrix for the Implementation of the Proposed Agricultural Sector Development Strategy for Syria

Vision. Agricultural development in Syria should aim at an agricultural sector that is efficient and productive as well as sustainable in its use of resources, competitive in terms of external orientation, and providing adequate incomes to a large number of holders with equitable distribution of incomes and benefits.

Objectives

- Promote self-reliance for the agricultural sector and the economy via greater reliance on comparative advantage;
- Utilise fully and improve productivity of natural agricultural resources, especially those of land and water;
- Increase labour productivity in agriculture;
- Achieve equitable levels of income distribution, satisfactory targets of poverty alleviation in rural areas, and contain rural-urban migration;
- Secure adequate levels of employment to the rural labour force;
- Securing adequate food consumption of low income urban and rural populations;
- Provide adequate supply of raw materials at reasonable prices to domestic processing plants;
- Increase the value of agricultural exports;
- Promote private investments as a major instrument for achieving economic development;
- Develop and expand economic relations with foreign countries, with a view to promoting exports, acquiring new technologies, and becoming a regular member of international organisations, such as the WTO;
- Achieve better utilisation of water resources for irrigation and other uses;
- Maintain environmental balance;

Principles and Philosophy of proposed strategy

1. Agricultural development in Syria should be based on intensification of current production structures and methods, along lines of comparative advantage, coupled with more efficient, conservation minded, and labour intensive production methods.
2. Any planning of production or resource use should be based on providing to farmers appropriate incentives, and not through coercive mechanisms.
3. The orientation of agricultural and food production should be organised within a context of an open and export oriented agricultural sector.
4. Agricultural development should be seen as part of an overall rural development, and labour employment strategy.
5. The organisation of production, marketing and processing of agricultural products should allow in the short and medium term, both private as well as public agents to participate in a non-discriminatory way in all aspects of the agrofood chain.

6. The role of the public sector should be gradually redefined to include correction of market failures, regulation (not control) of markets, and redistribution.
7. The process of adaptation and transition to a more market oriented but regulated agricultural sector should proceed at a fast pace.

Program	Actions until end of 2003	Actions between 2003-2005	Actions between 2005-2010
Introduce a system of licenses to sell for strategic products	Complete study of the proposed system of sale licensing, with design of the types of licenses that are to be issued, the regional differentials, water charges, and all administrative details. Design of a monitoring and evaluation system	Pilot implementation of the proposed system in one or two water basins. Implementation of the monitoring and evaluation system in the same regions. Study of the outcomes, and adaptations and corrections as needed.	Implementation of the full licensing system, as well as the monitoring and evaluation systems, on a national basis.
Introduce on non-metered irrigation systems per-hectare water charges	Complete study of region and basin specific opportunity costs of water. Design and propose alternative pricing formulas	Pilot implementation of per-hectare water charges in certain regions. Monitor and evaluate, in order to adapt.	Implementation of full system
Revise formulas for setting domestic support prices for strategic products.	Design and conduct baseline farm management survey in all producing regions. Determine actual costs for each product under different agroecological and technological production systems. Implement study of border prices	Implement mixed system of pricing	
Price policy for non-strategic products	Conduct product-specific studies to estimate the tariff equivalent of all current policy interventions.	Substitute a tariff as the single instrument for pricing policy of each agricultural product, and abolish the other interventions.	Adjust tariffs towards a unified overall tariff rate.
Export promotion	Fully legalize the holding of foreign exchange. Abolish export taxes and export	Gradually liberalize foreign exchange market, by allowing freer convertibility of domestic currency. Implement system of grading and	

