

**Family Farm Agriculture**  
**Factors Limiting its Competitiveness and Policy Suggestions**

**Report prepared for the OECD review of agricultural policy in Chile**

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## **1. Introduction**

In Chile the agricultural sector has played an important role in the growth process; nevertheless in each of the different governments the emphasis of the agricultural policy has been distinct. Even though there are diverse agricultural policy instruments, the agricultural extension – commonly referred to as technological transfer – has been the most frequently used to bring about improvements in production levels and, consequently, in raising the standard of living of the rural population.

Chilean agriculture is characterized by production ways that go from a type of modern agricultural company, closely linked to the international markets, to others of a more traditional nature like self-consumption. Thus, while the modern sector makes use of adequate levels of capital, technology, and information, the traditional sector finds itself with truly limited access to markets, handling of technology and information. From an agro-political point of view, concern for the topics of exchange rate, trade agreements, tariff and non-tariff measures, infrastructure, labour legislation, etc. is concentrated on the modern sector. The traditional sector, being aware of the incidence of the previously mentioned factors, is more focused on aspects linked to price bands, loans from the Livestock and Agricultural Development Institute (INDAP - Instituto de Desarrollo Agropecuario), regulation concerning the contract agriculture system, temporary worker regimes, cooperative association incentives, etc.

The complex heterogeneity of Chilean agriculture, not only in its agro ecological aspects, but also technological, productive and business aspects, complicates the application of agricultural policy decisions and measures. In order to articulate the different instruments available, very dissimilar answers are obtained and they have different impacts on the producers. Consequently the search for new tools for transformation and modernization are becoming an imperative to the State's institutions responsible for agricultural development.

Over the time of the different governments and, especially as of the mid seventies, the actions of the State in the agricultural sector have been linked to economic policies. That is to say, the application of agricultural policy tools has been subordinated to the

economic model. In the area of the so called “Family Farm Agriculture” (FFA) and in the smallholder, peasant/farm community sectors and those with a strong ethnic component, the agricultural extension and technology transfer programs carried out by INDAP have comprised the most frequent relationship with the State.

The implicit diagnosis behind the transfer programs has supposed the need to transform peasants into farmers providing them with benefits related to production techniques, development of business management skills, organizational promotion, etc., all without taking into consideration the agro ecological characteristics where beneficiaries of a program are placed or, even worse, considering the quality and quantity of agricultural and natural resources that these users possess in order to produce. Only in recent years has there been a distinction made in some programs for the smallholders or those in very poor situations, but their orientation has not escaped from the general administrative line being applied to the rest of the family farm producers. For this reason, and in order to understand this relationship, it is important to give a chronological recount of the agricultural policies and their relationship to the technology transfer and extension programs applied in Chile during the last half century, all of which have the characteristic of originating from the institutions tied to the Ministry of Agriculture.

## **2. The Agro Political Scene in Different Periods**

### ***2.1 Pre reform period (1952 - 1964)***

The President Ibañez’s government determined the need to modernize the rural sector affected by the growth strategy that from the thirties on produced a strong expansion of the industrial sector. The effect of the pro industrialization measures signified a reduction of investment incentives and profitability in the agricultural sector. The agricultural pricing policy of the forties, which aimed to set maximum prices for food stuffs, had the clear objective of favoring urban consumers.

In the agricultural arena the reorganization of the Ministry of Agriculture, the implementation of an Extension Service, the structuring of an Agricultural Research

Council, the development of the dairy industry, the beginning of plant and animal health protection programs and the development of regional plans are some of the most noteworthy measures. As well, agricultural policy guidelines were created permitting the operation of the first extension programs directed toward the spread of the use of modern agricultural inputs (fertilizers and improved seeds), the introduction of import substitution production activities (sugar beets, rapeseed, dairy products) and the development of a farm level infrastructure as means intended to increase self sufficiency in the domestic food supply. During this period the emphasis was placed on the support of the medium sized and large property owners benefiting the multifamily land holdings (Fundos). The task carried out by the Extension Service, the institution later transformed into INDAP, aimed toward supporting the organization and supply of technological goods and loans to the small farm sector in the south-central zone of the country.

During the Alessandri's government (1958 -1964) economic policy continued without any significant change setting the objective of using the market as the only means of economic regulation/control. The price stabilization program, negatively affecting the agricultural sector, was compensated for; to some extent, by subsidies for the use of fertilizers and by the investment in public infrastructure that meant significant externalities for the sector.

Regarding agricultural policy, the Extension Service was reorganized, a system of loans to small farmers was instituted, and the Agricultural Trade Company (ECA - Empresa de Comercio Agrícola) was founded. The ECA was responsible for adjusting the supply and demand of agricultural products. The principal agricultural policy tool for this period was to establish the guidelines for the formulation of the first Agricultural Reform Law (Law N° 15.020). This law, even though it had only a moderate impact in terms of beneficiaries (920 families) and land used (1% of the irrigated land in the country), fomented an extensive debate about the agricultural situation, which was supporting a substitutive industrialization process, brought on by the "Great Depression".

## ***2.2 Reform Period (1964 - 1973)***

During one decade (1962 - 1973), the agricultural policy of the country was centered around the modification of the land tenancy system. The agricultural sector's low contribution to economic development and the search for an explanation of this situation established that the dichotomy "latifundio-minifundio" was responsible for the sector's delay. Based on this finding, a process of structural change was begun that in fact eradicated the Chilean latifundio creating out of this process some 40,000 family owned agricultural properties. The Livestock and Agricultural Research Institute (INIA - Instituto de Investigaciones Agropecuarias) was set up during this period and the National Plan for Livestock and Agricultural Development (Plan Nacional de Desarrollo Agropecuario) 1965 - 1980 was formulated. This Plan proposed methods of agricultural innovation linked to vegetable, fruit, and livestock production, as well as, an active development of plant and animal health control programs.

The government of Eduardo Frei Montalva (1964. - 1970) tried to bring about an economic program making use of monetary and financial policy measures. In discussions about the under development of the agricultural sector, two visions were confronted: one maintained that the causes of the delay could be found in the agricultural pricing policy, that is, in the substitutive industrialization strategy that was detrimental to the profitability of the sector and a loss of its ability to attract new investments; and the other interpreted agricultural under development as of a structural nature where social and political participation, access to health care, housing and education of the rural population are put on a hierarchy just the same as that of the economic problems.

The agricultural program of Eduardo Frei proposed giving access to land to 100,000 new owners through a new Agricultural Reform law (Law 16,640) that was approved in 1967. The scope of the Agricultural Reform made it necessary to generate its own institution for the application of the process and to support the organizational, loan, and technological transfer systems: the Agricultural Reform Corporation (CORA - Corporación de la Reforma Agraria). The Agricultural Reform became the central theme of agricultural policy. In this context, agricultural instruments remained subordinate to the actions carried out within the framework of this process.

Standardizing industrial and agricultural minimum wages, establishing the right to form unions, and regulating the operation of Agricultural Reform and small farm cooperatives are standards that complemented the reform process. During Frei's government 20,976 families became landowners (3,564,000 hectares). The impulse of the process substantially modified the concept of agricultural extension in the country, thus, CORA is linked to agricultural upgrading programs oriented toward the operation of the future productive units, and INDAP is linked with the smallholder sector through the implementation of important upgrading schemes (literacy), through the promotion of productive and social organizations (Farmer Cooperatives and unions), and through technological transfer and loan systems (for consumption and agricultural inputs) for this segment of about 150,000 families.

The Allende government's economic policy (1970 - 1973) supported the idea that the productive capacity installed in the country was under used in that an increase in the demand (by way of better salaries and redistribution of income) would make companies respond with an increased supply and consequently a rise in the GDP. On the agropolitical level the principal action taken by the State was centered on the Agricultural Reform that was to be "*rapid, intense and massive*". During its 33 month regime 6,297,000 hectares were expropriated by the government involving 37,270 farming families. The production deficits were compensated for by an active ECA supply policy. The loan programs operated through INDAP and CORA, the literacy programs, and the continuation of the plant and animal health programs promoted by the Livestock and Agricultural Service (SAG - Servicio Agrícola y Ganadero) are worth pointing out. Agricultural extension in this period had a highly training character.

