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New Transatlantic Conflicts: American and European Food
Policies Compared

Marjoleine Hennis

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European University Institute
Badia Fiesolana
I – 50016 San Domenico (FI)
Italy

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For further information:
BP Chair in Transatlantic Relations
Robert Schuman Center
European University Institute
Via dei Roccettini, 9
I-50016 San Domenico di Fiesole (FI)
Italy
E-mail: atlantic@iue.it
<http://www.iue.it/RSC/BP/>

Abstract

After a long period in which transatlantic conflicts over trade in agricultural goods have been marked by disputes over tariffs and domestic support issues, the focus has shifted towards food safety and environmental issues. This article seeks to contribute to a greater understanding of the new transatlantic conflicts by analysing changes in American and European agriculture against the background of globalisation. It is shown that the reduction of 'old' transatlantic conflicts and the emergence of new ones are closely linked to the level of convergence between American and European models of agricultural production and policy.

INTRODUCTION

Trade in agricultural goods makes up more than 10% of world merchandise trade (WTO, 1999). A considerable part (40%) consists of European and American trade (Eurostat-Comext, 1999). Not surprisingly, therefore, transatlantic conflicts have often been related to trade in agricultural goods. Most of the times, these conflicts have resulted from European obstacles to American attempts to increase their access possibilities on the European market.

Transatlantic conflicts are not a recent phenomenon. The first serious tensions between the US and European states (France in particular) started when American grain flooded onto the European market at the end of the 19th century. Since then, and especially after the Second World War, the nature of the conflicts and their causes have changed. When the Common Agricultural Policy (CAP) was just established, the conflicts centred around protectionism based on external barriers in the form of tariffs and quotas. Conflicts over agriculture were taken to the GATT negotiations during the 1980s. This shifted the emphasis towards disputes over protectionism in the form of domestic support measures. Contemporarily, conflicts over tariffs remained, for example, in the case of trade in bananas. More recently, there has been another change in the nature of transatlantic conflicts over agriculture. They have shifted from disputes over trade barriers and domestic support to barriers resulting from domestic regulation of food safety and quality. Examples are conflicts over trade in hormone treated beef and GMOs.

This article analyses the reasons behind the most recent transformations in these conflicts which have taken place during the last forty years against the background of increasing globalisation. It is based on the notion that such an analysis, instead of focusing on the way foreign economic policies encounter in multilateral trade agreements, must begin within both trade blocs. Such analysis is indispensable given that, due to increasing integration of international economic activity, the nature of transatlantic conflicts has shifted more and more towards behind-the-border issues. Hence, the analysis is carried out through a study of the underlying structural changes in European and American agriculture, and the way they have altered their positions in the WTO negotiations. It is assumed that the process of globalisation affects both the conditions of trade and the political processes within each trade bloc. More precisely, it is argued that, as a result of the process of globalisation, a development towards greater differentiation within and among regions can be observed. This process should not be seen as an a-political process characterized simply by the adaptation to technologically driven change. On the contrary, it is argued that regulatory systems, social movements and other types of human action help shape the process of globalisation. In other words, differences in

national and regional regulation have an impact on the possibilities for the globalisation process to expand in certain geographical areas with respect to others and this will create the differentiation.

The article focuses on the consequences of this differentiation for the relations between the USA and the EU with regard to agriculture. Firstly, the relation between globalisation and American and European agricultural production is reviewed. Secondly, the differences between American and European agriculture, leading to divergences in policy outcomes and positions internationally until the mid 1990s are analyzed. In the third and final section an analysis is made of the new aspects of the present production and policy models in the US and EU. Through a case study of conflicts over trade in GMOs, it is analyzed in how far convergence in the American and European regulatory systems is taking place, which will shed some light on the nature and persistence of transatlantic conflicts in the future.

GLOBALISATION AND AGRICULTURE

The homogenising effect of the process of globalisation in American and European agriculture can be studied by looking at the Food Regime, a concept which places agricultural restructuring processes within the different periods of capitalist accumulation. A Food Regime is characterized by a global division of labor on the one hand, and the replication and integration of a certain mode of agricultural production and consumption, and a policy model which supports both, on the other hand. This concept makes a comparison possible of developments which do not necessarily take place at the same moment. In addition, it allows for the analysis of the interaction between the developments in the US and EU against a background of an ever more global market.

