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## Role, Usage and Motivation for Contracting in Agriculture

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## Executive Summary

Agri-food sectors have been going through a remarkable transformation worldwide. This process has been accompanied by an increasing use of contracts, which raises concerns about market transparency, possible consequences for actors of the food supply chains and the role a government in this changing environment. The objective of this paper was to provide policy makers with a brief overview of structural changes in the sector and main incentives behind the increased use of contracts, together with identifying some emerging policy issues.

The discussion is supported by results collected via two surveys undertaken by the Secretariat. First, views were solicited from producer organisations with the close cooperation and assistance of IFAP. Second, national level data were solicited from member countries. Responses to the questionnaires were relatively low but provided insights and new information on the use of contracts and potential role for governments. The main findings of the paper are the following:

- The main forces pushing in the direction of increased used of contracts have been linked to market consolidation, changes in trade patterns, transport possibilities, technological developments and changes in consumer demand.
- The basic motives for contracting identified in the economic theory include incentive alignment, risk sharing, market power, and efficiency gains. In the context of recent changes in agri-food systems, the need to improve efficiency and transparency of production processes tend to be the overriding incentive for contracting.
- The representatives of producer associations viewed the role of governments mainly in specifying the “rules of the game” and in stimulating meetings among the supply chain subjects before the signature of the contracts. Several studies indicate that small farms, especially in developing countries, could get better access to markets as a result of using agricultural contracts.
- The data collected from member government surveys suggest that a large percentage of farmers and production is under contracts but the uptake varies by commodity and farm size. For example, in Finland, 80-90% of hogs and dairy farms respectively use contracts and this share has been rising. In the US, the hogs and beef farms producing under contracts tend to be nearly 4 and 12 times bigger than average farms for these commodities respectively.
- In some cases there may be a role for government policy directed at reducing transaction costs; helping to fill the information gap in contract negotiation; enabling contract enforcement and fraud reduction, and moderating the possibilities of “hold up” and rent seeking.
- In the context of diminishing spot markets the prices may no longer be correctly signalling market conditions and financial situation of farms, so that spot price information may need to be completed with information on contracts.
- Both surveys underscored the need for periodically collected quality data on the use of contracts in agriculture. In many countries national level data on the use of contracts are not readily available. The importance of contracts is likely to increase further and detailed contract data will become the key to informed debate and policy guidance.

## **I. Introduction**

Agri-food sectors have been going through a remarkable transformation process worldwide that have accelerated the transition from independent markets towards much more tightly aligned food supply chains. Very often, these changes have been accompanied by an increasing use of contracts.<sup>1</sup> It is perhaps the speed of these changes that raise concerns for policy makers and some stakeholders. In this context, there is often a great deal of uncertainty about the extent of the “phenomena”, possible consequences for actors of the food supply chains and the role a government in this changing environment should play.

Contracting is important because it can provide alternative governance mechanisms for the sector and can often improve the efficiency of supply chains. Improvements can be attributed to an altering of incentives for market participants, to greater co-ordination between the different stages of the chain, and to improve information for specific agents as well as managing product quality and flows. However, an extensive use of contracts can result in thin spot markets and can reduce cash price information which is often the basis for a contract price. The use of contracts in concentrated markets with few buyers can also raise concern about possible abuse of market power.

Hence, contracts represent a challenge for governments in terms of ensuring fair practices and a level playing field but also in terms of maintaining flows of reliable price information. Masten and Saussier (2002) argued that for policy-makers, understanding the functions and implications of contracts is a prerequisite to distinguishing between efficient and anti-competitive practices, and to developing appropriate policies in that respect. This paper attempts to address some of the questions pertinent to the growing use of contracts in agri-food sector.

The paper starts with an overview of recent drivers in the agri-food industry and the subsequent changes in the agri-food sectors organisation. Developments in contract theory are then briefly reviewed. Survey information on the use of contracts in the agri-food sector is then presented, followed by a discussion on possible roles governments might play in regulating and supporting contracting.<sup>2</sup>

## **II. Contracts in agriculture – drivers and responses**

It is important to start by defining what types of contracts are to be considered as this term has been used with respect to essentially all forms of agreements. Some of the definitions touch on the legal concept of the contract, the link between contract design and contract enforcement, and dependence on legal rules and functioning of the legal system.<sup>3</sup> The primary motivation in this study is to understand the growing use of contracts in the realm of increased vertical co-ordination

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1. Recent surveys in the United States, for example, suggest that the value of production under contracts in the United States roughly tripled over the last three decades, with nearly 40% of the value of US agricultural production under contract in 2003 (MacDonald and Korb, 2006a).
  2. The help and insights from professor Menard (Université de Paris) in the initial phases of the project were much appreciated.
  3. MacNeil, 1974 characterised contracts as “legally binding promises”. Masten (2000) defined a contract as a formal legal commitment to which each party gives expressed, not necessarily written, approval. Brousseau and Glachant (2002) defined contract as an agreement under which two parties make reciprocal commitments in terms of their behaviour – a bilateral coordination arrangement.

in agri-food chains so that the main attention will be given to contracts linked to producing and selling of agricultural products. These types of agricultural contracts have existed for a long time, particularly for perishable agricultural products delivered to the processing industry, such as milk for the dairy industry or fruits and vegetables for making preserves (Bijman, 2008). Little and Watts (1994) point out that seed production contracts have been the rule since the 1940's in Europe and North America where seed merchants contracted with growers and established strict conditions pertaining to quality and quantity.

Among the driving forces fuelling the uptake of contracting has been a remarkable transformation process of agri-food systems worldwide. Among the most pervasive changes in the agri-food chain have figured consolidation, new patterns of consumption and technological developments.

- *Consolidation.* Several indications show rapid changes in the direction of more concentrated agri-food industry. First, the number of farms has fallen sharply and farm size has increased while production became more specialized.<sup>4</sup> Simultaneously, there has been a powerful movement of concentration in processing, at least in some sectors. In the US hog industry, the four largest hog packers slaughtered 32% of all hogs in 1985 and 63% in 2006 (USDA, 2008). In the same country, the four-firm concentration ratio in the steer and heifer packing industry went from 36% in 1980 to 79% in 2006 (for all cattle the ratio increased from 29% in 1980 to 69% in 2006, USDA 2008). Similar changes have occurred in other sectors and in related activities (e.g. seed companies, pesticide etc. Johnson and Melkonyan, 2003). Concentration in the retail sector has been particularly evident, with the concentration share of top 5 firms reaching as much as 90% in the case of Australia and Canada, and rarely less than 50% in the majority of developed countries (Menard and Klein, 2004; OECD, 2006). This has been accompanied by the development of retailer brand-names, making reputation a major issue, pushing towards increased control and tighter vertical coordination.
- *New patterns of consumption.* In developed countries concerns with availability and price of food have been largely replaced by food quality and safety concerns. Consumers request more variety in their choice of food, are becoming health and diet conscious, and consume more of their meals outside the home. Consumers are also more aware of animal welfare and environmental protection issues. It follows that concerns with “non-tangible” specific attributes of food are increasingly part of the product selection process. This phenomenon is also spreading to developing countries, fuelled by rising incomes, westernisation of diets and increased urbanisation. In order to address these new consumer concerns and to monitor food and process attributes firms have adopted modes of organization that are viewed as more apt at coordinating an increasingly complex supply chain. The increased trade in consumer-oriented goods has also caused developments of specific supply chains that meet food quality and production standards that differ from domestic regulations.

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4. In the United States, between 1989 and 2003 the share of farm production on very large farms (sales of more than half of million USD - adjusted for inflation) increased from 38% to 56%, while the share of small farms (sales between USD 10 – 250 000) plummeted by more than 40% and their number fell by over 20% (MacDonald and Korb, 2006a). The European situation is similar. In France, the EU's leading agricultural producer, the number of farms, between 1958 and 2000, fell by two-thirds while the average farm area has doubled (Menard and Klein, 2004).

- *Technological changes.* Three changes are particularly relevant for understanding the increasing role of contractual practices. *First*, progress in transportation technologies (containerization, controlled atmosphere, cargo sizes and speed, fuel efficiency and satellite navigation systems) have reduced freight costs, enabled long-distance sourcing and allowed the diversification of the supply base of food retailers and processors (da Silva, 2005). They have also increased the need for coordination and pushed towards organizational arrangements that can provide adequate support. *Second*, biotechnology has moved the boundaries of product attributes and production possibilities. It is often cited as a prominent reason behind changes in organisational mode and tighter vertical coordination. For example, increased vertical co-ordination in the seed and chemical industries has been linked to the product complementarities, to research and development costs, to economies of scale and scope created by intellectual property rights, and to regulatory costs (Fulton and Giannakas, 2001; Johnson and Melkonyan, 2003). *Third*, changes in information technologies play an important role in providing means for better planning, control, and decision making along the supply chain. Information technologies allow enforcing contracts much more efficiently. It also facilitates traceability, which is becoming the norm for many products in a context of consumer-driven food safety.

The above discussed transformations stimulated changes in organisational modes within vertical co-ordination in order to meet changing requirements and expectations from consumers while improving the efficiency of food supply chain organization through minimizing transaction costs. The coordination in supply chain, however, encompasses a continuum of possibilities from open spot market transactions to full vertical integration<sup>5</sup> (Williamson, 1973). In between these extremes lie contracts and various other forms of organisation and cooperation. Table 1 illustrates that moving from spot markets towards vertical integration rapidly decreases control over production decisions and assets for the farm operator who, ultimately becomes a ‘quasi employee’ of the vertically integrated firm. Moreover, the market price progressively loses its role as the primary determinant of transactions.

However, a large variety of arrangements exists. For example, production contracts differ considerably depending on the legal relationship between producer and contractor, and commodity produced. Moreover, individual contracts of the same ‘type’ might be structured using different price terms (Katchova and Miranda, 2004, identified eight different mechanisms in marketing contracts) and may differ according to duration, the presence of confidentiality clauses, rules for quality, compensation and delivery of quantities, etc. Delivery clauses include rules for product handling, transport, timing and penalties for departures from the rules (Menard, 1996; MacDonald *et al.* 2004).