### ***2.3 Post Reform Period (1975 - 1990)***

With the arrival of the military government the market economy model became the basis for the majority of the decisions concerning the institutional and economic life of the country. During the second half of the seventies, a large number of the companies and industries under State control were re-privatized. Regarding international trade, there was a progressive elimination of the existing limitations on import goods and a policy for stimulating, and diversifying exports was established. With respect to the

pricing policy that had been maintained in the economy for more than 40 years, repercussions were felt in the agricultural sector with the end of the period of State control, price fixing and subsidies. The agricultural measures adopted were related to a reorganization of the public divisions linked to the sector, the opening of markets and the search for establishing competitive conditions, the end of the Agricultural Reform process (1978), a decrease in tariffs, the opening up of international markets and the diversification of production. The specific action in the agricultural sector was limited to aspects of production where the most outstanding were the pricing policy (price bands) and the technological transfer directed to the multifamily property. Concerning the small farm sector, the main governmental effort of the period was directed at concluding the Agricultural Reform process substantially modifying the relationship between the State and agriculture. The public efforts in the years 1975 - 1981 were centered on the allocation of individual piece of land resulting in approximately 47,000 peasants acceding to property. Thus, a large Family Farm Agriculture sector was set up including the smallholders, renters, share croppers, share land owners, and other family farmers coming from the colonization process. Toward the beginning of the eighties this group represented 17% of the national population and 45% of the livestock and agricultural land area. Nevertheless, some 20,000 families initially incorporated into the agricultural reform process did not receive the benefits of this process in that later the majority of them were excluded from the peasant settler and land redistribution cooperatives. Many of these families remain in conditions of rural and extreme poverty in small rural settlements. Part of the property originally assigned to the peasants were sold and transferred to new investors. In the regions with better productive potential (the central zone) the process was more dynamic, whereas farther south in the country, the process was slower. It is estimated that nearly 40% of the assigned properties were transferred and part of these original beneficiaries are also found in conditions of poverty in rural settlements.

The dissolution of CORA and its replacement by the Office of Agricultural Standards (ODENA - Oficina de Normalización Agrícola) in 1979 signified that INDAP would, in practice, take over the financial support, technological transfer and extension of the reformed sector (FFA), thus abandoning and leaving without support its traditional historic substratum, the smallholders sector. For the agricultural policy of the post-reform period the word “peasant” and the social phenomenon called peasantry tended to

be dispelled. The arrival of new actors in the rural society, the actions brought on by the agricultural counter reform process, the opening of the land market and later, the market for agricultural products, the ostensible reduction of State activity in agriculture, etc. reduced to the extreme the significance of and the necessity for support in the peasant sector.

The dismantling of public institutions for rural development (1975 - 1980) produced a state of isolation causing the peasants to react by adopting diverse survival strategies. These strategies with few exceptions did nothing more than expand their traditional productive vocation. The consolidation of their production systems was achieved in domestic market goods, easily consumable by the peasant families who sustained their production by resorting to their traditional skills of doing things. In some regions the existence of contract agriculture programs for industrial goods alleviated the depressed situation the FFA was going through. Since the eighties, and taken into account an agro-political design that has been successively adjusted, the public institutions have put forward a technological transfer and operation loan program directed at small family farm owners. This “Technological Transfer Program” (TTP), along with reestablishing the State’s role concerning extension, was given emphasis in a move to increase the basic food production in the country. The program was privately operated, shaped by technical assistance companies and, for its part, INDAP reserved for itself the financial and supervisory functions of the program.

The reinsertion of Chile and its agriculture into the international economy meant certain disadvantages for the traditional production of cereals and industrial crops but it opened possibilities of new production directions linked to the fruit and vegetable export sector. The arrival of new capital and entrepreneurs, the existence of a land market, the opening up of trade and an adequate reading of the world agriculture technology and trade scenarios have made possible this transformation of production.

#### ***2.4 Period of the Coalition Governments (1990 - 2005)***

Chile’s democratic recovery did not substantially modify the basic outline of the economic policy defined by the military government. The strict monetary control and

the effort to keep fiscal spending and inflation under control are maintained as fundamental principles. Added to this are specific steps taken toward international economic integration, privatization of some public institutions, and incentives for foreign investment. Some social programs, especially education and health care, will form part of the concept of “growth with equity”, which involves raising some taxes and perfecting the taxation system for redistribution and control. The fight against extreme poverty gives rise to new programs of diverse types in both the urban and rural sectors. The Agricultural Policy of the period has been centered on new goals for international trade and the consequent need to transform Chilean agricultural production. Increased activity in exports, business ventures, trade fairs, technological innovation (irrigation and new goods), technological development and new transfer programs are some of the activities being carried out. As regards agricultural prices, price bands have been maintained for the principal traditional goods. The low prices of goods for domestic consumption (cereals, industrial crops, dried grains and dairy products) are characteristic of the period due to strong international competition from countries having trade agreements with Chile, and also the emergence of industrial food products (vegetables, fruit and wines) that will markedly modify the productive structure of some regions. After 1990, and relative to the FFA, the exhaustion of and limitation on the traditional means of extension for this sector were partially compensated for by the creation of complementary action programs put forward by the same institutions in existence for technological transfer. These programs, even though they have suited other objectives and agro political impass, have not answered to the main objectives of an agricultural extension program, given that in the first years of their application the service and the programs were not modified. Only from the mid nineties were new programs implemented in order to give greater viability and sustainability to the FFA sector. In this context, INDAP considerably increased its budget and developed activities beyond the traditional short term loan programs and technological transfer services. The new agenda for INDAP works signified better and broader coverage to include new users (smallholders), which stands out as the most characteristic element of the Agricultural Policy of the period. Especially noteworthy are the program for recovering eroded soils, the program fostering livestock development, and loans for forestation. Added to the traditional TTP (in force until 1996-1997) were the Local Consultant Services (SAL - Servicios de Asesoría Local), Project Consultant Services (SAP - Servicios de Asesoría de Proyectos), and as well, the Business Development

Fund (FODEM - Fondo de Desarrollo Empresarial) and Administration Centres were created. In high poverty rural areas, the selection of poor communities by INDAP as focal points for assigning technological improvement programs is translated into the implementation of Local Development Programs (PRODESAL - Programa de Desarrollo Local), and Poor Communities Development Programs (PRODECOOP - Programa de Desarrollo de Comunas Pobres) in dry coastal regions with many smallholders. There was also a large drive toward irrigation through subsidies for the construction of irrigation infrastructure, to rural tourism and to development programs with youth and women. Besides the programs developed by INDAP, initiatives linked to agricultural extension developed by the Foundation for Agricultural Innovation (FIA - Fundación para la Innovación Agraria), the INIA and the Universities, should also be mentioned. The private sector places emphasis on those areas operating along lines of contract agriculture (tobacco, tomatoes, sugar beet, seeds and some vegetables).

### ***2.5 The Current Period***

The current government defined on its agenda five crucial points to be accomplished between 2006 - 2010: consolidate Chile as an Agriculture and Food leader; to make appropriate and to modernize the forest-livestock-agriculture public institutions; to contribute to increasing and diversifying the energy matrix in the country; to promote sustainable use of renewable natural resources and the protection of the biodiversity; and, to promote overall development. Within this last point it is proposed to “contribute to the narrowing of the socio cultural and economic gap in the most backward rural sectors”, by designing programs and means that help to insert “Small Farming” into domestic and international agrifood markets. In order to accomplish this they have set out methods and means for one segment of these sectors, the so called FFA and the salaried agricultural workers without setting out specific programs or instruments for the rest of the segments making up sub groups within the family farm sector, each with its own markedly different aspects. INDAP has only one intervention plan for the farmer users or clients of said institution. It has grouped them into three large segments according to their relationship with the markets: those whose insertion into domestic or international markets linking with agro industry is very clear; another segment whose main objective is the domestic market, and is also linked to agro industry but more

variable than the first segment, that is, it has also gone through the exporter chain through intermediaries, but that is not its main activity; and finally, there is the “multi activity” segment (judged as vulnerable) where there is continued implementation of programs such as PRODESAL, PRODECOOP, and inter institutional agreements such as INDAP-PRODEMU and those related to the subject of native people (“ORÍGENES” program). Besides these there are other activities planned in conjunction with MIDEPLAN associated with intervening in the rural poverty sectors which are part of the UNITED CHILE (Chile Solidario) program.

### **3. Current Environment of the FFA and the Smallholders Agricultural Sectors.**

The profound processes of change that occurred within the Chilean society in the last decades have, on one hand, affected the new position of the agricultural sector in face of the national economy and society and, on the other hand, a profound alteration in the relations among the different actors in the rural society and the relationship of these with the public and private institutions. Thus, Chile becomes the country that has changed its agricultural structure and organization the most rapidly and radically, setting clear distances between modernized agricultural areas and the ones still managed by conventional structures, insufficiently using capital and modern technological inputs. On the other hand, the agricultural policies followed the last decades have firstly defined themselves in terms of the international market, to specific production items and, in general, with an almost exclusive emphasis on the economic aspects of agriculture. The above has generated some productive, economic and social imbalances such as:

- ⇒ An employment structure based on seasonal work.
- ⇒ The generation of production systems, especially in the country’s central region, characterized by a production structure based on intensive farming of a frankly mono production nature and highly dependant on international markets.
- ⇒ An inadequate specialization on those areas where the FFA is predominant.
- ⇒ A deep technological crisis in many traditional production systems, with economical and social repercussions.