The first Food Regime started in 1870 in Europe and the USA. Against a background of the consolidation of nation-states, American agriculture changed parallel to the European process of industrialization. This process was characterized by the increase of trade in wheat and meat, and the “replication of European agricultural production –and industry- on a more cost-efficient basis appropriate to the large scale” (Friedmann and McMichael, 1989, p.95).

The second Food Regime was led by the US and started in the 1930s. It was characterized by the completion of the state system, together with the transnational restructuring of agriculture. The American model of production was designed as part of the New Deal and provided the initial context for the regeneration of US agriculture and its technological transformation. It was based on the Agricultural Adjustment Act (AAA) of 1934. By the 1970s, the EC had

started to replicate most aspects of the New Deal model of agricultural production. The policy through which this was to be achieved was the Common Agricultural Policy (CAP). Integration within this Food Regime took place in the form of growing connections especially between European and US agro-food sectors, via industrial inputs and processing, which was facilitated through free movement of capital (Friedmann, 1993, p.36/7).

In the 1970s the Food Regime assumed more global characteristics when the replication and integration of the US model of production began to show some problems. The production model led to huge surpluses. Moreover, the consumption pattern which had developed demanded more meat production and required the involvement of other countries for the supply of fodder. The solution for this combination of problems was the exportation of surpluses and part of the production process to other parts of the world. Maintenance of the production model was only made possible by the supply of cheap raw materials mostly from developing countries.¹

Homogenisation of Production

The second Food Regime in the US and EU was characterised by a shift from labour-intensive to capital-intensive production and flexible forms of labour organisation. Connections between farmers and supplying and processing industries increased. Industrialisation subordinated farms to emerging agro-food corporations, both as buyers of inputs, and providers of materials for food manufacturing. The role of agriculture as a whole changed: because of the integration within the agro-industrial production chain, agricultural products changed from final to intermediate products. In this way, parts of agriculture turned into commodity production on the basis of wage labour as mass production of durable goods required standard agricultural raw materials. Enlarged agro-industries engaged in more fixed market commitments with chain stores. In turn, they needed to increase their control over the quantity and timing of their transactions with farm producers (Koning, 1995, p.11). In order to assure themselves of a stable input, corporations introduced contracting with specialised and standardised farms. In spite of the reduction in decision-making and autonomy these contracts brought to farmers, they increasingly engaged in it as a means of acquiring external capital and resources. In general, these processes created a greater homogeneity in strategy between the vertically organized segments of a commodity chain and reduced the choice of farmers.

¹ An example is the import of soyabeans from Brazil to the European Union for fodder for intensive stockfarming.

The process of restructuring changed the characteristics of farming, at first in the USA and later also in Europe. As a result, farm size increased. While American farms had an average farm size of 62.8 ha in 1935, in 1997 it had grown to an average of 194 ha (ERS/USDA, 2001). In Europe the same happened from the late 1960s on. In France, for example, farm size increased from 18.9 ha in 1970 to 38.5 ha in 1995 (Agra-Europe, 1997). A major consequence of the trend towards fewer and larger farm holdings was the remarkable loss of farmers and farm workers. In the US and EU, agricultural employment decreased with an annual average of 0.7 and 2.5% respectively between 1975 and 1985 (Ingersent and Rayner, 1999, p.208). In addition, the restructuring process led to an enormous increase of productivity and agricultural intensification. In the US, between 1973 and 1985 it grew with 2 % and in the UK with 3.3% between 1975 and 1984 annually (Ingersent and Rayner, 1999, p.208). Especially wheat, maize grain, poultry-meat and pig-meat were more and more farmed under capital-intensive, factory-like systems where livestock converts feed grains into a meat product.