The governance mechanisms along the food chain differ not only among agricultural sectors, but also within the same sector. In some sectors contracts are the preferred mode of coordination

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5. The spot market is defined as a market where commodities are sold for cash and delivered immediately or over a short period of time. The price is the primary determinant of the transaction and typically reflects the real time situation, although products typically need to meet minimal quality expectations. Given that the cost of storage is effectively higher than the expected price in the future the spot prices typically reflect current supply and demand, not future price movements. Depending on the position of a firm in the chain, three possibilities of vertical integration exists. *Backward vertical integration*, the firm integrates with input suppliers. *Forward vertical integration*, the firm integrates with a further processing firm or a distributor of their products. *Balanced vertical integration*, the firm integrates with subsidiaries that both supply them with inputs and distribute their outputs.

while in others vertical integration is more common (MacDonald and Korb, 2006a, 2006b). Contract variety does not relate only to different commodities. For the same commodity and within the same country, there may be significant differences in contractual practices. For example, Key and McBride (2003) have shown that the likelihood of contracting varies across regions in the US. There is casual evidence that the same situation prevails in Europe. For example, contracting plays a major role in the French poultry industry (Menard, 1996) while integration seems much more developed in the Netherlands.

**Table 1. Governance mechanisms along the vertical chain organization continuum**

<b>Form of governance</b>	<b>Brief description</b>	<b>Control of production</b>	<b>Payments to farmer</b>
Spot Markets	Commodities are sold for cash and delivered immediately. Price is the primary determinant of the transaction.	Farm operator controls assets and production decisions in agricultural enterprise.	Farm operator receives price for farm output, negotiated at time of sale just prior to delivery.
Marketing Contracts	Refer to sales conditions. Contain estimates of the production under the contract and of delivery times and quantities.	Farm operator controls assets and production decisions in agricultural enterprise.	Farm operator receives a price for farm output, negotiated before or during production of agricultural commodity.
Production Contracts	Refer to sales and production specifications. Producer agrees to deliver a product produced in a manner set forth in the agreement.	Contractor exercises control over some production decisions or farm enterprise assets.	Farm operator is paid a fee for farming services rendered in the production of the commodity.
Vertical integration	Refers to the production control. Price as a determinant is replaced by internal decisions.	Single firm controls assets and production decisions in adjacent farming and processing stages.	Farm operator-manager is compensated for skills and time like other employees.



Source: Adopted from MacDonald *et al.* (2004).

To summarize, there is a wide variety of organizational responses to the rapid changes in the agri-food industry. The development of contracting practices is a significant component of these organizational responses. Contract and organization theory can help bring some order and improve the understanding of the issues at stake.

### ***Contract theory and motivation for contracting***

The many questions linked to the diversity of contractual practices can be grouped under three broad categories: (1) what pushes towards the development of these practices? (2) what incentives are implemented to coordinate and control? and (3) what is the impact on the agri-food sector? These questions are embedded in two different and somewhat competing approaches: transaction cost economics, which has contributed to the analysis of alternative modes of organization and to the understanding of the trade-off among these modes; and agency theory, which has mostly focused its attention on how to design incentives that could induce the heterogeneous and even conflicting interest of interdependent parties to converge.

A review of the agency literature and related models can be found in Hart and Holmstrom (1987) and Salanie (1997). An overview of transaction costs economics literature is provided in Menard and Shirley (2004). More general discussion on the main contract theory approaches can be found in Furubotn and Richter (1997), and Brousseau and Glachant (2002). The contract theory approaches are briefly reviewed in Annex 1 of this paper, with an emphasis on what is relevant for the agri-food sector.

To broadly summarise the discussion in the Annex, what differentiates the transaction cost and agency theory is a motivation to contract. The primary reasons for contracting in agency literature are risk transfer (insurance) and incentive alignment. On the other hand transaction costs literature view contracts as efficiency improving devices for structuring ex-post adjustments and constraining rent dissipating efforts to influence distribution of gains, ex-post bargaining, “hold up” problems, and ex ante search and sorting costs.<sup>6</sup> In this context, according to the transaction cost approach contracts should be determined by: (i) the need for specific investments, creating interdependencies so that partners look for safeguards (this should shape the type of contracts and their clauses); (ii) the necessity to enhance supply chain efficiency by reducing costs, (iii) the necessity to develop tight coordination in an environment in which product quality, variety, and safety are key issues.

### *Efficiency*

Efficiency is at the centre of transaction cost approach argument and as a primary motivation for contracting, emphasizing productivity gains that are stimulated by improved managerial capabilities, better technology transfers, and more efficient coordination. The coordination of investments and control over processes is needed for guaranteeing product quality and enhancing the efficient use of plant capacity and consequent economies of scale. For example, Key and McBride (2003) suggest that hog production contracts are associated with substantial productivity increases while Paul *et al.* (2004) found that smaller farm operations and those with lower contracting levels are less efficient than larger contract intensive entities. The authors warn that efforts to regulate contracting operations may have significant economic costs but note that limiting environmental damage still remains an important regulatory task.

Efficiency is an important economic factor, but why would spot markets be any less efficient than contracting? Lambert and Wilson (2003) argue that although spot markets do provide incentives to reduce costs they do not control well opportunistic behaviour by farmers, processors, or retailers. Spot markets also do not address well the measurement problems related to product attributes such as food safety, non-visible quality characteristics, assurances of animal welfare etc. The quest for satisfying the “new” demand factors have raised the information costs for downstream food firms in identifying suppliers of the products with (or without) these characteristics and driven processors and other intermediaries to develop alternative means of coordination, *e.g.* integration or contracts arrangements. (see Menard, 1996; Maze, 2002; MacDonald *et al.*, 2004; Ward, 2001; Purcell, 2002, Sykuta and Parcell, 2002, Raynaud *et al.*, 2002).

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6. Hold up problem relates to the situation in which a farmer invests in specific assets and becomes vulnerable to opportunistic behaviour on the part of other supply chain actors, who may try to force the farmer to accept less favourable terms, given that the alternative use of his asset may be limited or nil.

### *Market power*

Critiques of transaction costs economics have argued that market power may be the fundamental motivation behind the push towards vertical integration and the development of contractual arrangements. The central argument is that dominant firms would use contracts to extend or exert market power. For example, Hegrenes and Borgen (2003) argued that less regulation and weak marketing cooperation and concentration of the downstream market segment led to tight vertically coordinated chains where farmers are in a relatively weak position.

A lot of attention has also recently been devoted to growth in the importance of so-called captive supply, such as the procuring of fed cattle for slaughter based on contracts. The contract contains a price formula which is linked, among other things, to spot market transactions. As the price reporting becomes less transparent and spot markets thinner, highly concentrated meat packers may lower their cost by trying to lower spot market prices. These possibilities led US Congress to adopt the Livestock Mandatory Price Reporting Act in 1999. This act obliges US meat packers to report the prices paid for their animals to United States Department of Agriculture (USDA), which then posts summaries (averages) of those prices, nationally and for different regions. However, Schroeter and Azzam (2003, 2004) argue that their empirical findings do not indicate that captive supply procurement has caused low cash market prices and that low market prices should not be used as a justification for policies that restrict the use of captive supplies. Moreover, MacDonald *et al.*, 2004 in their extensive study note that although, theoretically, contracts could be specified such as to create market power for buyers, the evidence for market power exploitation is weak.

### *Incentive alignment*

Another motivation behind increasing role of contracts identified in the literature is incentive alignment. The empirical literature on this aspect is relatively meagre mainly due to the lack of data and difficulty of deriving testable hypothesis for comparing different incentive mechanisms. Nevertheless, some recent papers have investigated the comparative role of some incentives mechanisms, *e.g.* tournament *vs.* fixed-performance standards contracts (Wu and Roe, 2006), and the possible impact of institutional constraints on incentive mechanisms, *e.g.* the welfare effects of banning tournaments in broiler contracts (Tsoulouhas and Vukina, 2001).<sup>7</sup>

Tsoulouhas and Vukina note that in the US broiler sector, the payments based on tournaments often create apprehension about the possible opportunistic behaviour of the principal (buyer, processor). Moreover, farmers have difficulty accepting that for similar efforts their income varies considerably. In general, it is difficult to design an optimal contract and align incentives perfectly. The alignment is driven by a complex set of factors, *e.g.*, relative attitudes towards risk, degree of asymmetric information, extent of moral hazard, and possibility of adverse selection (Hobbs and Young, 2001). These difficulties could explain why simple contracts are often preferred to complex formulas.

### *Risk sharing*

The protagonists of the risk sharing argument view contracts as a way to transfer risks from one actor in the supply chain to another in the presence of asymmetric information. Patrick *et al.* (1998) report that in their survey a majority of farmers regarded cash-forward contracts as effective means of reducing risk; only less than a third of respondents valued spot markets as

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7. Tournament is the ranking of payments according to the relative performance of several agents.

effective in providing risk protection. However, if risk-sharing is the main argument for contracting, it could be expected that farms under contract receive lower average returns than other farmers in exchange for the risk reduction. Yet, MacDonald *et al.* (2004) observe that contract prices frequently exceed average market prices for some commodities, and some producers may contract in order to secure higher prices rather than to reduce price risks. These producers may receive higher prices for supplying uniform or special attributes that are valued by the buyers.

Other studies have also challenged the view that risk is the major factor determining the choice of contractual arrangements. Allen and Lueck (1999, 2005) provide evidence of factors that are, in their view, more important than risk sharing, *e.g.* the need to coordinate better and to reduce transaction costs.<sup>8</sup> Moreover, there are many risk management strategies other than contracting that can be used by farmers (Harwood *et al.*, 1999). Hence, properly written contracts can provide certain risk protection, but risk sharing does not seem to be the engine behind the recently growing use of contracts in agriculture.