- ⇒ A marked tendency toward consolidation of a tenancy structure that does not allow space for the development of forms of family production and of part-time agriculture.
- ⇒ A trading structure with a high foreign dependency and with clear monopsonistic characteristics in some areas.
- ⇒ Processes of migration, deep inequalities of intra and inter sectorial income, serious environmental imbalance and the marginal position of the peasant.
- ⇒ A FFA faced with the challenge of interventionist agriculture policies of industrialized countries, and exposed to the growing globalization process that the economy has been experiencing.

Considering the above it is an unavoidable task for agricultural policy to embrace not only economic consideration, but also, and very particularly, those aspects relative to technological, social and environmental concerns, aspects of inter sector relationships, of regional structures and of basic infrastructure, among others. The specific characteristics of commercial agriculture have not been reproduced in the FFA sector. Their production methods have not responded to a pattern of agro climatic specialization, but rather have been by preference directed toward activities of self consumption or with low salable surpluses, low capital requirements, of little mechanization, etc. This demonstrates that the family farmers has not been able to profit from the externalities generated by the investments made not only by the State, but also by the business sector in order to enter into the modernization process.

#### **4. The State's role in agriculture**

The consensus about the role of the State in agricultural development has been changing over time towards a less direct handling of economic activities and less control over the price and quantity of factors and products. Although the concept of “market failures” has already been recognized by the private sector, the perception that there are also “State failures” is now much greater than at the beginning of the market model's application. Even if a good part of the “State failures” can be attributed to institutional incentives and to inadequate financial policies, they are a reality. However, the government should have an outstanding role in moving the consensus toward

appropriate development policies and their translation into concrete actions, which should indirectly correct the most important “market failures”. Institutions should underline income distribution and wealth, since they affect incentives and the multiplying effects deriving from agriculture. Therefore, adopting market systems at any cost may seem too simplistic when there are serious equity problems, above all in the most backward sectors of our society where many rural settlements are located.

Then, what should the State’s role be, if it is not found in production and distribution? The roles of the State are indisputably clear: to protect property rights, to ensure that contractual obligations are met in order to foster competition, to provide public goods and services such as research, technology, information and infrastructure and to provide education. The most highly debated roles are related to the redistribution of resources through strong measures such price fixing, risk reduction, providing loans, etc. With respect to the provision of public goods, there are goods and services that the competitive markets do not supply or they make them lesser quantities than the optimum; among these are included support for agricultural research and some forms of extension and communication, and the investment in human capital for economic growth. On the other hand, it is also the task of the State to limit the effects of monopolies whether it be through incentives for competition (including liberal international trade policies), or through control when competition is not a viable alternative.

In modern economics, the private sector and the State play roles of mutual support, and the border between them should always be clearly defined. As far as agricultural policy is concerned, it should join the State with the markets in a complementary manner, rather than substitutive, keeping in mind that the markets alone can not assure the desired results and that the absence or failure of a market does not require the State to take on the responsibility for that activity. In this sense, the governments can and should help to promote equity and alleviate poverty, policies that contribute to the growth and well being of the entire population.

The role of the government is to stimulate agricultural development within a modern context, and to help this process by the decentralization of its functions. Even with all its limitations (administrative capabilities and vulnerability in terms of expensive

institutional processes), the State can play at least a significant role, contributing to agricultural financing and guaranteed risks. It can take the initiative in establishing market products, generating and spreading information, facilitating high risk contracts and arbitrating the disputes over them. The topic of public investment should also be related to biotechnological research; involving new plant and animal varieties, and the preservation of biodiversity.

The priority for public investments in agriculture should be switched from major works to the betterment of the use of productive resources at the community level, which implies a bigger and better social control of the investments. A problem that is a large obstacle to the majority of the government actions is related to distribution conflicts. In areas of high social and economic inequality the problem of “conquering” the local public institutions by the local elite can be important, and the poor and weaker segments of the society can remain exposed to this inequality.

In its different areas, an efficient government should make an active promise toward the development of the agricultural sector; therefore it should be aware of the limitations to public action and the danger of creating serious economic distortions if the policies are not well thought out. The government should support development with intelligence, diagnosing with precision and constancy the problems that emerge and take on the role of facilitator to the growth of the sector. The State, through the government, should take on the functions that the public institutions must accomplish so that the markets function appropriately. In this manner, it would be meeting the expectations that the national community has entrusted to them, above all in that which is related to assuring equal opportunities and equality for all of its inhabitants.

## **5. Restrictions to Competitiveness and Agricultural Policy Measures and Instruments to Favour it. Case Study FFA from the Maule Region**

### ***5.1 General Characteristics of the Agricultural Sector in the Maule Region***

The Maule Region, with a surface area of 30,301.7 Km<sup>2</sup>, is located in the central zone of Chile between the southern latitudinal parallels 34° 41' and 36° 33' and from the 70°20'

western meridian to the Pacific Ocean. Its topography displays the development of the longitudinal entities that characterize Chile: the Andes mountain range, the Central Valley and the Coastal mountain range. The climate is Mediterranean with some variations derived from the increase in latitude and altitude. With an average annual precipitation of 700mm, the extreme average temperatures are 22°C in January and 8.2°C in July.

The composition of the region's population is noted for a high percentage of rural dwellers as can be observed in Table 1.

**Table 1: Composition of the Maule Region's Population.**

	Population per local		Population per gender		Total
	Urban	Rural	Men	Women	
<b>Maule Region</b>	603,020	305,077	452,988	455,109	908,097
<b>Country</b>	13,090,113	2,026,322	7,447,695	7,668,740	15,116,435

Source: ODEPA, 2007.

It must be highlighted that the level of rural population in the Maule Region comes up to 33.59%, according to 2002 Census figures, which is significantly higher than the national level reaching only 13.40%. This demonstrates the great importance of the agricultural sector as one of the most important components for development in the region.

On the other hand, the economic development of the region is supported by agro climatic conditions, the basis of its forest-agro- livestock production potential. In the region are found 2.2 million hectares of potentially productive land, 1 million of which are good for livestock and agriculture and the remaining 1.2 million are good for forestry. In this manner, the forest-agro-livestock sector has shown a slight increase in its participation in the GDP at the regional level, reaching a 17.52% of the regional total for 2003 (see Table 2)

**Table 2: Total and Forest-agro-livestock GDP at the Regional and National Level.**

Years	Total GDP		F-A-L GDP	
	Country	Region	Country	Region
2000	35,646,493	1,220,088	1,485,916	199,754
2001	36,850,289	1,284,636	1,575,996	210,604
2002	37,655,141	1,296,565	1,647,623	224,045
2003	39,130,058	1,333,671	1,746,970	233,661
2004	41,541,807	1,396,846		

Source: ODEPA, 2007.

With respect to employment (see Table 3), forest-agro-livestock activities employ 128,850 people, which corresponds to 34% of the total regional workforce, causing the regional employment rate to rise, above all in harvest periods.

**Table 3: Employed and unemployed in the Feb-April 2007 period (thousands of persons).**

Employed		Unemployed		Unemployment (%)	
Region	Agriculture	Region	Agriculture	Region	Agriculture
376.22	128.85	16.62	2.89	4.2	2.2

Source: INE, February-April, 2007.

At the regional level the main exports are found in the primary sector, arriving at US\$ 288,490,000 en 2004, which represents a variation of 24% more that in the previous year for the same goods. This brings to light the large development that the primary sector has had within the region where in the last fifteen years a significant development in forestry and agricultural businesses can be appreciated transforming this zone into one of the most important regional producers of raw materials and forest and agricultural export products (see Table 4).

On the other hand, the most significant forest-agro-livestock products in the Maule Region can be seen in the Table 5, where cellulose, wines and fruit are the most notable.