In this Food Regime global finance played an important role. The restructuring process in American and European agriculture depended heavily on capital provided by banks. Not only did banks supply credit to primary producers for investments in new technology and equipment, they also facilitated trade taking place on a wide geographical basis, and fulfilled the function of financial intermediaries through which they could dominate the availability of capital. With the supply of capital, banks played an important role in the evolution from labour-intensive agricultural production to capital intensive production. Moreover, they considerably influenced the direction of capital investments through their selection of the (type of) farms that, according to their criteria, were creditworthy. In this way, banks were able to control to a substantial extent, the type, rate, and direction of capital intensification in the agricultural structure which has contributed to disparities among farmers. Moreover, the credit function of banks not only strengthened their own position, it also played a central role in the consolidation of the industrial sector during its formative stages (Boyd, 1995).² The impact of the huge supply of credit by the banks was also considerable in regard to the displacement of farmers out of production. By facilitating overproduction (with easy credit), prices decreased and forced especially independent small producers (in all parts of the food chain) into a cost-price squeeze and ultimately out of business (Boyd, 1995).

² In highly integrated commodity chains, where breeding or growing by primary producers is done under contract, this is especially evident. In this kind of situation it is not unusual that half of the fixed capital investments is done by the growers who follow a very intensive investment pattern, as they are afraid to lose the contract. The maintenance of this pattern has become a common interest of banks and processing industries.

The position of the banks was strengthened during the 1980s when a drop in the value of land changed the conditions for lending money (Marsden, et al, 1990). This meant that banks, rather than deciding on the basis of the total performance of a farm holding, supplied loans for specific purposes. It increased their influence on the direction of investments, and consequently on the characteristics of the restructuring process. With the internationalisation of production, which was made possible by technological change, capital in the form of credits, insurance and other services was able to go beyond geographical borders. Consequently, a global network of capital developed.

The growing power of transnational capital is characterised by a global organisation of credit and the development of the relative autonomy of finance with respect to production. This situation, which has emerged as the anchor of the above-mentioned globally constructed regime of accumulation, has caused a transformation among the actors in the policy process. Among other things, it has been leading to a change in the role and nature of the individual state. As Gill notes, "(T)he emergence of the neo-liberal form of state...includes the internal restructuring of the state apparatus and governmental institutions so that they are more fundamentally permeated with market practices and market values: the internal structures of the state are thus both subjected to market discipline and, in this way, the public sector is commodified. Within governments, there has been a general shift in the pecking order of ministries, with finance ministries tending to become most important" (Gill, 1994, p.16).

Thus, in the Second Food Regime, the state has yielded its primacy of place in the regime of accumulation. More than a mediator between global capital and national bourgeoisie and the working class, it has become a facilitator of the requirements of global capital (McMichael and Myhre, 1991). The political arena, the battlefield upon which a continual struggle between interests takes place, has therefore been balanced towards the group with the largest capital concerns. As a result, agro-industry, being more and more transnationally integrated, has gained a prominent role in the policy making process, while the task of nation states in regulating labour, land, and the accumulation of capital within their territorial jurisdiction has become more and more influenced by international factors. In fact, during the period in which the position of banks was strengthened, the internationalisation of capital led to the pursuit of deregulation, starting in the 1980s. This took form in a tendency towards the liberalisation of trade, privatisation of state industries, and the use of financial and fiscal measures as a substitute for bureaucratic control. State intervention in financial services was replaced by a system of commercial banks at the end of the 1980s, in the US but also in European countries such as the UK, and Ireland (Coleman and Grant, 1998, p.234).

With this development, however, the role of the nation state in regulation has not disappeared. On the contrary, in a situation in which the primary scale of economic processes was global, with an agricultural sector still highly dependent on support, state intervention was needed. As global capital requires intervention of the state in order to secure economic, social and political conditions of accumulation, the nation state has kept a certain control over the process in its territory (Le Heron, 1993, p.21). Moreover, state intervention is still regarded as important in overcoming instabilities in the agricultural sector, as transnational capital allocated activities which first were essential to farming by turning agricultural production largely into an industrial labour process (Lowe et al, 1994, p.6). Furthermore, for reasons of legitimacy, nation states have continued to take account of the public interest at the domestic level (Marsden, 1995).

In sum, the development towards the global organisation of production has restructured American and European agricultural production and has reorganised the relations among production forces within the agro-industrial production chain. Processing industries and retailers have gained a relatively powerful position with respect to agricultural producers. As part of this, the relations among farmers, the concept of farming as such, and its role in the policy making process have undergone changes in both the US and the EU. These changes, however, have not taken place at the same time. In the USA, the process of agricultural restructuring was largely concluded by the 1970s (Ingersent and Rayner, 1999, p.269) whereas in Europe it had just started in that period. Nevertheless, the general characteristics of the process have been very similar. In Europe and the US farms have become larger, fewer in number, and more specialised.³ In this sense, the process of globalisation has led to homogenisation. It has created a system of mass-production based on standardised production methods on a large scale, on export, and on a commercial financial system which tends to enhance intensive and large-scale farming.