To summarise, assessing alternative incentive mechanisms associated with different types of contracts is a difficult task plagued by the lack of data, heterogeneity and complexity of contracts. Nevertheless, the available literature distinguishes several basic motives for contracting in agriculture: incentive alignment, risk sharing, market power, and efficiency gains. The empirical evidence, however meagre, tends to suggest that not all these motives have the same weight in the decision to contract and in organisational choices. In the agri-food industry, the increased use of contracts has been linked to the need to improve efficiency, quality and transparency of the production process and to the ability to guarantee specific desired product attributes.

### **III. The extent and use of contracts in agri-food sector – survey results**

The above sections have outlined the roles and principal motives for contracting in agriculture. The discussion was supported by review of theory and empirical studies. A majority of the cited studies have focused on researching a particular aspect of contracting. Moreover, these studies have typically used survey data to analyse a specific sector only. Contracting was studied particularly for broilers (Knoeber, 1989; Menard, 1996; Goodhue, 2000; Tsoulouhas and Vukina, 2001), hogs (Key and McBride, 2003; Wang and Jaenicke, 2006; Reimer, 2006), fruits and vegetables (Valceschini and Soler, 1999), and beef (Xia and Sexon, 2004).

One of the objectives of this study was to collect data at producer or producer group levels that would allow an assessment of contracts main characteristics, identify main incentives and impacts of contracting on farmers, while helping to identify the role of the institutional environment and public policies. Another objective was to gather information on contracting in agriculture at the national level to provide for a more precise picture of the extent of their use across sectors and across countries. In addition, a stock taking of existing national and special survey data, contact persons and other sources of information on contracts was envisaged.

#### *Data collection*

The collection of the information on contracting was through a questionnaire sent to producer associations that could have the data available or could forward the questionnaire to individual producers. Collaboration with the International Federation of Agricultural Producers (IFAP) was

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8. Key (2002) also argued that the value of risk reduction to farmers is overstated if analyses do not control for the loss of autonomy many farmers experience under contract.

sought to facilitate the survey procedure. The questionnaire was designed so that it would address the main contract issues but remain relatively simple and short.<sup>9</sup> The questionnaire was further refined following comments by the Working Party on Agricultural Policies and Markets.

The final questionnaire consisted of three parts. Part I collected background information such as name of the association, producer group, main commercial product produced by members, average size of holdings etc. Part II asked about the main contract characteristics. For instance, whether contracts contain exclusivity or penalty clauses, how prices are set and payments made as well as the average length of time of contract validity and renewal procedures. Part III inquired about the incentives for and impacts of contracts in the sector and asked about participants views on contracts and the potential role for government. There were also open ended questions to provide a more complete understanding of potential or perceived advantages and disadvantages of contract use in the agri-food industry and the potential role for government.

In addition, a shorter questionnaire was sent to OECD country Ministries of Agriculture seeking information on research activities (if any) in their country (assessments, special surveys etc) analysing the role, scope and policy implications of contracts. The focus of this questionnaire was on national level data, on the use of contracts by sector, by share of output across sectors as well as by type of contract, where such information was available.<sup>10</sup>

#### *Results from the producer-association questionnaires*

The questionnaire designed for producer associations was sent with the co-operation of IFAP to its members. This enabled a wide reach as IFAP represents 120 national farmers' organizations in 79 countries. The participants were asked to return questionnaires via email directly to the OECD Secretariat. The response rate was low and a follow-up questionnaire, which focused only on qualitative questions (Part 3), was re-circulated with a similar low response. The fact that many producer associations do not have data on the use of contracts readily available was probably the main constraint.<sup>11</sup>

The Secretariat has received altogether 14 responses (the list of respondents is summarised in Table A2.1 in Annex 2). Moreover, the questionnaire participants were not always able to answer all the questions. Some respondents were also producer associations of a specific product or group of products so that some products are covered only in few questionnaire replies. This unfortunately makes it impossible to undertake any statistical analysis of the sample and draw empirical conclusions. Nevertheless, the questionnaire replies that were submitted do provide interesting insights and information on the use of contracts. It should be noted that most of the producer associations that filled out the questionnaire represent a very large number of farmers.

Given the low response rate and the number of products specified, the responses to the first part of the questionnaire are difficult to summarise or present in a tabular form. However, it is possible to observe a certain difference in contract use between OECD and non-OECD respondents. For example, Brazil and South Africa associations indicated that use of milk contracts does not exceeds 10% and 20% respectively while OECD countries typically responded that a majority of milk production is governed by contracts.

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9. The questionnaire was designed with the help of Professor Menard (Université de Paris).

10. Both questionnaires are available upon request.

11. Language difficulties with the questionnaire may be another reason.

The responses to the second part of the questionnaire indicated that the main contract clauses are used across commodities in a similar way. The use of confidentiality clauses was indicated only in one case for wheat and maize, so that these clauses do not seem to be an important feature of contracts used by members of the surveyed producer associations. Exclusivity clauses, disabling an open market alternative, were featured more often than confidentiality clauses. Traceability was an important clause mainly for fruits and livestock products but less so for crops. Most often cited price mechanisms were fixed-quantity-and-price, and price formula based on quality and product attributes, while a fixed-price-only formula (without a quantity specification) was cited only once (for crops). A price formula based on the spot market was used mainly for arable crops, while formula based on production performance was used at least once for all products with the exception of beef and dairy. None of the respondents indicated that contracts specifically included value for a service provided by a farmer. A majority of respondents indicated that a typical period for a contract was less than 12 months and contracts were re-negotiated each season. None of the respondent indicated the use of automatically renewed contracts.

The third – more qualitative – part of the questionnaire had the highest rate of responses. Tables A2.2 and A2.3 in Annex 2 group responses to statements related to incentives for contracting and contract consequences from 12 questionnaire replies. The statements are ordered from the ones that respondents agreed the most to those that they disagreed the most.<sup>12</sup> Table A2.2 shows that all respondents strongly agreed that contracts facilitate planning of activities, reduce price risks, facilitate coordination with suppliers and buyers, reduce sales risk and lower search costs for markets. The majority also agreed that contracts facilitate investment and/or access to credit and provide managerial support or technical assistance. Although the respondents agreed that contracts reduce the risk of hold up this was the least understood question despite the explanatory footnote provided. Half of the respondents acknowledged that they were unable to answer the question. There was a contrast among questionnaire replies as to whether contracts increase productivity and provide access to new technologies with more negative responses.

Table A2.3 illustrates that the majority of questionnaire replies agreed that contracting improves quality control and smoothes production flow. Despite some different opinions, the majority also agreed that contracts could tighten control over farmers, lower price transparency and generate thinner spot markets. The statement that contracts generate dependency on suppliers and buyers was supported by three-quarters of respondents however several responses also indicated complete disagreement. Respondents were split over whether contracts lower input prices for farmers. The difference in response was largely driven by the commodity produced. Associations representing predominantly crop, vegetable and fruit producers agreed, while those representing livestock producers disagreed, with the statement. The respondents were divided on whether contracts increase adoption of new technologies, provide incentives to adopt new managerial techniques or reduce production choices. Nevertheless, participants were united in the view that over contracts did not increase producer prices.

An open ended question asked participants to list three main reasons why contracts might be beneficial to farmers. The responses to some extent supported the views presented in Tables A2.2 and A2.3. Respondents confirmed the importance of contracts to reduce price/sales risk, to ensure supply and market for product and to provide better stability and flow on the market. More specifically, contracts were deemed to ensure the availability of raw material in required time, quantity and quality. Other benefits of contracts were linked to ability to facilitate financing,

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12. The ordering was based on a simple formula which counted “Agree” as 2 points, “Partly Agree” as 1 point, “Partly Disagree”, as -1 and “Disagree” as -2. The statements were then order by the total count.

financial guarantees for producers and long term investment and planning. Several answers also recognised the benefit of contracting in inducing productivity and quality control of production, stimulating quality enhancement, enabling addressing of customers' needs, and providing access to new technologies. One of the respondent noted that contracts could be a good method to lower input costs and increase income.

Among the reasons why contracts might be detrimental to farmers is that respondents often listed the creation of dependency on suppliers and buyers. This was typically linked to a weaker position of small producers in bargaining with "big" buyers. One respondent also argued that contracts don't reduce the risk of hold up. It was also noted that contracts can slow down reaction to market changes, can introduce elements of rigidity in commercial relationships and even limit competition and productivity. Long term contracts were deemed slow to address rapid prices oscillation of raw material, hampering the change in contract conditions. Responses also focused on contract inconveniences related to limited producer mobility and production choices. It was also noted that contracts increase administrative burden for farmers who face complicated regulations and legal issues.

The survey also sought information on current government assistance to farmers regarding contract issues. Out of twelve questionnaire replies, only one clearly indicated assistance provided by a government. It was specified that the help was provided via organisation of sales associations and training courses. Other replies pointed to a very limited or no involvement of governments. Many associations indicated that they, themselves, assist farmers with respect to contracting issues. Some associations provide help in contract negotiations. For example, in Italy they sign annual or triennial agreements with the other subjects of the chain that fix guidelines for the contracts among the agents. In Slovakia, producer associations provide consulting on contracts and survey of markets. They also organise courses, lectures and help in setting new contracts. In non-OECD countries, the support of associations is more limited and often deemed informal and insufficient. Moreover, as indicated by a producer organisation from the Philippines, members of their association sought advice only after a contract had been signed and they started to encounter difficulties.

Producer associations were also asked their opinion on the role of government in addressing contract issues in agri-food sector. There was a clear split among respondents over this question. Half of the respondents said that governments should not get involved. They have regarded contracts as an agreement between private entities over which the government should not interfere or be biased for one party or another.<sup>13</sup> The other half indicated that there is a role for governments but mainly in specifying the "rules of the game". For example, governments could help in setting up minimum contract provisions that would protect the basic rights of producers and buyers. They could ensure that such minimum provisions appear in all contracts (*i.e.* translation of documents into local dialects if necessary, full transparency in the details and provisions of the contract, clear pricing formulas and quality standards, mutually agreeable and affordable system for settling disputes, etc.).