**Table 4: Maule Region Industrial and Primary Exports by Subsector (thousands of US\$ FOB).**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Var % 04/03
<b>Class/Subsector</b>											
<b>Exports</b>	<b>385,032</b>	<b>408,084</b>	<b>333,952</b>	<b>394,017</b>	<b>446,500</b>	<b>405,090</b>	<b>429,723</b>	<b>610,604</b>	<b>639,494</b>	<b>782,571</b>	<b>22,4</b>
<b>Primary</b>	<b>83,653</b>	<b>115,176</b>	<b>103,163</b>	<b>159,466</b>	<b>132,619</b>	<b>110,520</b>	<b>107,665</b>	<b>240,108</b>	<b>232,215</b>	<b>288,490</b>	<b>24,2</b>
Agricultural	82,389	114,011	100,641	158,128	131,282	109,488	105,880	238,986	231,161	287,134	24,2
Livestock	95	1,002	1,327	508	857	649	1,129	806	756	1,059	40,1
Forest	1,169	163	1,196	830	480	383	656	316	399	297	-25,5
<b>Industrial</b>	<b>301,379</b>	<b>292,908</b>	<b>230.788</b>	<b>234,551</b>	<b>313,880</b>	<b>294,570</b>	<b>322,059</b>	<b>370,496</b>	<b>407,179</b>	<b>494,081</b>	<b>21,3</b>
Agricultural	93,195	158,435	139,896	142,331	154,891	138,995	194,338	229,597	271,511	327,384	20,6
Livestock	1,175	1,575	3,218	1,273	1,758	5,485	8,818	7,905	5,858	8,223	40,4
Forest	207,008	132,899	87,674	90,947	157,231	150,090	118,903	132,994	129,810	158,473	22,1
<b>General Total (country) unspecified</b>	<b>443,680</b>	<b>441,551</b>	<b>425,565</b>	<b>407,164</b>	<b>372,454</b>	<b>409,951</b>	<b>500,881</b>	<b>6,040</b>	<b>4,370</b>	<b>3,465</b>	<b>-20,7</b>
<b>Total for the country</b>	<b>4,473,288</b>	<b>4,169,892</b>	<b>4,270,252</b>	<b>4,332,807</b>	<b>4,720,594</b>	<b>4,976,354</b>	<b>4,785,260</b>	<b>5,184,598</b>	<b>5,938,049</b>	<b>7,401,187</b>	<b>24,6</b>

Source: ODEPA with the Nacional Customs Service, 2007.

**Table 5: Maule Region Principal Export Products (thousands of US\$ FOB).**

<b>Products</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Var % 04/03</b>
Fresh apples	35,653	49,111	43,732	78,607	69,132	53,432	41,690	125,157	126,986	148,545	1,50
Cellulose	191,333	113,222	65,369	74,276	139,998	139,500	110,686	129,499	117,719	137,943	-9,10
Wine with origin denomination	3,731	7,091	12,551	16,733	20,274	25,895	62,679	93,113	106,425	119,006	14,30
Other wines	6,351	17,490	19,561	22,727	22,511	22,481	31,662	25,548	37,027	54,850	44,90
Fresh Kiwis	8,732	13,606	11,852	16,537	11,456	12,480	13,902	21,926	27,248	36,272	24,30
Tomato purée and juice	23,508	39,619	32,143	33,570	37,025	22,486	18,993	22,135	20,359	27,247	-8,00
Frozen raspberries, including with sugar or sweetener	11,864	16,020	7,136	13,968	13,214	13,986	11,538	9,571	17,837	25,900	8,40
Blueberries	1,307	2,520	2,739	4,544	4,927	6,763	11,978	14,216	11,686	24,525	-17,80
Peaches, compotes, jellies	-	-	0	133	350	1,186	3,649	6,134	11,370	18,900	85,40
Pears	6,435	10,010	8,807	10,511	9,017	5,487	5,327	14,385	13,605	17,944	-5,40
Fresh plums	-	-	3,315	3,892	3,774	4,373	3,380	9,416	5,743	14,120	-39,00
Dried apples	4,332	9,034	5,209	4,426	5,786	7,100	7,586	7,799	9,742	11,816	24,90
Fresh cherries	4,190	5,795	4,673	5,668	7,854	5,560	6,959	15,254	19,648	11,113	28,80
Other conserves, jellies and jams, purée and pastes	772	322	1,472	966	3,535	4,521	5,526	5,232	6,289	9,048	20,20
Fresh grapes	1,220	2,247	2,800	5,826	2,521	1,274	2,138	12,277	5,170	8,808	-57,90
Raspberries, blackberries	2,381	1,641	2,420	6,374	8,114	8,681	10,096	12,194	9,364	7,597	-23,20
Other wines	508	1,483	2,153	2,171	3,410	1,858	6,405	16,430	10,991	6,933	-33,10
Cherries preserved in natural juice	5,588	9,261	9,721	6,917	7,251	6,630	5,416	6,010	4,340	6,425	-27,80
Frozen blackberries	1,701	1,689	2,410	3,072	5,722	3,628	2,111	2,862	5,441	5,110	90,10
Apple nectar and juice	1,222	17,083	14,538	1,396	4,806	3,796	3,728	3,246	5,625	4,380	73,30

Source: ODEPA with the National Customs Service, 2007.

Concerning Table 5, it can be mentioned that the greatest growth has taken place in the wine industry, the compotes and jellies, as well as berries for freezing and other fruits for making juice and concentrates, while some fresh fruit exports have considerably decreased their amount of transaction for the period under consideration.

The country's open economy system enabled a large segment of producers in the Maule Region to produce for the international market, which was qualified as successful. On the other hand, those farmers who were limited by agro ecological conditions or the quantity of physical or financial resources remained outside the model's beneficiaries. Among the latter, aiming to produce for the domestic market, are found some who are in condition to face a reconditioning to the requirements of the market. However, a large number of them, the "family farmers" are nearly incapable (either for the scanty physical resources they possess or for their administrative skills) of readapting production by themselves. These family production units with salable surpluses have been supported by the State through INDAP with financial programs, technical transfer and organization support. Without a doubt, the growth of the agricultural sector is centered on the fruit and vegetable export enclaves and the agro industries, preferable located in the Central Valley.

Another sector of producers with family units, the smallholders, generating marginal salable surpluses or whose production is for self consumption and survival are far from benefiting from the success of the regional agricultural sector. These producers are concentrated in the pre Andean zone, but by preference in the coastal dry zone and the interior drylands. In these areas, the large extensions have welcomed the D.L 701 that subsidies forest plantations what have radically changed the agricultural landscape and agricultural activity.

With respect to land tenancy structure, in the Maule Region there are 44,068 properties occupying 2.9 million hectares with 29.55% of them being considered subsistence farms (ODEPA, 2000).

The distribution of the farms at a regional level can be divided into four large groups: i) subsistence farms; ii) small farms; iii) medium farms; and iv) large farms. The latter possess 44% of the total of the agricultural land in the region and are mostly made up of

large agricultural companies that have installed their property around the cities. Following them in importance are the small farms, which make up 31.5% of the total productive land (see Table 6).

**Table 6: Distribution of the Number of Farms According to the Type of Producer and Surface Area. Maule Region.**

	<b>Subsistence</b>	<b>Small farms</b>	<b>Médium famrs</b>	<b>Large famrs</b>	<b>Without activity</b>	<b>Without classification</b>	<b>Total</b>
N° farms	13,024	24,294	2,294	1,522	1,074	1,860	44,068
% according to number of farms	29.6	55.1	5.2	3.5	2.4	4.2	100
Productive surface area (hectares)	137,272	921,371	408,115	1,287,752	30,003	139,750	2,924,263
% according to productive surface area	4.7	31.5	14.0	44.0	1.0	4.8	100

Source: ODEPA, 2000, from 1997 Agricultural Census.

This categorization of farmers is currently used by INDAP, dependent on the Chilean Ministry of Agriculture. On the basis of this characterization, programs intended to develop and move forward the small farmers are planned and carried out. The main characteristics of each group are summarized in Table 7.

**Table 7: Characteristic of Types of Farms**

<b>Type of Farms</b>	<b>Characteristics</b>
<b>Subsistence</b>	The subsistence farms are those originally classified as of a small size with an agricultural area of use too small to provide the monthly minimum income. The sizes that do not permit reaching the minimum monthly income are those that remain under the cut off line indicated for the small size section in each of the sub areas indicated.
<b>Small farms</b>	The maximum size for each homogeneous sub area was qualitatively established according to the limit that the INDAP regional specialists estimated would differentiate between FFA and an agricultural area of greater business context. To determine the upper limit the maximum land size defined by INDAP for its beneficiaries was used; that is, 12 basic hectares with water rights, applicable according to soil characteristics in each of the homogeneous sub areas. In the majority of the cases the upper limit defined for small farms was slightly greater than the indicated surface area.
<b>Medium farms</b>	Corresponds to those whose agricultural surface is greater than the upper limit determined for the small units and less than the large farms.
<b>Large farms</b>	Corresponds to those agricultural areas that allow for commercial returns and benefits on a significant scale. Considering that the CORFO criteria for distinguishing between medium and large companies (100,000 UF in annual sales) was not applicable to the agricultural sector since the large majority below this indicator, an eminently qualitative criteria as defined by qualified reporters in function of each local situation. Thus, the size of the area effectively exploited would permit them, among other characteristics, to do without State financial assistance as a basic requirement for the development of the dominant productive activities in the homogeneous sub area in their places.