	<p>licenses. Design system of grading and standards Conclude Syria-EU trade agreement. Design and pass law to allow multinational or national firms to produce under contract with farmers.</p>	<p>standards Organize and start and export promotion organization.</p>	
Development of microfinance groups	<p>Create on pilot basis rural savings and loan associations. Also implement pilot project on microfinance groups.</p>	<p>Adopt savings and loan association model on a large scale. Same with microfinance groups.</p>	
Restructure co-operatives towards marketing and input delivery.	<p>Implement study on co-operative restructuring, and propose and adopt new law.</p>	<p>Pilot restructuring of some co-operatives.</p>	<p>Restructuring of co-operatives on large scale</p>
Establishment of more transparent agricultural land rights	<p>Restore full ownership rights, including right to transfer, of former state or land reform lands that have been distributed to farmers and have been fully paid.</p>	<p>Introduce system of licenses to sell on all these lands. Distribute state land currently under rental agreement to farmers, with ownership like contracts. Establish in each Mohafaza center of legal land related information.</p>	
Marketing of agricultural products	<p>Abolish monopoly marketing of public organizations. Design a system of collection, organization, and public dissemination of market information for agricultural and food products. Abolish all price controls at the</p>	<p>Institute role of public organizations as buyers of last resort. Abolish all import bans, and liberalize both imports and exports, subject only to tariffs.</p>	

	retail and wholesale level for all agricultural and food products		
Consumer subsidies	Conduct national household survey of expenditures, and incomes.	Design targeting mechanisms for the poor	Implement targeted subsidies through food coupons
Technological improvement	Conduct thorough study of comparative advantage of all Syrian agricultural products, under different technologies and irrigation structures. Conduct study of medium term agricultural research strategy.	Implement results of agricultural research strategy. Redefine role of extension, and reorganize in light of transition from the current state planning mechanism to a sale licensing system.	
Allocate responsibilities between relevant ministries	Conduct study of responsibilities of ministries, in light on new strategy		

References

2. 1. Forni, N. (2001), "Land tenure systems: Structural features and policies", technical report, FAO project GCP/SYR/006/ITA, Damascus, March. International Monetary Fund (2000a). Syrian Arab Republic. Staff Report for the 2000 Article IV Consultation. Washington DC, August 3, 2000.
3. International Monetary Fund (2000b). Syrian Arab Republic. Recent Economic Developments. Background report for the 2000 Article IV Consultation. Washington DC, August 7, 2000. Maletta, H. (2001), "Encouraging private investment in agriculture and agribusiness", report for FAO project GCP/SYR/006/SYR, Damascus, April.
1. Michele De Benedictis (2000): Preparatory Work for the Preparation of the Agricultural Development Strategy for Syria, FAO project GCP/SYR/006/SYR, Damascus, February 2000.
4. Parthasarathy, N.S. (2000) "Implications for the agricultural sector of the liberalisation of input markets" report for FAO project GCP/SYR/006/SYR, Damascus.
5. Parthasarathy, N.S. (2001) "Implications for the agricultural sector of the current credit system and policies to be pursued to create viable and sustainable rural credit institutions" report for FAO project GCP/SYR/006/SYR, Damascus, June.
7. Sarris, A. (2001). Analysis of structure and performance of the agricultural sector of Syria: Background to the articulation of an agricultural sector strategy for Syria", final report Part 1 for FAO project GCP/SYR/006/SYR, Damascus, September.
8. Syrian Arab Republic (2000). Orientations to the agricultural development strategy in the Syrian Arab Republic. Ministry of Agriculture and Agrarian Reform, Damascus.
9. Varela-Ortega, C., and J.A. Sagardoy (2001) "The utilisation of water resources in agriculture: Analysis of the current regime and policy", report for FAO project GCP/SYR/006/SYR, Damascus, June.
10. Westlake, M. (2000), "Strategic Crops Study", report for FAO project GCP/SYR/006/SYR, Damascus, December.
11. Maletta, V. (2001) Opportunities, Constraints and Possible Policy Options for Encouraging Private Investments in Agricultural Production, Processing and Marketing, Report for FAO Project GCP/SYR/006/ITA, 2001
12. Gareth Edwards-Jones (2001) Agricultural policy and the environment in Syria: An examination of impacts and suggestions for policy reform, FAO Project GCP/SYR/006/ITA, June 2001
13. José-Maria Garcia Alvarez-Coque (2001) Implications for the Syrian Agricultural Sector of a Possible Co-operation and Trade Agreement with the European Union, FAO Project GCP/SYR/006/ITA, 2001
14. Peter Wehrheim (2001) Taxation of Agriculture in Syria, FAO Project GCP/SYR/006/ITA, December 2001