Governments could also provide guidance in explaining the contract terms and conditions to farmers. This could be supplemented by educating and training farm leaders in effective negotiation of contracts. Moreover, to the extent possible, they could provide support services and investments (counselling, technology dissemination, etc.) that would encourage and enable buyers and producers to contract on mutually beneficial terms. In other words, a government was viewed

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13. One respondent even "warned" that a government agency may end up getting the blame in case it assisted farmer organizations in a contract deal that end up with dispute.

as a possible mediator that could stimulate meetings among the supply chain subjects before the signature of the contracts. In addition given that court litigation is prohibitively expensive for small farmers, a role of government was seen in setting up arbitration mechanisms where farmers could seek immediate redress or forward their complaints which would also facilitate out-of-court settlements. In that way, government would help improve the enforcement of contract clauses.

Although some respondents argued that a government should not be concerned with contracting, they pointed out the governments' role in creating policies that facilitate entrepreneurship and sustainable relationships among stakeholders in the value chain. However, the generally weak position of farmers as individual entrepreneurs was also recognised and it was suggested that there is a need for farmers to organise themselves within a certain product group to better meet buyers' demands, attain sufficient economies of scale and improve bargaining position. This was deemed particularly important for farmers producing perishable products or products for which there are no mass (spot) markets to which farmers could readily sell after harvesting. Moreover, such producer groups or cooperatives could then also facilitate education, exchange of views, and help with contracting issues.

The questionnaire replies do provide some interesting insights. Given the importance of contracting, it could be expected that more surveys will be undertaken by stakeholders and producer groups as they also feel the need to better understand the extent and implications of contracting on their members. For example, dairy experts at the organisation representing European farmers and agricultural cooperatives ([www.copa-cogeca.eu](http://www.copa-cogeca.eu)) have recently analysed the present modalities and future potential of the use of contracts in the European dairy sector. The analysis was conducted via a questionnaire sent to Copa-Cogeca member organisations throughout Europe in June 2008.<sup>14</sup> The nearly twenty responses sent back from dairy farming experts representing the majority of the main dairy producing countries in the EU provided a picture of how contracts are currently managed and what the major organisations that represent EU dairy producers think about contracts in the context of the current EU dairy policies. The results of the Copa-Cogeca survey and analysis are summarised in Box 1.

**Box 1. The use of contracts in the EU dairy sector — current state of play**

The survey results indicated that dairy production contracts are in use in a vast majority of the countries that responded. In some countries, the cooperative way of organising the sector, with specific statutes, replaces dairy contracts. Production contracts are used by a wide majority of producers (>60% of producers) in the countries that responded and producers' experience of them is generally good. In a few countries, contracts can even be oral (e.g. Austria, France).

Existing dairy contracts are mostly governed by the general commercial or civil law of each country. In a few exceptional cases, a special government decision prescribes operators the terms of a typical milk sales/purchase contract (e.g. Lithuania). A dairy contract typically contains the following information: the parties agreeing to the contract, the price and payment terms, the volume purchased, the term of the contract and notice of termination, the delivery terms and sampling modalities, requirements concerning milk quality and composition, hygiene requirements, liabilities, premia and fines. However, a majority of contracts are not harmonised at national or even organisation level. A "one-size-fits-all" approach may not be acceptable and workable in practice. On the other hand, a complete lack of harmonisation (a minimum common ground for contracts) might run the risk of distorting competition. There are still big differences among European countries in the way in which the content of a dairy contract is approached. On one hand there is a minimalist approach targeting mainly volume and price and leaving room for operators to add other terms; on the other, a detailed approach seeks to focus on each and every part of a contract.

14. The Secretariat has contributed to the Copa-Cogeca survey in the phase of the design of the questionnaire.

As to whether the Copa-Cogeca experts were interested in the use of contracts as a policy tool to stabilise and plan milk supply, the answer was largely positive (83% in favour). Interest in using contracts stems mainly from the following reasons: they allow production to be planned, make it easier to access credit for investments and enable better coordination for producers and purchasers and provide farmers with legal protection. On the contrary, the experts did not believe that contracts would make it easier for revenue to be shared fairly along the food chain and help increase the price of milk. As to the possible impact of expanding the use of contracts, the respondents mostly agreed that contracts would improve the harmonisation of quality standards and that they would neither distort competition nor prevent production from freely adjusting to demand. However, respondents were doubtful as to whether contracts could contribute to improving productivity in the sector.

Given the general interest in dairy contracts, respondents were asked how they would like contracts to evolve. Firstly, the experts seemed to attach more importance to the collective negotiation of contracts in order to give farmers more bargaining power and guarantee a certain degree of contract harmonisation. Such collective bargaining could take several forms, e.g. via groupings of farmers or under the supervision/with the advice of inter-branch organisations. Still, freedom of choice for the milk producer was considered to be very important for all types of contract, be they individual or collective.\* Thus, the experts remained divided over the question of whether or not dairy farmers should be obliged to adhere to contract practice. Secondly, respondents to the survey favoured fixed-term contracts, or ones based on a rolling agreement. Longer-term contracts should not prevent both parties from making price and other adjustments to the contract. There was no clear consensus on the ideal term of a contract (the range was as wide as from six months to five years or even an indefinite period of time). Sufficient flexibility was a key element for each of the Copa-Cogeca experts. However, flexibility on volume, price and qualitative requirements in particular should be based on objective and measurable criteria.

Concerning contract content, purchasing price was of primary importance, with the exception of some cooperative organisations. The price-fixing mechanism would most probably be based on a minimum price with the possibility of adjustment. The final milk price paid would be established according to a clear formula. In terms of a possible differentiation in the milk price based on the use of the milk for processing into products either on domestic or on foreign markets, the experts expressed their clear opposition to such a practice. However, there was greater disagreement on whether the price should be differentiated according to the nature of the processed dairy product (e.g. bulk commodities and more value-added products; organic products). On top of that, contracts should state the volume purchased, but allow for shortages/excess supply. Contracts should also set purchasing modalities (terms of payment) as well as production standards (quality, hygiene, milk components). On the other hand, the exclusivity of the producer/processor relationship should be avoided say the experts. A more divisive item was the issue of contract management, especially the question of harmonisation at national or EU level. An overly restrictive framework for all would not be accepted, but a guide to good "contracting" practice could be a solution foreseen by some as a means of reinforcing non-discriminatory treatment among dairy farmers and developing common standards. One group of respondents even advocated EU contract law or the need to amend EU/national competition law. There was no clear view on who should provide guidance on dairy contracts (EU, national governments or professional organisations) and whether inter-branch agreements would be a useful alternative.

In conclusion, European producers and their cooperatives have shown a general interest in developing the issue of contracts further. The most common ground could be found in the desire to have collectively negotiated, flexible contracts, which would be reflected partly through limited contract terms and partly through the setting of the price, volume and qualitative standards. On the other hand, views differ on contract characteristics and contract management, the degree of national or EU harmonisation, whether the use of contracts should be compulsory or not, the need to amend EU/national competition policy legislation and the role that inter-branch organisations could play in establishing and running milk delivery and purchasing contracts.

This first insight into the future of dairy contracts in Europe will allow the COPA-COGECA Working Party on Milk to launch a further internal debate on possible ways how contracts might evolve all things being equal in the future. Based on the outcome of this debate, the group will continue to develop a common strategy for the future of the EU dairy sector. This strategy could be based on the premise that with the phasing-out of milk quotas, new commercial ways will need to be found by the sector to plan milk volume. This would mean that contracts would come to signify more in terms of the relationship with purchasers than they do currently as they could become quotas in a way. The key aspect for milk producers will then be how to preserve a balanced relationship with the purchasers.

\* The following contract definitions were used in the survey: *Individual contract* means a contract established between the producer and the buyer (a cooperative or a private processor). *Collective contract* means that the contract is not signed by a group of farmers but on an individual basis, resulting, nonetheless, from collective bargaining by a group of farmers or an inter-branch organisation with a processor (group of processors).

Source: Stanislav Jas, COPA-COGECA Working party on Milk and Dairy Products.

### *Results from the national level questionnaires*

While the detailed questionnaire for producer associations tried to identify relevant policy issues and searched for information on contract design, causes and effects, the questionnaire sent to OECD countries' Ministries of Agriculture tried to take a stock of existing national and special survey data collection activities and information on the extent of contract use at a national level. This section summarises the questionnaire replies.

The Secretariat has received 9 questionnaire replies. National level data on contracting are not readily available in many member countries. Several countries notified the Secretariat about lack of data on contracting which was also indicated in several questionnaires replies. Table A3.1 in Annex 3 summarises the information on existing sources of information on contracts in agriculture in countries that have returned the questionnaire.<sup>15</sup> The table shows that data on contract use at a national level is available in Finland, Japan and the United States. The United States also indicated a presence of sector specific specialised surveys, together with Germany and Slovakia.<sup>16</sup>

Table A3.2 presents the available data on the percentage of farms by sector that used contracts recently and 5-10 years ago.<sup>17</sup> The data clearly illustrate the wide differences that exist among countries and commodities in the extent and evolution of contracting in the agri-food sector.<sup>18</sup>

For example, in Japan nearly half of all poultry farms and about one quarter of hogs' farms use contracts. In the same country, the percentage of livestock farms under contracts has decreased from 2000 to 2005, while the percentage of farms producing fruits and vegetables under contract nearly doubled. In Finland, 80-90% of hogs and dairy farms respectively use contracts and this share has been rising. A much lower share was reported for wheat although this also has risen. On the other, hand the percentage of beef farms using contracts seems to have diminished considerably in the last 5-10 years.