Source: ODEPA, 2000.

Currently the programs carried out by INDAP en the Maule Region have as beneficiaries the groups that correspond to the subsistence farmers and the small farmers with a total of 37,318 farms making up 84.68% of all farms in the Region. Of these, 29.55% are subsistence farms and 55.12% are classed as small farmers. In the Region the group of small farmers has been divided into the following types:

- ⇒ A producer whose principal source of income is commercial agricultural activity and their crucial productive activity is linked to the agro export process.
- ⇒ A producer whose principal source of income is commercial agricultural activity and their main production is linked to the domestic market involving dynamic and traditional goods.

With respect to the subsistence farms, the producers use a strategy of mixed farming activities to generate income including agricultural activities, and other activities tied to agro industrial processes, rural tourism, and handicrafts.

The productive surface area in the hands of INDAP beneficiaries comes to a total of 1,058,643 hectares, which corresponds to 36.20% of the productive area in the Maule Region, made up of 4.69% in the hands of subsistence farmers and 31.5% occupied by small farmers.

The distribution of the agricultural groups in the different communities can be seen in Table 8:

**Table 8: Distribution of the Number of Farms per Community and the Type of Farmer.**

Community	Total	Large	Medium	Small	Subsistence	Others
CAUQUENES	3,035	71	87	1,467	1,092	318
CHANCO	1,127	3	18	347	733	26
COLBUN	1,866	50	48	1,075	507	186
CONSTITUCION	1,088	5	40	413	533	97
CUREPTO	1,796	13	27	816	764	176
CURICO	1,768	130	103	976	412	147
EMPEDRADO	658	9	12	209	372	56
HUALANE	687	21	65	349	220	32
LICANTEN	456	5	25	162	220	44
LINARES	2,935	77	141	1,750	747	220
LONGAVI	3,005	113	148	1,995	674	75

MAULE	1,150	25	58	719	241	107
MOLINA	921	88	60	604	140	29
PARRAL	2,433	89	94	1,505	592	153
PELARCO	673	43	78	392	149	11
PELLUHUE	980	2	16	300	615	47
PENCAHUE	934	35	44	522	259	74
RAUCO	573	29	69	261	189	25
RETIRO	2,143	79	102	1,598	277	87
RIO CLARO	979	55	91	588	216	29
ROMERAL	681	71	37	441	115	17
SAGRADA FAMILIA	999	69	135	505	220	70
SAN CLEMENTE	3,329	72	178	1,938	852	289
SAN JAVIER	2,693	100	112	1,247	1,072	162
SAN RAFAEL	492	38	81	295	77	1
TALCA	1,125	27	71	738	240	49
TENO	1,998	106	134	1,152	482	124
VICHUQUEN	537	2	24	200	249	62
VILLA ALEGRE	1,347	43	90	706	446	62
YERBAS BUENAS	1,660	52	106	1,024	319	159
<b>TOTAL</b>	<b>44,068</b>	<b>1,522</b>	<b>2,294</b>	<b>24,294</b>	<b>13,024</b>	<b>2,934</b>

Family Agriculture in the Maule Region represents nearly 16% of the national total, that is, one of every six family farmers (including smallholders) are settled in this Region. As can be appreciated, it is a matter of a significant and relevant stratum for any strategy for agricultural development and competitive entry that is considered to be implemented at the national and/or regional level.

## ***5.2 Methodological Element of the Typologies to be Used***

As has been previously mentioned, there exist 44,068 agricultural holdings in the Maule Region, of which 84,51% (37,273 holdings) belong to the FFA segment. Within said segment, 13,024 (29,55%) are subsistence farms and the remaining 24,249 (55,026%) are classified as small farms. In the Region, INDAP annually attends through its various programs and credits about 15,000 producers, classified within these two segments, i.e., nearly 35% of the regional holdings.

The proposal of typologies - Valdés and Foster (2007) - assumes the existence of rural-agricultural households which *“have a future in the sector and those households that do not have it”* (i.e., that are not competitive in the agricultural sector). If the proposal just assumes a model of agricultural of a “full-time” nature, one has to point out that there is a space in the agricultural sector for family farming called “part-time” farming, a kind of agriculture which combines agricultural self-employment with an occupation, in any other kind of working schedule, in another economic sector.

Consequently, it should be first pointed out that even in the farmers’ space *“with a future in the sector”*, it is possible in this Region to establish competitive roads, not only for local markets, but also for international ones. For instance, once can find in both markets the possibility to insert minor fruit species (berries), flowers, vegetables under greenhouse system, egg production, beekeeping, etc. In any case it is best to differentiate this group of producers from the residential smallholding type, i.e., that in which the man-land relationship is only established for dwelling purposes, without any productive importance. To this latter group belong retirees, agricultural workers and seasonal workers, located in small villages and along rural roads.

The report using this kind of typology presents an analysis of the structural features of the households related to agriculture in Chile. A typology of said households has also been developed, placing an emphasis on the sector of smallholders and salaried agricultural workers. The main purpose of this typology is to elaborate a conceptual framework for formulating development policies, not only associated with agricultural production, but also in a more general way, with the family’s income and poverty

alleviation. Said report uses primarily two information sources connected with agricultural households: the 1997 Agricultural Census, and the 2003 CASEN survey. Finally, in section four of the report, and from data obtained from the CASEN survey, the households are identified by agricultural production and salaried agricultural work, besides their dependence level on agricultural income sources.

According to the typology to be used, and based on the 2003 CASEN survey of households, the existence of 26,383 (100%) was determined for the Maule Region, (only those designated as **Family Farms**), which were associated to farming use. At the same time, these were divided into six categories:

- a) Farms comprising one person, with only agricultural income (38,31%);
- b) Farms comprising one person, with non-agricultural income sources (28,1%);
- c) Farms comprising two to five farm workers, without family workers and with only agricultural income (9,2%);
- d) Farms comprising two to five farm workers, without family workers and with non-agricultural income sources (8,4%);
- e) Farms comprising two to five farm workers, with family workers and with only agricultural income (9%);
- f) Farms comprising two to five farm workers, with family workers and non-agricultural income sources (7%).

For purpose of this report the typologies mentioned above, were regrouped into the following four categories (see Table 9).

**Table 9: Reclassification of Family Farm Typology**

<b>New classification</b>	<b>Previous classification</b>
<b>Family Farm Agriculture 1 (FFA1)</b>	types <b>c</b> and <b>d</b>
<b>Family Farm Agriculture 2 (FFA2)</b>	type <b>e</b>
<b>Family Farm Agriculture 3 (FFA3)</b>	type <b>f</b>
<b>Part-time farming or Subsistence farming</b>	type <b>a</b> and <b>b</b>

Source: Author's elaboration.

In these categories, it is defined as **“Part-Time Farming”** that which is carried out in a small farm, with a productivity level which permits its owners to generate complementary income. Notwithstanding the aforesaid, and in empirical terms, there are farmers in the Region designated as **“modern entrepreneurs”**, who have a productive vocation targeted at international markets, among which we can find Forestry and fruit companies and other producers, who despite being aimed to the domestic market, have technological and productive levels which make it possible to include in this segment. The so-called **“traditional entrepreneurs”**, are represented by producers of traditional crops with medium to high technological levels, with poor flexibility of their productive supply and some management and marketing problems. Next, the **“small integrated producer”** is defined, i.e., the producer who had his origin in the Agricultural Reform process or agricultural colonization and who is linked with the market through more profitable crops or contract farming, with a medium technological level and a poor management level, but who unlike the former ones, is more flexible in his productive structure. Next, the **“small producers with farming potential”**, are classified, also called **“backward producers or plot holders”**, due to their poor relationship with the market, management capacity and lack of technology and capital which makes it difficult for them to choose more profitable crops. Finally, the **“small producer without farming potential”** is mentioned, who are basically smallholders from the dry lands regions, from the preAndean zone, peasant communities and farmers in areas with a strong ethnical component, who carry out a subsistence agriculture and who depend mainly on off-farm income. The greater part of this population is in a poverty or marginal situation.