Annex 1. Terms of Reference

Agricultural Development Strategy (Second Phase)

International Consultant

The assignment shall be accomplished under the direct supervision of the Chief RNER Operations Services and the Technical supervision of Chief RNEP and of the CTA. Also, in close collaboration with the Director of NAPC/National Project Director, Agricultural Economist, the Co-ordinator and National Strategy Task Force for the preparation of the strategy and officials of MAAR and other concerned institutions, the international consultant shall prepare a long-term agricultural development strategy for Syria.

The preparation of the strategy shall be based on the work carried out during the first phase of this exercise, which involved production of a road map for the completion of the strategy as per the attached report. During this second phase, the international consultant shall carry out the following tasks:

Participate in the First National Agricultural Policy Workshop.

Review all studies carried out by the project for the preparation of the strategy.

Prepare a long-term agricultural development strategy including proposals for processes by which the policies and actions contained in the strategy can be internalised by MAAR and other concerned institutions.

Give seminars on the strategy, which will be attended by senior Government officials of MAAR, other relevant institutions and parastatal, concerned political and professional organisations, concerned agents in the private sector and representative of the donor community.

Prepare a complete written draft development strategy and forward to FAO for revision and comments.

Participate in the Second Agricultural Policy Workshop to be organised by the project, present the agricultural development strategy and lead discussions on it.

Finalise preparation of the draft long-term agricultural development strategy by incorporating the results of the discussions in the workshop.

Submit the draft agricultural development strategy document for FAO clearance.

Finalise the agricultural development strategy document within two weeks after receiving FAO comments.

To accomplish these tasks, two stages involving field visits and work at home base are envisaged. These stages are as follows:

Stage (1) Visits to Syria:

Undertake 6 visits to Syria, as follows:

First visit (duration 2 weeks) this travel the international consultant shall:

Hold meetings with the National Co-ordinator and members of the national task force to programme the work to be done in a manner to ensure effective and efficient involvement of task force members and their respective institutions,

promote with FAO (RNE and project management) the establishment of an informal network among the international consultants responsible for the planned individual policy studies to enhance discussion on policy issues, and

submit a tentative outline of the strategy report, based on the outline proposed by Mr. M. De Benedictis and included in the attached report.

Subsequent 3 visits (duration 2 weeks each) in which the consultant shall:

Meet with Co-ordinator and national task force to review and monitor progress,

discuss results and policy recommendations coming from studies recently completed and present preliminary results on specific components of the strategy, and

provide guidance to national strategy task force on follow-up actions needed including identification of additional specific documentation needed for the strategy to be obtained from the Country/ Project.

The first of these three visits shall coincide with the First National Policy Workshop in which the consultant shall also:

Participate in first National Agricultural Policy Workshop,

Make a presentation on the arrangements for preparation of the strategy and its likely structure, contents and elements, and,

hold meetings with the international consultants present in the workshop to sum up the implications for the strategy of the policy studies they carried out and presented to the workshop

Last visit (duration 2 weeks) shall coincide with the second national policy workshop. During this travel the international consultant shall

discuss the strategy with the national team,

present the complete written draft of the strategy document to the Second National Agricultural Policy Workshop, and

Follow-up, in light of the workshop, on discussion and revision of the strategy with the concerned government institutions.

Stage (2) Work at home base

(9 weeks spread through out the entire time of the assignment)

Activities:

careful assessment, from the point of view of the strategy, of the material produced by the individual studies,

identification of possible gaps between expected outputs of the studies and inputs needed for preparation of the strategy and suggest remedial actions to be taken,

summing up the implications (for the strategy) derived from the entire set of information and analytical material produced by the Project, and

prepare the strategy report.

Qualifications: Agricultural Economist with extensive knowledge in agricultural development and long and wide working experience (20 years) in agricultural economics and formulation of sustainable agricultural development strategies.