In the United States the percentage of crop farms that used contracts was relatively low but increased between 1998/2000 and 2005. However, the percentage of farms producing fruits and vegetables under contracts has decreased by about 5-7 percentage points. About 40% of poultry farms were under contract, 9 percentage points less than previous period. Very few beef farms use contracts in United States, while more than one-third of dairy farms have used contracts and this share has been increasing.

A different picture is seen if the focus is on a percentage of agricultural production under contracts (Table A3.3). In the US livestock sector, more than 90% of poultry production and more than half of hogs and dairy production is governed by contracts. The 20 percentage points increase

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15. The list of contact persons on contract use in Agriculture in Agricultural ministries is available from the Secretariat upon request.
  16. Spain has not returned the questionnaire however provided information on citrus production contracting (viz Annex 4).
  17. For Slovakia the data are rough estimates. It is important to note that definitions of farm sizes may differ among countries. For example, the US defines a farm as any place that has USD 1 000 in sales of agricultural commodities.
  18. New Zealand questionnaire reply indicated that depending on definition, some forms of contractual arrangement for production of kiwi fruit, poultry, milk, and vegetables for processing exist in New Zealand. However, none of this information is publicly available, due to commercial considerations.

in hog production under contracts is especially remarkable. Despite the falling percentage of vegetable farms under contracts, the total production under contract has increased by 15 percentage points over the period 1998/2000 and 2005.<sup>19</sup> Although only less than 2% of beef producers use contracts the percentage of production covered by contracts is many times higher (18%) albeit falling from previous levels.<sup>20</sup> The table also illustrates that major field crops, such as maize and wheat, were still largely sold through spot markets. Agricultural contracts for these commodities covered only 7-20% of production, but in the case of maize the contract coverage increased considerably which is likely related to an increase in contracting for special varieties, such as high-oil maize.

As discussed above, there are different mechanisms used along the vertical chain. Table A3.4 illustrates how these mechanisms can vary across individual sectors. Here, as in Table 1, the distinction is drawn between production and marketing contracts. Recall, that production contracts are those that link farmers to processors, integrators or retailers and which often specify the use of inputs and production processes, while marketing contracts are those which specify conditions of sale only, often including price, quantities, delivery dates and destination. The table shows that in the United States, of those crop farms using contracts, a majority use marketing contracts. Only among farms producing vegetables is there a significant percentage using production contracts. In the livestock sector, the situation is completely different between poultry and hogs on one side and beef and dairy on the other. Of those farms using contracts in the poultry and hogs sectors a very large majority use production contracts while the exact opposite is the case for beef and dairy where marketing contracts prevail, approaching 85% and 100% respectively.

An important question from a policy point of view is whether uptake of contracting differs by size of the farms. A question in the survey asked specifically to compare the average size of farms under contracts with the average size of all farms. Table A3.5 illustrates that farms in the United States that use contracts are bigger, often much bigger, as compared to the national averages. While the difference is not so marked for crops, fruits and dairy farms, it is substantial for poultry, vegetable and, above all, hogs and beef farms. Hogs and beef farms producing under contracts tend to be nearly 4 and 12 times bigger as compared with the national average farm size for these commodities respectively.<sup>21</sup>

The data summarised above suggest that a large percentage of farmers operates under contracts while the percentage of production covered by contracts is even higher and increasing for most of the commodities examined. Given the sparse data on contracting available, the national surveys of Japan, Finland and the United States are important sources of information on the extent and evolution of contracting in agri-food sector. The data for the United States seem to be the most

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19. A special survey on vegetable production in Germany (not presented in Annex 3) indicated that area under contracts for vegetable decrease from 29% in 1996 to 26% in 2004. However, considering only a sub-set of more important varieties (like spinach, cabbage, carrot, cucumber, peas, etc), the area of cultivation under contract increased from 61% to 62% over the same period.

20. It is important to note that the decline in the use of contracts may have been offset by increased vertical integration.

21. Comparing percentage of farms and percentage of production under contracts gives already a clear indication that larger farms tend to operate more often under contracts.

complete data source on contracting and several recent studies provide a very comprehensive review of the US situation.<sup>22</sup>

#### **IV. Agricultural contracts and policy interventions**

Should government get involved with contracting issues in agriculture and what role it should play? Schwartz (2002) argued that the theory of contract regulation is a new and evolving area and there is no clear consensus concerning the appropriate role of the government. However, rapid structural changes of agri-food systems with corresponding increase in the use of contracts put contracting issues more and more under the spotlight. The choice of a role might be delicate as policy interventions typically create trade offs (see Wu, 2003, 2006). Contracts are agreements between private entities and hence policy intervention constraining private transactions may reduce efficiency and exacerbate market failures. On the other hand, a policy that facilitates exchange among parties and enforces individual rights may reduce market failure and transaction cost.<sup>23</sup> The elements of contracting that are most prone to create inefficiency and abuse of contracts and thus could be apt for policy involvement have been discussed in the literature.

##### *Incompleteness, market power, and fairness of contracts*

Wu (2006), and Schieffer and Wu (2006) indentified, among others, several “tricky” areas of contracting related mainly to incompleteness of contracts, market power and dispute resolution procedures. Incompleteness is an aspect of almost all contracts and relates to the fact that it is impossible to anticipate, and identify optimal response to future events. An incomplete contract does not specify all eventualities and contain clauses that are not enforceable by a third party. Wu (2006) and Schwartz (2002) suggest that in order to fill the gap or to make the contract more complete, governments could provide common vocabulary which would reduce the transaction costs of negotiating but also could supply common default rules for contracts.

Market power and fairness of contract arrangements are likely the most sensitive areas of contracting in agriculture. Unequal market power could bias the bargaining process and push weaker subjects into accepting unfavourable conditions. This is often referred to as “take-it-or-leave-it”, which may leave weaker actors without other options given the increasing upstream concentration in the supply chain. A related issue pointed out by de Geest (2002, cited in Wu 2006) which is linked to market power is “signing-without-reading” practice which can harm actors that are unaware of the risks involved or do not understand well the legal jargon. In other words, some stakeholders may use lawyers to design contracts using complex legal language and thus exploit the inability of others to understand properly all the clauses. Again, government policy that requires (and provides) simple language and transparency about involved risks may be justified to prevent rent seeking and abuse of power.

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22. MacDonald, J. *et al.* Contracts, Markets and Prices (*Agricultural Economic Report* No. 837, 2004), and MacDonald, J. and P. Korb - Agricultural Contracting Update: Contracts in 2003 (*Agricultural Information Bulletin* No. 9, 2006) and MacDonald, J. and P. Korb, “Agricultural Contracting Update: Contracts in 2005” (*Agricultural Information Bulletin* No. 35, 2008).

23. Although public contract enforcement is often seen as a necessary prerequisite for efficient market exchanges Gow *et al* (2000) discusses also private mechanisms that could be used in the absence of strong or impartial enforcement institutions, namely the use of “self-enforcing” contracts.

Moreover, a carefully drafted regulation could increase fairness in agricultural contract and improve dispute resolution procedures. For example, such regulation could ban confidentiality clauses and/or clauses that prevent farmers to choose dispute resolution (some contracts may contain mandatory arbitration clauses that restrict farmers from accessing the courts, etc.).

The US Farm bill 2008 serves as a recent example that illustrates adoption and language of such legislation. The Farm Bill, which became law on 18 June 2008 has increased protection to livestock producers involved in production contracts. According to the new legislation processors (packers) are no longer allowed to ask farmers to decline their right to challenge unfair practices in court. Thus, farmers will be able to opt out of binding mandatory arbitration clauses at the time they sign a contract with a processing company. Moreover, processors are obliged to disclose in any new or renewed contract, if significant equipment and building upgrades will be required over the life of the contract.<sup>24</sup>

#### *Farmers access to contracts*

Another sensitive area of contracting that has received a lot of attention concerns the access of farms to the value chain through contracts. This issue is particularly pertinent in developing countries and there has been an upsurge in studies on this subject. The main concern relates to the potential of contracts to link farmers to markets and to stimulate agricultural production. The main focus is typically on the ability of small farms to benefit from such links. There are some recent studies, facilitated by large scale surveys, which assess the role of contracting but also producer and marketing organisations (cooperatives, etc.) in linking small farmers to global markets. For example, Patrick (2004) studies contracting in Indonesia, Guo *et al.* (2005) analyse the situation in certain provinces in China and Sautier *et al.* (2006) focus on parts of Africa.

Similar studies have been also undertaken by governments themselves. For instance, the Government of India (2007) has addressed contracting issues within its five year plan. The report noted that contract production typically gave much higher returns as compared to non-contract situation, but it also cites examples of contracting working to the disadvantage of farmers in cases where buyers' power increased "disproportionately". The report also tended to confirm that contracting agencies typically prefer large farms given their capacity to produce better quality crops due to more efficient and business oriented farming methods, large volumes of produce which reduces the cost of collection for the firm, their capacity to bear risk in case of crop failure, and various services provided by these large producers like transport, storage, etc.

Despite the general focus on developing countries, the issue of small farmers' access to contracting could be to some extent analogous in developed countries. It could be argued that in general, contracting does not favour small farms. This is mainly due to the higher transaction costs involved in setting and monitoring the contracting parties. The questionnaire reply data for the United States also seem to confirm that a large difference exists in average size of farms that use contracts and those that do not.

To address the problems of linking small farmers to contracting, FAO has produced a report on this issue and started an initiative to promote farm-agribusiness linkages. *Contract farming -*

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24. The exact language can be found in Section 11005. Production Contracts of the Farm Bill (<http://www.ers.usda.gov/FarmBill/2008/>). It is also illustrative to examine the discussion that preceded the legislation decision. A number of stakeholders gave a testimony in front of a Subcommittee on Livestock, Dairy, and Poultry which provided an overview of the market structure in the livestock industry (<http://agriculture.house.gov/hearings/statements.html>).