### ***5.3 Restrictions and Factors Limiting FFA Competitivity***

There is a set of decisive factors to stimulate the competitiveness of Family Farming in the process of the international insertion of agriculture of the Maule Region, as also others which become actual barriers towards attaining this goal. The Maule Region, is the regional space which concentrates the highest ratio of rural population in the country (35,5%). Together with the aforesaid, of the 55,000 agricultural properties (IRS case records), which are estimated by the 2007 Agricultural Census, 93% have a surface of 0,1 to 15 Equivalent Hectares, which concentrate approximately 55% of the regional

soil (3 million ha., which corresponds to a total amount of 245,000 Equivalent Hectares). Family Farming in the Maule Region represents 16% of the national total, i.e., one of every six family farmers (including smallholders) is situated in this Region. As can be noticed, it is a significant and important stratum in any agricultural development and competitive insertion strategy, not only because of its effect on the stratum itself, but also for the effect on general welfare ensuing from a better use of the available resources.

There are a series of factors which affect the competitiveness of Family Farming in the Maule Region, some of which are of a structural nature, others of functional features and certainly others that are due to the internal organization of the sector.

### **5.3.1 Structural Factors**

#### **a) Natural Resources:**

This refers itself to the soil availability, particularly to its physical attributes, features, degradation and use capacity. As a general rule, there are important restrictions in the dry coastal regions, and preAndean zone. An area in which this subsistence property is mainly located, which does not employ additional labour and of which an important part of labour is comprised by the seasonal workers associated both with horticultural activities in the central valley during the spring-summer season or with forestry activities during the winter-summer months (planting and forest fire brigades). The water availability in drylands and those lands with a safer irrigation in the central valley area is another structural restriction which has no possibilities of being removed without a decisive action of public policies. Irrigation programs (irrigation tenders), applied within the framework of Law 18.450, have partially contributed to improving irrigation techniques at a farming level and allow a more efficient use of water.

#### **b) Household Head Features**

Generally, the age structure of Family Farming in the Maule Region corresponds to ageing groups, particularly in the subsistence sectors. According to some studies, the

average age of the household head is estimated as 56, being more than 60 in the smallholdings' sector. This situation and the education level of the household head (incomplete basic education for the great majority) reduce the permeability and scope of Family Farming professionalization and training. Important levels of functional illiteracy are to be noted in a significant part of regional Family Farming.

### **5.3.2 Functional Factors**

The Capital, Technology and Entrepreneurial production factors are set in a heterogeneous manner in the Family Farming sector. Although for the operational capital, i.e. the financial resources requirements belonging to a structure based on annual crops, there is a satisfactory coverage on the part of INDAP and private banks, the investment resources which permit significant changes in the production structures of this sector are more limited. Notwithstanding the aforesaid, in the last two years there have been more resources for the implementation of farming investments within the framework of BPA and BPG (good agricultural and livestock practices), essential for any competitive insertion process. Starting from the premise that the average capital for family farming (including the value of the land) is approximately US\$ 90,000, a third part of it corresponds approximately to realizable capital. With respect to this capital, there are two striking phenomena: the high incidence non-realizable capital has on the total capital stock (little technology), and the scarce capacity of Family Farming to have access to funds for equipment updating and renewal. The access to effective innovation mechanisms (risk capital) is another factor limiting the area's modernization dynamics. The traditional means for this have been conventional credits which have been used in the past for innovation processes. Their failure has contributed to increase the amounts of unpaid debt (arrears), principally of INDAP.

Together with access to innovation restrictions, both in economic terms as expert counsel, there are entrepreneurial restrictions, i.e., the commercial escalation of many processes that are initially suggested as pilot processes. The availability of human resources with the necessary capacity for the technological transfer and training in the public and private national outreach system must also be reviewed to make this process viable. There is a clear assumption that what have been transferred are traditional

standards for a sector which is fundamentally traditional and this has become part of a vicious circle which must be modified. There is in the country a general and common treatment in the agricultural area of innovation and enterprise, which considers as automatic and simultaneous two processes which have a different nature and a different sequence. The use of modern inputs is another functional factor which besides having a heterogeneous behaviour, has unsatisfactory application levels. The reasons for its poor use are not due to ignorance in the majority of the cases, but rather to institutional factors (access to credit), risk assessment and opportunity and intensity of its application.

### **5.3.3 Internal Organization**

One of the factors that reduce the coordination of service or trade actions in Family Farming is the scarce will to associate to make organizational processes viable. The high geographical dispersion and relative isolation in some areas of the country are not compensated with organizational structures which mean positive externalities to the sector.

All agricultural services, as also those that are connected with them, do not have a single window to see to the different demands of the sector and the perception of the farmers is partial, segmented and incomplete. The action model which favours relations between the farming services and the world of family farming has a frank productivistic character, i.e., it favours this sector as producer of “farming inputs”, instead of covering plans favouring food production, with quality, biosecurity and harmlessness standards in accordance with international agreements. Although there has been some change in the last three or four seasons, the current model does not show symptoms of weakening, yet.

Together with it, a primary farmer-producer outlook is favoured, instead of an entrepreneurial farmer outlook where there is an interest in hard technology transfer (technical-productive) as well as in soft technology transfer (that related to information and communication management). The new communication and information technologies, essential for any international competitive insertion, are only marginally

presented in farming areas, both in terms of areas with electricity which permit to have *in situ* access to the computer training of the members of Family Farming. This is at present an objective restriction as the greater part of the available relationship, both the one corresponding to technical reports as well as commercial reports, is done through this means.

Another factor of an organizational character which can be gathered from observing the reality of regional Family Farming is the low level of coupling between the strategies of international insertion of the commercial sector of Chilean agriculture with those tested in the Family Farming sector. There has been a trend in these efforts to search for a way of its own creating from the productive stratum, marketing organizational models of their own without a proper international commercial tracking, adequate contact networks and with reduced export volumes. Many of these efforts have failed and have thrown back producers to their original productive structures, with higher levels of rejection to new enterprises. On the other hand, the programs destined to create commercial skills in part-time farmers, particularly in the PRODESAL program of INDAP, which integrates the outreach system with communal action, have limited resources to satisfy the huge demand. To obtain a better profile of this interesting instrument, one must achieve some progress in the specialization of these programs according to the targeted group (young people, women, smallholders, etc.).

### 5.3.4 Analysis by Categories

#### a) FFA1

**Main features:** Within this group we find those producers proceeding from the Agricultural Reform or agricultural colonization process or their descendants. They have successfully managed their enterprises which has allowed them to capitalize their farms (machinery, productive infrastructure, etc.), but they have mainly acquired land, thus enlarging their farms. This has meant that they have “graduated” or gone beyond INDAP’s prototype of user or clients. They are in general enterprising and innovative farmers, with a great management capacity and a close connection with internal or external markets.

**Restrictions and factors limiting their Competitivity:** Their technical and productive capacity is not compensated by the current State support mechanisms and instruments as they cannot make use of them, having to recur frequently to the bank credit market and on many occasions with barriers that prevent them to develop or expand their productive plans in more profitable permanent crops or connected with export. They have no other choice but to work with contract farming and/or annual crops. In organizational terms, they are not linked to the networks of their peers and do not participate - for a lack of social connections - in other organizations linked to entrepreneurial farming.

## **b) FFA2**

**Main features:** They are represented by those producers that are within INDAP's users' category, but are potentially in the process of "graduating" from the system, i.e., they are in the "ceiling" of demands to maintain themselves as clients of the current State promotion mechanisms. They produce mainly for local markets, associated to contract farming, participate in the seed production system, have raw materials for the agricultural industrial system (wine grapes, for instance), although in many cases they are associated to the agricultural export system through intermediaries, generally producing some type of berries.

**Restrictions and factors limiting their Competitivity:** They have many of the features mentioned in the previous category, although they depend more on the State system of technical and credit transfer. This category faces the productive process and national and international markets in disadvantageous objective conditions. Their relative productive isolation, as their connection with the products and factors' market is generally individual, does not allow them to attain a solid negotiation position. The weaknesses noticed in this category must be considered together with the menaces it faces, far from being able to consolidate a position in the current political agricultural scenario and to play some relevant role in it in the near future, in the new stage facing national agriculture.

### c) FFA3

**Main features:** These are producers who despite being inserted in INDAP's support system make a poor use of their productive resources. They are mainly targeted towards the domestic market but have no relation with contract farming.

**Restrictions and factors limiting their Competitivity:** With respect to land tenure, in spite of the fact that many of them carry out their productive activities in smallholds of the Agricultural Reform process, it is in a precarious situation because generally they are factual or legal fractioned successions and inheritances, which limits their access to credit and/or the possibility to incorporate themselves to an investment promotion program in new crops of a permanent type which require of operational and investment capital, but a higher profitability level. Thus, they are kept out of some modernizing processes in the productive field. Due to this, they are on the "floor" category of INDAP users or in a frank process of "smallholding" their properties, with all that this status implies. Therefore, many of them sell their family labour surplus in the seasonal market as a way of complementing their income. There are exceptional cases of producers in this segment which connect themselves with the public institutions having crops linked to the processing-exporting agricultural industry, generally berries (raspberries or strawberries). Unfortunately, as they have no sale contracts, the marketing of their products is done through middle men ("conchenchos"), and, therefore, these productive efforts are diluted, generating a "vicious circle" with respect to the crop. On the other hand, within the shortages or weaknesses they have, it might be mentioned a productive structure principally expressed in annual crops, a limited command and knowledge of entrepreneurial management, a low level of capitalization; in general, ignorance of the nature, features and functioning mechanisms of the farming business, an organizational lack which does not make possible for them to obtain economies of scale and joint action, etc.