*partnerships for growth* by Eaton and Shepherd (FAO, 2001) provides advice to farmers but also to government officials that wish to promote contract farming operations or monitor existing operations. Moreover, an FAO report by da Silva (FAO, 2005) discusses a number of possibilities that facilitate the uptake of contracts and alleviate some of the problems often linked to contracting. The report suggests an important role of third parties in setting and negotiating the contracts. This could be government, but also NGO's and other organizations functioning as brokers in linkages between farmers and agribusinesses. Another important role highlighted in the document is that of information provision. Information on contracting in general and on contract designs in particular, can be provided by governments, development agencies, research institutions and NGO's, as a way to disseminate best practices and reduce the uncertainty in decision processes.<sup>25</sup>

There are various examples available on information support for contracting and on contract designs. Support is often provided by producer associations and NGO's, but also by governments. For example, the United Kingdom National Farmers Union (NFU) in November 2007 launched a model milk contract. Their objective was to improve the transparency and relationships between milk producers and purchasers. Their proposed model contract agreement is constructed using flexible terms and conditions but stays relatively simple. The contract, in addition to farmers' coordinates and details, contain 24 clauses. These clauses for example cover: contract period, sale and purchase obligations, pricing and payment, contract termination, warranty, indemnities, insurance and limitation of liability, termination on breach, governing law and jurisdiction, dispute resolution and other clauses specifying legal issues. Farmers can download the Milk Purchase Agreement and Milk Purchase Agreement Guidance Notes directly from internet at the NFU address: <http://www.nfuonline.com/x24272.xml>.<sup>26</sup>

An example of how a government can sanction and monitor contracting is illustrated in Annex 4. This example provides a picture of an agricultural contract scheme in Spain. It demonstrates that a model contract can be relatively simple and short. Moreover, it shows how the monitoring and controlling of the use of contracts could be achieved. The discussion and examples above on the potential involvement of governments to a large extent concur with suggestions communicated by producer associations via the questionnaire replies collected by the Secretariat. As noted, the respondents saw a role for governments in providing guidance in explaining the contract terms and educating farmer leaders in effective negotiation of contracts.

#### *Price discovery and data collection*

Another area related to contracting which may call for government involvement is linked to price discovery and reporting issues. The case of the thin spot markets and the Livestock Mandatory Price Reporting Act that obliges US meat packers to post prices paid to producers for their animals was discussed above. However, more generally, the weakening of spot markets may make a change inevitable in the role governments play in enhancing market transparency. If spot markets get too thin, what prices should governments publish? How would government monitor price trends? In fact, the need to adequately measure the value of farm sector output and the

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25. In addition, Regoverning Markets Project [www.regoverningmarkets.org](http://www.regoverningmarkets.org) provides a wealth of information on linking smallholders in developing countries to local markets.

26. For an example of a government initiated information scheme on contract see web pages of state government of Gujarat (India) [http://agri.gujarat.gov.in/boards\\_corporations/gs-agri-market-board/schemes/contract-farming/cf\\_overview.htm](http://agri.gujarat.gov.in/boards_corporations/gs-agri-market-board/schemes/contract-farming/cf_overview.htm)

financial condition of farms was a primary reason why the USDA set up the annual ARMS survey process and started to collect data on contracting.<sup>27</sup>

Data on contracting are essential for analysing the cost and benefits of policies that govern supply chain relations but also for understanding the motivations, effect, adoption, and consequences of contracting in agriculture. Hueth *et al.* (2007) argue that there is intrinsic value in systematically collecting publicly accessible data that summarizes the incidence and nature of agricultural contracting. The authors point out that the importance of data on contracting is going to increase even further and detailed contracting data will be the key to informed debate and policy guidance. The only way forward, in this respect, is to collect data. The data situation could be greatly improved even by adding only a few precise questions to existing surveys.<sup>28</sup>

## V. Conclusions and summary points

The use of contracts linked to producing and selling of agricultural products is not new but its importance has grown rapidly in recent years fuelled by a remarkable transformation process of agri-food systems. The main forces pushing in the direction of increased used of contracts and more tightly controlled supply chains have been linked to market consolidation, changes in trade patterns, transport possibilities, technological developments and changes in consumer demand.

The economic theory reviewed in the paper has identified several basic motives for contracting in agriculture: incentive alignment, risk sharing, market power, and efficiency gains. In the context of important changes in agri-food systems the need to improve efficiency and transparency of the production seemed to be the overriding driver for contracting. However, an increased use of contracts together with rising upstream concentration in the supply chain have created concerns about the impact of this form of supply chain governance on farmers and issues related to market transparency and potential role of government.

The policy intervention constraining private transactions may reduce efficiency and exacerbate market failures. The areas of possible policy involvement identified in the literature were linked to actions that would reduce transaction costs; help to fill the information gap in contract negotiation; enable contract enforcement and fraud reduction, and moderate the possibilities of “hold up” and rent seeking.

Two surveys conducted by the Secretariat attempted to obtain a more refined picture on contracting. The questionnaire solicited from producer organisations that are members of IFAP sought information on contract use and their consequences on farmers. The participating farmers’ representatives indicated a generally positive experience with contracting. They valued contracts for improving planning and quality control, facilitating coordination with suppliers and buyers, reducing sales risk and lowering search costs for markets. However, it was noted that contracts could tighten control over farmers, generate dependency on suppliers and buyers, lower price transparency and create thinner spot markets.

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27. ARMS is a complex annual survey applied to a stratified random sample of all U.S. farms gathering information on the financial condition, production practices, resource and contract use, and economic well-being of U.S. farm households. For the details of the phases of data collection, survey structure and organisation see <http://www.ers.usda.gov/Data/ARMS/GlobalAbout.htm>

28. For example, an inquiry in Canada on production contracts has been recently added to the Farm Financial Survey (FFS) and more questions are to be added in the following surveys.

It was also noted that contracts could slow down reaction to market signals and can introduce elements of rigidity in the commercial relationship. Judging from this discontent it appears that contract clauses have generally insufficiently addressed the instability of prices on the market, so that a push for more flexibility and price adjustments in contracts would be likely sought by producers and their representatives in coming years. This was also a message from survey of the COPA-COGECA experts which viewed the price setting mechanism and sufficient flexibility as a key element for future contracting.

As to the role of government, the participants viewed it mainly in specifying the “rules of the game”. That is, governments could help in setting up minimum contract provisions that would protect the basic rights of producers and buyers, and provide guidance and help in explaining the contract terms and conditions to the farmers. Governments were also viewed as possible mediators that could stimulate meetings among the supply chain subjects before the signature of the contracts.

This help does not need to rest entirely on government shoulders and there is a scope for private institutions to substitute for public policies.<sup>29</sup> The respondents to the survey saw the need for farmers to organise themselves within a certain product group to provide contract guidance but also to better meet buyer’s demands and improve bargaining position. The importance of bargaining power was reiterated also in COPA-COGECA survey which underlined the value of collective negotiations and contract harmonisation. Several studies show that small farms are much less engaged in contracting than bigger ones, although contracting may be highly profitable for them, especially in developing countries where it can improve market access. Higher transaction costs for smaller farms may be an issue but third party involvement (public or private) could help to reduce them.

An important area related to contracting that merited government involvement was linked to price discovery and reporting issues, as in the context of diminishing spot markets, the prices may no longer be correctly signalling supply/demand conditions, and financial situation of farms and agri-food sector. It follows that spot price information may need to be completed with information on contracts. The outcome of the Secretariat’s survey sent to Member countries suggests that national level data on the use of contracts in agriculture are typically not readily available. The most extensive data were available from Finland, Japan and the United States.

Both Secretariats’ surveys made it clear that collecting data on the use of contracts in agriculture is a complex undertaking. Contracts information is often regarded as private and given the degree of specificity in contracts it is difficult to classify and compare them. Nevertheless, the availability of quality data collected periodically is a prerequisite for better comprehension of the contract use and measuring the value of farm sector output. It appears almost inevitable that the importance of contracting will increase even further in the coming years and detailed contracting data will become the key to informed debate and policy guidance.

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29. Alternatively, there might be a role for public-private partnership where certain responsibilities of “overlooking” contracting issues are undertaken by private bodies partly supported by a public funding. A discussion of the role of public and private institutions in governing the agri-food chain could be found in Menard and Valceschini (2005).

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## Annex 1

### Contract Theory — Overview of Approaches

Brousseau and Glachant (2002) note that contract economics was born in the 1970 out of the dissatisfaction with so called Walrasian analysis, in which supply meets demand around a posted price. The central argument to the contract theory states that if agents are subjects to transaction costs, if they can benefit from informational advantages, or if irreversible investments must be made, the same good would not be traded at the same price and under the same rules as on a Walrasian market. In the last several decades the contract theory has had a remarkable contribution to a fundamental redesign of nearly all areas of economic analysis. The analysis of contracting has been dominated principally by two approaches: transaction cost economics and agency theory.

#### *Transaction costs economics*

Transaction costs economics was born out of an apparently very simple observation made by Coase (1937) and developed by Williamson (1975, 1985), North (1990, 2004) and others. In order to take advantage of the division of labour and make specialization possible, an economy must organize transactions, that is: the transfer of rights to use (and possibly to own) goods and services among separable economic units. This transacting activity requires supports, which involve costs. These supports are twofold, and have fed two branches of what is now called the “New Institutional Economics”. On the one hand, there are ‘institutions’,<sup>1</sup> which are generic and concern broad families of transactions: for example, contracts among parties require a legal regime that will make commitments credible. Thus institutions, which define an “institutional environment” (North, 1990) matter and must be included in any proper analysis of economic activities. On the other hand, there are supports associated to specific transactions or types of transactions: for example, a production contract has characteristics purposely designed for dealing with the attributes of the transactions it intends to organize. These supports define different modes of organization and contractual practice (the “institutional arrangements”, operating within the “institutional environment” in North’s vocabulary).

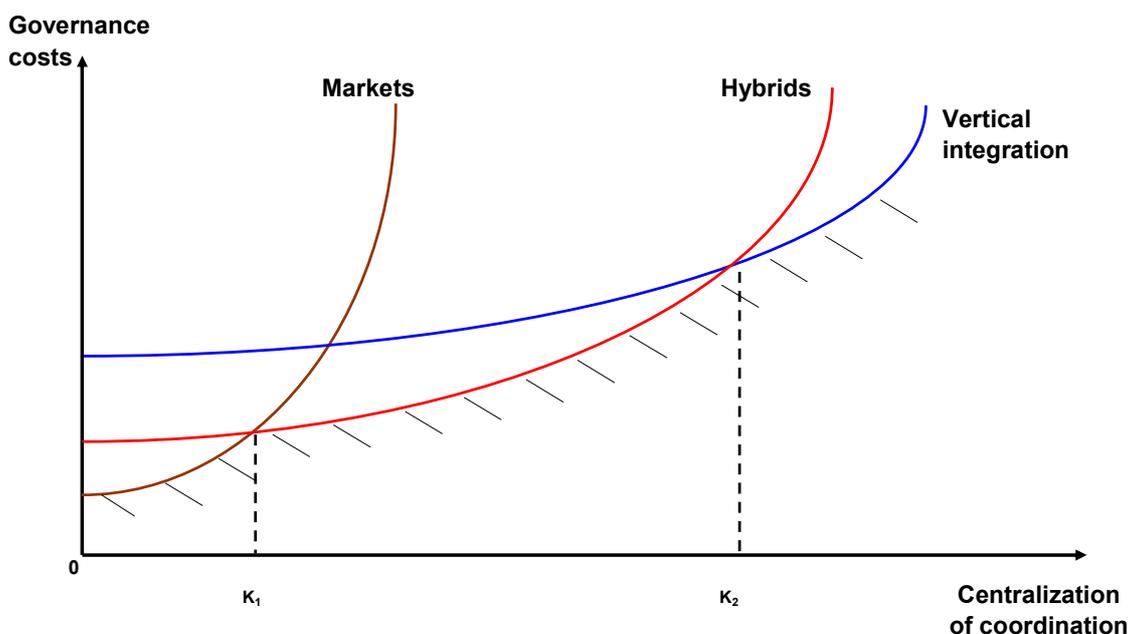
All these supports have costs, the “transaction costs”, e.g. costs related to the information, search, negotiation, enforcement and monitoring of transactions. There is no reason to presume that all supports involve similar costs. Therefore, there exist alternative ways of organizing transactions, spot markets and vertical integration being the two polar cases. The question is what factors determine the existence of these organisational forms and the trade-off among them? In the transaction cost perspective, the motivation for agents to find new arrangements or to arbitrate among existing ones is that they are looking for solutions that minimize these transaction costs (beside and in interaction with production costs, of course). However, this minimizing process is confronted to the risk of opportunistic behaviour among parties involved, generating contractual hazards. Hence the need for safeguards, many of which take the form of contractual clauses.

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1. In this theory, institutions are: (1) the written and unwritten rules and agreements that govern contractual relations and corporate governance, (2) laws and rules that govern politics, governments and society more broadly and (3) unwritten codes of conduct, norms of behavior and belief (Menard and Shirley, 2005).

For example, if business partners want to make investments specific to their relationships, *e.g.* a farmer building big broiler houses to increase his capacity to fulfil orders from a processor, a mutual dependence may result from such an investment. Therefore, the parties will want to implement safeguards and coordinate in order to have an incentive to do the required investment while getting protections against risks of opportunism or “hold-up”. Williamson (1996) has captured this idea in a simple model. The model considers three broad modes of organization: spot markets, vertically integrated firms, and, in between, contractual agreements leaving variable autonomy to partners and identified as “hybrid” forms.<sup>2</sup> The horizontal axis indicates the degree of intensity of coordination, *e.g.* the degree of specificity of investments required, for example for quality control purposes. On the vertical axis are the costs of governance associated with this coordination by various modes of organization. Under some general and quite realistic assumptions, the parties will have to make a trade-off among these different solutions according to their costs: calculative agents will look for an arrangement that keeps them on the lower envelope of transactions (or governance) costs. This can be summarized in a simplified graph (Figure 1). Contracts play a particularly significant role in the  $[K_1, K_2]$  zone since this corresponds to arrangements (“hybrids”) in which parties remain legally autonomous and keep control over significant parts of their decision rights while sharing resources that they coordinate through contracts.

**Figure A1.1. Trade-off among alternative modes of organizations and contracting practice**



Source: Williamson, 1996, p. 108; adapted by Menard.

This simple model has two features that are particularly interesting for the analysis of the problem of contracting in the agri-food industry. First, it provides a way to “organize” the variety of contractual arrangements along relatively simple characteristics (in the version above, the relationships between the degree of coordination required and the associated transaction costs). Second, it provides tools for analyzing the impact of changes in public policy. For example, policies restricting contracts among parties would involve a shift in the north-east direction of the intermediate (‘hybrid’) curve, modifying the distribution of modes of organization (in this example, pushing towards more vertical

2. For a detailed analysis of these intermediate forms, see Menard 2004 and 2007.

integration).<sup>3</sup> In a transaction cost perspective, public policies must be analyzed with an alert eye on their impact on modes of organizations and contracts.

### *Agency theory*

In general terms, agency theory assumes that economic agents are endowed with an extended rationality, so that they can evaluate quite appropriately the gains and costs of alternative solutions. However, and this is the main source of problems according to agency theory, two contracting parties do not have access to the same information. This approach, initiated by Ross (1973), Jensen and Meckling (1976), and followed by many others, focuses on the contractual relationships between a leader, the “principal”, who proposes the contract, and an “agent”, the party who accepts or rejects the contract. In the perspective of agency theory, the main motivation for a principal and an agent to contract is to provide adequate incentives to the agent so that he/she will implement actions in conformity with the interest of the principal, while allocating risks appropriately.

This is what makes contractual practices difficult and may explain the diversity of arrangements from the agency perspective. Indeed, two types of informational situations may hamper the convergence of interest between the principal (*e.g.* a processor) and the agent (*e.g.* farmers). *First*, there is the possibility for an agent to have information not available to the principal or not observable, so that this agent may take advantage of this asymmetry. This is an ‘adverse selection’ situation,<sup>4</sup> and the contractual solution is to find an information structure that will induce the agent to reveal his information (or his preferences): typically, a principal proposes different types of contracts, the choice of one contract revealing the preference of the agent. For example, a sharecropper has information on soil or equipments that the landowner does not have and can hardly acquire at the time the contract is established, so that finding the right incentive to get relevant information is a key issue (Stiglitz, 1976). *Second*, a principal can be confronted to a moral-hazard situation,<sup>5</sup> in which he cannot freely observe the actions required or desired from agents. For example an integrator may have a hard time identifying the efforts provided by farmers located in different areas and confronted to varying conditions. The contractual solution can then be the design of a contract with a payoff that will motivate agents to meet specified targets, so that the interests of the principal and the agent will be better aligned.

Therefore, a principal faces the risk of adverse selection due to ex-ante opportunism arising from hidden information or faces the risk of moral hazard due to ex-post opportunism arising from the hidden actions of agents. Contracts should be analyzed and evaluated according to their capacity to solve or at least minimize these problems. There are several studies examining alternative incentive mechanisms in the agri-food industry, *e.g.* the role of fixed-rate contracts (Goodhue, 2000) or the role of tournament vs. fixed performance-standard contracts (Tsoulouhas and Vukina, 2001; Wu and Roe, 2006).

The principal-agent setting has been essentially developed under the assumption of so-called ‘complete contracts’. In this framework, all eventualities that may affect the contractual relationship are taken into the account. This is, however, unlikely to happen in the real world. When the cost of

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3. For a more detailed exploration of the impact of such policy changes on modes of organization and contracting practices, see Menard 2005.

4. Also identified as “pre-contractual opportunism” since the agent has a motivation to hide information at the time the contract is established.

5. Also identified as ‘post-contractual opportunism’ since the problem arises at the time the agent delivers actions.

accounting for an unlikely event is higher than the benefit of writing such an eventuality, the contract would be left incomplete (for a discussion, see Salanie, 1997 and Tirole, 1999). “Incomplete contract theory” in its formalized version intends to take these “imperfections” into account. However, most of its developments are concerned with the allocation of property rights and the related decision to integrate or not. There is very little empirical application so far, due to the difficulties of making testable propositions (Whinston, 2003). A recent paper by Reimer (2006) makes a comparison between transaction costs economics and incomplete contracts with data from the hog industry.

### ***Other theories***

Although the transaction cost and agency theory remain the principal theories with respect to contracts, other theories have emerged that attempt to explain the behaviour of firm and supply chain organisation. Hobbs and Young (2001) review several of the alternative theories starting with a body of literature referred to as *Competency theory* (sometimes referred to as *Capabilities theory*). This theory draws on business history, strategy, evolutionary economics and technology studies. A central factor in the competency approach is knowledge, which represents firms’ competitive advantage. According to the competency theory firms are created in circumstances in which they are able to coordinate the collective learning process more efficiently than is possible through open market transactions. On the other hand, proponents of *Strategic management theory*, in taking more functionalist view of the firm, argue that firm’s competitive advantage results from the ability to produce at a lower price than rivals or to create added value that warrants a price premium (Porter, 1991). In this approach, strategic considerations include, among other things, the desire to create barriers to entry, to increase competitors’ costs by restricting the number of suppliers and by raising the capital requirements of market entry, or to mitigate the impacts of regulatory price control through the use of transfer pricing in a vertically integrated firm.