### d) Part-Time or Subsistence Agriculture

**Main features:** These are producers or peasant villagers that are concentrated in the dry coastal regions or in the preAndean zone of the Maule Region. The quality and quantity of the natural resources they possess do not permit them to live from farming activities,

but they sell their labour principally in a temporary way and/or strongly depend on the composition of their income, of the money and non-farming income sent by their relatives.

**Restrictions and factors limiting their Competitivy:** This category receives a strong pressure from migrating currents, i.e., the ageing of the economically active population in the smallholding areas, resulting in the deterioration of the available natural resources. On the other hand, and unlike what happens in the Central Valley, these peasants are deeply rooted in their land, in the rural way of life and in farming as economic activity. One has to point out that in this segment is concentrated, besides the people who live in small country villages, the greater part of the population living in poverty and rural regional indigence.

#### ***5.4 Agricultural Policies and Instruments favouring FFA Competitivy***

The promotion of Family Farming development in the Maule Region is maybe one of the principal regional development efforts that public and private institutions must see to, given the scope and significance of this phenomenon in the regional productive structure. An important part which explains the national competitive position of the Maule Region, placing it in one of the last places, is related to this situation. Consequently, the Family Farming development task is a task which besides spreading to the whole regional economy, has also an impact on the farming area as a whole due to the importance this region has in the country's proportion of tillable and irrigation soils. From a public policy point of view, it is appropriate to state that, before making any exclusion concept of farming development, it must clear up from the debate the following unknown quantities: i) to establish the limits of subsistence farms which base themselves more on reasons of a technological nature and/or production structure than those strictly of subsistence of a more residential character; ii) to define the political and agricultural space which has the definition of a framework of action for the development of a part-time agriculture inserted to domestic or international markets, as appropriate; iii) to progress in the definition of a public policy which nuances the productivistic model inspiring it, with strategic and instrumental definitions aimed at

developing entrepreneurial management skills, such as massive improvements in the products' quality.

With respect to the factors that may contribute to raise the competitiveness of regional Family Farming, it may be pointed out the following:

- ⇒ Improvement in the soil production factor, through irrigation programs (new major and medium-sized works), irrigation assurance, massive irrigation technification. Massification of the degraded soils recovery program, particularly in drylands, destined to raise the production of dry matter for livestock feeding.
- ⇒ Implementation of a risk capital fund enabling innovation and enterprising programs of a greater scope, and which do not operate through contestable funds.
- ⇒ To count with promotion instruments for productive chaining, making the incorporation of family farmers something attractive to major commercial companies, either of national or international exposure. (Massification of suppliers' development programs, chain management, etc.).
- ⇒ Development of outreach methods and actions of the different services (development instruments) using single window methods, allowing joint management (public-private) of the various promotion instruments. A method based on the implementation of "Management and Enterprise Centres" aimed at Family Farming.
- ⇒ Improvement of information platforms and access to available communications for Family Farming. This program presupposes an important effort in connectivity, education and farm equipment. This step is essential for making progress in matters of precision agriculture which this sector must necessarily face in the next years, if a competitive position is envisaged for it.
- ⇒ Farmers' professionalization by means of skills' training and certification programs.
- ⇒ Access to investment resources (equipment, machinery, livestock, plantations, irrigation, etc.) which will make possible to carry out productive transformations and structural changes that will mobilize in an intensifying sense.

### 5.4.1 Analysis by Categories

#### a) FFA1

**Agricultural Policies and Instruments favouring their Competitivity:** They could be part of a future “farming middle class”, which could be the subject of a professionalization process, creating special productive and credit promotion mechanisms, permitting their permanent promotion and the expansion of the surface and/or capitalization of their productive unit.

#### b) FFA2

**Agricultural Policies and Instruments favouring their Competitivity:** The growth of the farming sector and the need to have more raw materials, has permitted the incorporation of these segments to the productive chains, establishing a sort of favourable strategic alliance for both parts of the chain and enabling more alternatives for their productive rotation and their farming business. These producers must receive support to face important challenges: the interventionist agricultural policies of industrialized countries and the growing globalization process. A redesigning of the action in matters of agricultural outreach and technological transfer is also required to allow through them, on one hand to apply agricultural policy instruments and programs and to face in a competitive manner the productive reconversion and modernization process. These instruments must produce significant changes in the way in which they are linked with the agricultural outreach and research system, in the access to productive technological innovation or of entrepreneurial management; in the relation mechanisms of farmers among themselves; in the relation of their organizations with the input and product markets and the agricultural-industrial chains; in the establishment of the necessary connections that must exist between the outreach system, agricultural research and education in rural areas, etc. The instruments must foster technological innovation and change and in particular, consolidate the producer as a farming entrepreneur.

Their productive and economical consolidation or transformation requires that they must be prepared to adapt to technological modernization, to their relationship with financial sources, their integration to agro industrial and agro export complexes, their connection

with international business, profiting from the country's image in international markets for expanding business lines, profiting from the interest of some international companies or investors in generating joint business with national producers and, particularly, assuming the market trends as an important component in the process of decision making. Their farms must be organized in an entrepreneurial and technological manner based on modern production techniques, which is the most immediate challenge for the agricultural policy of the country. That is why the modernization of the production systems must be one of the most essential agricultural policy goals, restructuring the forms and manners of production based on the fundamental principles of economic rationality, using modern production and organization techniques governed by the market's principles. It is clear that the emphasis must be placed in incorporating these segments of the FFA to the productive development strategy, promoting institutional and structural transformations, lifting the barriers that have systematically opposed themselves to their development, particularly in what regards investment credits, technological innovation, transfer of production, management and marketing techniques. To articulate the traditional sector into the agro industrial business implies wholly assuming the complex demands imposed on the different links of the chain. To sustain in the long term a model of farming and agro industrial development on technologically backward productive structures, without a competitive efficiency level in the respective market, without organizational structures, as basic as they may be, is utopic. One has to develop and attain productivity, technology, entrepreneurial development and farm investment levels which adjust themselves to the market's demands.

### c) FFA3

**Agricultural Policies and Instruments favouring their Competitivity:** As these producers have some positive features from the agricultural point of view, as for instance, having natural resources of excellent quality and situation, the necessary farming labour availability for productive decision changes of an intensive character; access to technological knowledge, persistence of the farm family production mode; education and instruction levels in satisfactory farm families, etc., one must apply in them ad-hoc specific measures or instruments allowing them to strengthen their attributes and reduce their failings. This would contribute to their integration into the markets in a most expedite manner, thus profiting from the infrastructure of transformation and services in the country, connecting them to the business, to the

technological knowledge sources and to be taken into consideration in the future political decisions to face the challenge of productive transformation and modernization. It is clear that all of it implies admitting the existence and challenge imposed by the insufficiency of financing sources and mechanisms for their productive transformation; the progressive trend to subdivide the family property with serious overtones of the properties becoming smallholds; the vulnerability generated by international prices of some agricultural products; the scarce institutional availability for productive innovation (reconversion mechanisms), etc..

#### **d) Part-Time or Subsistence Farming:**

**Agricultural Policies and Instruments favouring their Competitivity:** Some of the actions and/or measures that should be adopted with this segment should be, for instance, policies of land holdings' concentration - which would permit this part of the population to take roots in a sustainable way -; aid programs, activities of a conservationist kind ("Payment for Environmental Services"); "opportunities" farming, linked to the summer tourist flow, seasonal tourist services (agro tourism); etc., these services associated to some specific productive activities. Furthermore, policies must be implemented to overcome poverty in part of this category. While admitting a limited capacity of the State apparatus to contribute to overcome rural poverty, particularly in the smallholding sector, it must be aimed at applying instruments which permit to modify the social development patterns and access to employment and off-farm income. Some specific measures may also be implemented such as:

- ⇒ Enabling access to effective channels of active participation, these to be understood as the social, community, economic, cultural organization, etc.
- ⇒ Enabling on-site access to improvement of farm units.
- ⇒ Access guarantee to public (centralized and decentralized) and private institutions, with real interaction opportunities.
- ⇒ Improving living conditions of rural inhabitants in their living quarters.
- ⇒ Access to life quality levels and development opportunities compatible with the progress experienced by society as a whole.
- ⇒ Strengthening of collective awareness of the intrinsic value of rural culture.