The legal aspect of contracting is a focus of literature concentrating on *law and economics*. Masten (2000), notes that standard economic theories of contracting, for the most part, have given little explicit attention to the legal and enforcement issues. In these economic contract theories, courts mechanically enforce contract terms operating under the assumption that they do so under “an informed, sophisticate, and low-cost way” (Williamson, 1983). In the *law and economics* literature courts are given more flexibility and are seen as capable to evaluate opportunities for adoption and implementation of necessary contractual modifications. This literature offers a rich characterisation of background legal rules and the role of courts in enforcing contracts. Schwartz (2002) argues that there is a need for law and economic disciplines to develop a theory of what the state in general should do regarding contracts and then specify which legal institutions should perform which substantially desirable functions.

## Annex 2

### Results from the Producer-Association Questionnaires

Table A.2.1 List of participants in the producer association survey

Organisation	Country	Number of members	Commercial product of the members
Milk Producers' Organisation	South Africa	3 400	Milk
Confederação da Agricultura e Pecuária (CAN)	Brazil	800 000	Beef, Soybean, Sugarcane, Poultry, Maize, Dairy, Coffee
Confederazione Italiana Agricoltori (CIA)	Italy		
Grain South Africa	South Africa	3 242	Maize/Corn, Wheat, Sunflower, Soybeans, Sorghum, Barley, Groundnuts, Canola
Lantbrukarnas Riksförbund (LRF)	Sweden	1 500	Potato, Vegetables, Fruits
Slovak Vegetable Union	Slovakia	100	Vegetables, Fruits, Cereals, Maize
Federation of Free Farmers	Philippines	250 000	Rice, Corn, Coconut, Vegetables and Upland Crops
Land en Tuinbouw Organisatie (LTO)	Netherlands	60 000	
Agrarmarkt Austria Marketing GesmbH.	Austria	10 000	
Milk Union	Slovakia	44	Milk and Milk Products
Slovak Association of Millers	Slovakia	11	Wheat, Rye
SZPM Slovenský Zväz Prvovýrobcov Mlieka	Slovakia	272	Milk
Association of Cereals Growers	Slovakia	79	Cereals
Union of Livestock Breeders	Slovakia	136	Livestock

**Table A.2.2 Summary of opinions regarding incentives provided by contracts**

Possible incentives for contracting	Agree	Somewhat agree	Somewhat disagree	Disagree	Unable to answer	Total for ranking*
Facilitate planning of activities	9	2			1	20
Reduce price risks	8	4				20
Facilitate coordination with suppliers/buyers	7	5				19
Reduce sales risk – lower search costs for markets	7	4	1			17
Facilitate investment and/or access to credit	7	1	1	1	2	12
Provide managerial support or technical assistance	3	5	1		3	10
Reduce risk of hold up	2	3		1	6	5
Increase productivity	2	2	5	1	2	-1
Provide access to new technologies	2	1	3	2	4	-2

\* NA = unable to answer.

**Table A.2.3 Summary of opinions regarding the possible consequences of contract use**

Possible consequences of contract use	Agree	Somewhat agree	Somewhat disagree	Disagree	Unable to answer	Total for ranking**
Improves quality control (i.e. traceability)	7	5				19
Smooths production flow	5	7				17
Tightens control over farmers	4	4		2	2	8
Lowers price transparency and generate thinner spot markets	2	6	1	1	2	7
Creates dependency on suppliers and buyers	4	4	1	3		5
Lowers input prices	1	4	3	1	3	1
Increases adoption of new technologies	2	2	2	3	3	-2
Provides incentives to adopt new managerial techniques	1	3	3	2	3	-2
Reduces production choices: techniques and products		5	1	3	3	-2
Increases producer prices	1	2	4	5		-10

\* NA = unable to answer.

\*\* The total is calculated by adding survey responses as follows “Agree” as 2 points, “Partly Agree” as 1 point, “Partly Disagree”, as -1 and “Disagree” as -2.

### Annex 3

### Results from the National Level Questionnaires

**Table A.3.1 The existing sources of information on contracts in agriculture**

	Turkey	Finland	Austria	Japan	Slovakia	New Zealand	Germany	Canada	US
Are there country level (national) surveys on contract use in agriculture	NO	YES	NO	YES	NO	NO	NO	NO	YES
Are these surveys undertaken on a regular basis?	NO	NO	NO	YES	NO	NO	NO	NO	YES
Are there specialized surveys on contracting practices?	NO	NO	NO	NO	YES	NO	YES	NO	YES
which sector, commodity?					Tomatoes Tobacco		Vegetables		ARMS, GIPSA, AMS <sup>a)</sup>
Are the data on contracts collected by state agencies?	NO	NO	NO	YES	YES	NO	YES	NO	NO
Are the data on contracts collected by professional organizations?	NO	NO	NO	NO	NO	NO	NO	NO	NO
Is there any study done by your government on contract use in agriculture in your country	YES	YES <sup>b)</sup>	NO	NO	NO	NO	NO	NO	YES <sup>c)</sup>

- a) USDA ARMS surveys include 1-3 commodity-specific versions each year, and add contract questions to those  
 USDA's GIPSA surveys packers each year on livestock contracting  
 USDA AMS collects livestock data as part of price reporting
- b) Survey (sample about 3000 farms of the total of 70000 farms) made twice (2001, 2006) on quality systems on farms. Surveys included some information on contracts.
- c) Contracts, Markets and Prices (Agricultural Economic Report No. 837), Agricultural Contracting Update: Contracts in 2003 (Agricultural Information Bulletin No. 9)

**Table A.3.2 Percentage of farms in the sector that use contracts**

	Japan <sup>a)</sup>		Finland		US <sup>b)</sup>	Slovakia	
	2005	~5-10 years ago	2006	~5-10 years ago	2005	~5-10 years ago	2006
<i>Crops</i>							
Wheat			46	30	9.7	6.3	80-90
Maize (Corn)					22.6	14.7	80-90
Fruits	12.4	6.6			34.8	41.2	<25
Vegetables	17.2	10.4			17.2	22.1	
<i>Livestock</i>							
Poultry	45.7	49.0			40.6	49.3	
Hogs	25.6	26.9	82	69	20	12.7	>90
Beef	8.9	9.1	42	60	1.5	1.4	>90
Dairy	15.6	16.9	91	84	36.7	29.5	100

a) 2005 Census, MAFF; 5-10years - 2000 Census, MAFF

b) ERS estimates, from 2005 Agricultural Resource Management Survey

~5-10 years ago - ERS estimates, using data aggregated from 1998-2000 Agricultural Resource Management Surveys

**Table A.3.3 Percentage of agricultural production under contracts**

	United States		Slovakia	Canada
	2005	~5-10 years ago	2006	2006
<i>Crops</i>				
Wheat	7.5	7	60-70	
Maize (Corn)	19.6	12.9	<50	
Fruits	63.6	65.4	<25	
Vegetables	54.3	39.7		
<i>Livestock</i>				
Poultry	94.2	88.8		
Hogs	76.2	55.1	>90	22
Beef	17.6	24.3	>90	5
Dairy	59.2	53.6	100	

**Table A.3.4 Percentage of marketing and production contracts**

	United States	
	% of production contracts	% of marketing contracts
<i>Crops</i>		
Wheat	1.5	98.7
Maize (Corn)	2.6	98
Fruits	0.1	99.9
Vegetables	38.3	63.8
<i>Livestock</i>		
Poultry	98.5	1.5
Hogs	88.2	11.9
Beef	15.9	84.4
Dairy	0	100

**Table A.3.5 Average size of farms with and without contracts (as measured by total sales)**

United States	Average size of farms using contracts		Average size of all farms
	Total sales	% of sales under contract	Total sales
<i>Crops</i>			
Wheat	67241	7.5	40 886
Maize (Corn)	136485	19.6	67 681
Fruits	307 634	63.6	168 349
Vegetables	690 295	54.3	218 497
<i>Livestock</i>			
Poultry	873 786	94.2	376 096
Hogs	1 071 030	76.2	280 809
Beef	586 296	17.6	50 609
Dairy	624 087	59.2	386 963

## Annex 4

### Organisation of Contracting for Production of Citruses in Spain

According to the Law, an officially approved agricultural contract is monitored by a committee. The Monitoring Committees are non-profit organizations which represent both parties involved in contracting. These organizations promote and control the use of contracts for a particular product. They should provide the Ministry of Agriculture with an annual report, which include relevant data on the use of contract.

The Monitoring Commission for Processed Oranges, Mandarins and Clementines (known as CIT ZUMOS) is the monitoring committee of the official contracts for these products. CIT ZUMOS is an association that represents the farmers' representative organizations and the main Producer Associations (POs), as well as the Spanish Association of Citrus' Juice Companies.

CIT ZUMOS gathers a copy of all single contract subscribed between the industry and the farm, so this association is able to provide detailed data of the use of officially approved agricultural contracts in this sector. This information is presented in an annual report. An example of a model contract is illustrated below.

#### MODEL CONTRACT

CONTRACT TYPE: CLEMENTINES TO PRODUCE JUICE  
(English version of the original norm)

**NORM APA/3066/2006, 21st September, which approves a type contract for clementines to be processed into juice during 2006-2007 campaign. Duration: 5 to 6 months.**

The Monitoring Commission for Processed Oranges, Mandarins and Clementines (CIT ZUMOS) asked for approval of a type contract for clementines to be processed into juice during 2006-2007 campaign which set terms of transaction 5 to 7 months before delivery to the industry. CIT ZUMOS made the request in accordance with law 2/2000 and Royal Decree 686/2000.

The Ministry of Agriculture, Fisheries and Food adopts the following norm

First. According to law 2/2000, 7th January, which regulates type contract for agro-food products and Royal Decree 686/2000, 12th may, which complements the basic law, an annual type contract for transactions of clementines to be processed into juice is approved. The duration of this contract is 5 to 7 months. The contact text appears in the Annex.

Second. This approval shall last a year after its publication.

Madrid, 21st September 2006. The Minister of Agriculture, Fisheries and Food. Elena Espinosa Mangana.