- ⇒ Empowerment of organized groups for the defence of their corporate interests.
- ⇒ Sustainability and exposure of the attractiveness and multifunctionality of rural villages.

On the other hand, the investment in infrastructure in the areas in which this population carries out its activities, contributes effectively to overcoming poverty. But infrastructure on its own cannot overcome poverty. It requires other implementation lines which permit to improve the income level of said families, and that is why it is essential to add productive Rural Development programs with integral features, which mobilize the available set of factors for poor families. Infrastructure may bring benefits in terms of financial growth, poverty relief and environmental sustainability, but only when it provides services that respond to a real demand. This area requires a consistent interdisciplinary work covering the sphere of “Territorial Planning and Management”, “Local Development” approach, and specific actions in the farm level. Health focused programs (of municipal coverage), Rural Housing, Micro enterprise Promotion, Education (poorer schools) are also presented as contributions to alleviate a deteriorated situation.

Table 10 presents a summary of factors limiting competitiveness of each group, and policy suggestions.

**Table 10: Summary of Factors Limiting Competitiveness and Support Instruments to Improve Competitiveness According to Family Farm typology.**

Type of Family Farming	Description	Limiting factors	Policy instruments
<b>FFA1</b>	<p>Farms with two to five agricultural workers, without family workers and only agricultural income</p> <p>Farms with two to five agricultural workers, without family workers and with non-agricultural income sources</p>	<p>Lack of State support instruments as they can make no use of them (they are overqualified)</p> <p>The bank credit market prevents them from developing or expanding their productive plans on more profitable crops</p> <p>Lack of social connections with other organizations linked to farming enterprises.</p> <p>Poor bargaining power</p> <p>Lack of market information (prices and new products)</p> <p>Fragmented and dispersed production</p> <p>Lack of technical specialized</p>	<p>Investment in minor and intermediate irrigation and drainage works in terms of construction and maintenance.</p> <p>Certification systems for quality assurance of farming and livestock exports</p> <p>Productive and entrepreneurial skills development services</p> <p>Support to diversification of economical and productive activities</p> <p>Incentives to improvement and development of investments</p> <p>Service of specialized technical counsel through research centres</p> <p>Promotion of development programs for suppliers of goods and services</p> <p>Exports' promotion fund</p> <p>Promotion of associative projects</p> <p>Investment financing of small and medium enterprises</p> <p>Financing of leasing operations for small and medium enterprises</p>

		<p>assistance</p> <p>The high risk, segmentation and geographical dispersion of the farming sector raises the current interest rates of private banks</p> <p>No access to bonds and forward markets in agriculture</p> <p>Scarce or no investment in agricultural research</p>	<p>Subsidy program for Farming Insurance</p> <p>Tax concessions for training</p> <p>Program of direct support for enterprises - micro enterprises program</p> <p>Farming credit with preferential rates</p> <p>R&amp;D investment programs where the research guidelines are jointly given by authorities and farmers</p> <p>Savings promotion by means of new financial instruments attractive to producers</p> <p>Start-up of the agricultural stock exchange</p> <p>Creation of regulating frameworks to make the farming credit more attractive to private financial institutions</p>
<b>FFA2</b>	<p>Farms with two to five agricultural workers, with family workers and with only agricultural income</p>	<p>Highly dependent on the State technical and credit transfer system.</p> <p>Relative productive isolation does not allow it to attain a solid bargaining position.</p> <p>Advanced agricultural research is not aligned with the real needs of farmers</p>	<p>Promotion of investment in minor irrigation and drainage works</p> <p>Investment instruments of improvement of already existing irrigation areas (irrigation assurance)</p> <p>Focus of agricultural research instruments adequate to farmers' needs</p> <p>Strengthening of the water resources management</p> <p>Quality assurance system</p>

		<p>Deficient technical assistance in the product marketing area</p> <p>Scarce Capital resources</p> <p>Imperfections of agricultural markets limit the expected returns of this sector which further limits the farmers' payment capacity</p> <p>Poor access to information and markets</p> <p>Moderate financing access</p> <p>Scarce development of farm infrastructure</p> <p>Fragmented and dispersed production</p> <p>Limitations to financing</p> <p>Lack of efficiency, equity and sustainability in the management of natural resources (water, soil, etc.)</p>	<p>Counselling services for the management of peasant associated enterprises</p> <p>Incentives for investment improvement and development</p> <p>Development of productive and entrepreneurial skills services</p> <p>Support to economical and productive activities diversification</p> <p>Promotion of associative projects</p> <p>Financing of investments of small and medium enterprises</p> <p>Financing of leasing operations for small and medium enterprises</p> <p>Subsidy program to agricultural insurance</p> <p>Start-up of agricultural stock exchange</p> <p>Tax concessions for training</p> <p>Program of direct support for enterprises - micro enterprises program</p> <p>Farming credit with preferential rates</p> <p>Creation of sustainable rural financial institutions</p> <p>Training program for agricultural workers</p>
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			Programs for Internationalization
<b>FFA3</b>	Farms with two to five agricultural workers, with family workers and non-agricultural income sources	<p>Scarce level of organization</p> <p>Poor technological level</p> <p>Scarce training level</p> <p>Scarce productivity level</p> <p>Non-compliance with sanitary measures required for product marketing</p> <p>Precarious situation with respect to the land tenure.</p> <p>Limited access to credit and/or the possibility of participating in some investment promotion program in new crops of a permanent type requiring operational and investment capital.</p> <p>Poor bargaining power</p> <p>Inadequate product marketing.</p>	<p>Irrigation development program in poor communes</p> <p>Applied and participative research with farm producers</p> <p>Incentive system for recovery of degraded soils</p> <p>Support to diversification of economical and productive activities</p> <p>Incentives for investment improvement and development</p> <p>Debt reprogramming</p> <p>National program of enterprises integration to the network of enterprises by line of business</p> <p>Construction and improvement of irrigation works</p> <p>Implementation of production bonus</p> <p>Guarantee fund for the small entrepreneur</p> <p>Associative irrigation program</p> <p>Programs for Internationalization</p> <p>Technical assistance Fund</p> <p>Social productive development</p>

		<p>Limited command and knowledge of entrepreneurial management</p> <p>Poor capitalization level</p> <p>Inadequate management of natural resources (water and soil resources)</p> <p>State credit systems characterized by subsidies to general interest rates does not stimulate creation of rural financial institutions of a greater viability</p> <p>Use of plant propagation material (degenerate) with ensuing lower productivity</p>	<p>Development program for suppliers</p> <p>Tax concessions for training</p> <p>Bonus for skills' training and generation</p> <p>Training program for agricultural workers</p> <p>Strengthening of links between public organizations and local water management systems (Water communities).</p> <p>Farming outreach services focused to the customer and his real needs</p> <p>Regulating framework contributing to legalize property deeds</p> <p>Creation of social development programs</p>
<b>Part-time or subsistence farming</b>	Farms comprised by one person (self-employed) and only agricultural income	<p>Poor organizational level among farmers</p> <p>Poor technological level</p> <p>Low educational level and insufficient training</p>	<p>Irrigation development program in poor areas</p> <p>Debt reprogramming</p> <p>Integral technical counsel service</p> <p>Counsel services for peasant associative enterprises management</p>

	<p>Farms comprised by one person (self-employed) and non-agricultural income sources</p>	<p>Poor productivity level</p> <p>Without access to markets and information</p> <p>Low access to financing</p> <p>Poor infrastructure level and production goods</p> <p>Non-compliance with sanitary measures</p> <p>Ageing population</p> <p>Deficient social capital</p> <p>Low community organization and incapacity to make cooperative and associative efforts</p> <p>High degradation of soil</p> <p>Crops that are produced in areas which do not express their potential yield</p> <p>Lack of land property regulations may result in bad</p>	<p>Program for the recovery of degraded soils and adequate management of natural resources</p> <p>Implementation Production Bonus</p> <p>Credit programs</p> <p>Project of poor dry lands communes promotion</p> <p>Rural education and generation of farming skills</p> <p>Subsidy program for agricultural insurance</p> <p>Employment program</p> <p>Creation of social development programs</p> <p>Subsidy for self-consumption agriculture</p> <p>Social productive development</p> <p>Bonus for the training program PROEMPLEO</p> <p>Training program for agricultural workers</p> <p>Investment projects placing emphasis on the female gender focused not only on cultivation techniques, but also on reducing the time devoted to household duties</p> <p>Implementation of micro credits covering the subsistence sector</p>
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