Homogenisation of Regulation

The production model in the US and EU under the Second Food Regime has been enhanced by a regulatory system based on market and price policy which was designed to provide farmers of a decent income and consumers of a secure food supply. Also in this case, there have been many similarities in the

³ At the beginning of the 1980s, around 30% of American farmers produced 90% of total agricultural output. In that period, one quarter of European farms produced three quarters of total agricultural output (Ingersent and Rayner, 1999, p.208).

American and European situation although they have not started at the same time.

The American Agricultural Adjustment Act (AAA) of 1934 rewarded mainly large-size farmers. Its system of price guarantees enhanced the modernization of farming while setting aside the least productive acreage. This rationalisation of agricultural production resulted in the increase of productivity, in many people giving up farming, and in a concentration of land-ownership (Cafruny, 1988, p.37-8). The system of production control maintained the system of family farms. During the 1950s, mainly under pressure of American grain corporations and farm chemical industries for whom the system of production control system translated into lower volume and lower profits, price floors and loan levels to farmers were gradually reduced (Cafruny, 1988, p.29-30). Once the restructuring process had reached its completion by the 1970s, there was a change in agricultural policy toward less reliance on price supports (Ingersent and Rayner, 1999, p.270). Price reductions were partially compensated through deficiency payments (a system of direct payments).

In the period in which American agriculture was in the middle of restructuring, European agricultural policy replicated some of the most important characteristics of the AAA although its rationale differed on some points. Whereas state intervention under the AAA was the response of the Roosevelt administration to the farm crisis in American agriculture which had emerged from new entrants to the world grain markets, the initial objective of the CAP (which was a compromise between France, Germany, and the Netherlands) was self-sufficiency of food within the EEC. In other words, while the AAA aimed to limit production, the CAP focused on expanding output (Cafruny, 1988, p.14). But there were mainly similarities: an objective of both was to improve farmers' income levels. More importantly, both policies developed a system of market intervention based on price policy linked to a system of protection which separated their own market from the world market and which kept internal prices above those on the world market. In both cases these instruments enhanced the process of restructuring in agriculture.

In the case of Europe, the market and price policy was the main pillar of the CAP and, until the early 1990s made up for two-thirds of the EU budget. The idea behind this policy was that producers should receive their income through the price for their products. In this way, the CAP transferred the income from consumers to producers through high prices of agricultural products. Thus, net-importing Member States for food transferred income to net-exporting countries through trade and through the Common budget. This mechanism encouraged Member States to increase domestic production either in order to

maximize net recipients or to minimize their net contribution to the budget. Since the support went mainly to commodities produced on relatively modernized holdings, it soon led to surpluses. Also, the policy gave an incentive to the increase of farm scale and to increased use of capital through the provision of high and stable prices. As larger, commercial farms have higher net returns per unit of land, these support prices increased access to credit and lowered the cost for the larger farmers, providing an incentive to bid up the price of land and to increase further the size of their farms (Johnson, 1995, p.34). The products most subject to these mechanisms such as wheat and livestock, soon rose above the level of self-sufficiency, and the EU turned from a net-importer into a net-exporter for the most important agricultural products.

Transatlantic Conflict in the Second Food Regime.

At first, increased production in combination with protectionist measures under the CAP only led to problems for American producers on the European market. A good example of this was the so-called *chicken war* between 1961 and 1964. This transatlantic conflict was a direct result of one of the first directives under the CAP (EC/22) which protected French and Dutch producers of frozen chickens from cheaper imports from the US through an import tariff. The directive (EC/22) was imposed after an increase of French and Dutch chicken production due to financial support by the French and Dutch governments.

By the 1970s, when the modernisation of American agriculture resulting in increased productivity and agricultural output was at its peak, the European expansion of agricultural production took off. As a result, surpluses increased in Europe which were disposed on the world market with export subsidies. This exacerbated the problems for American agriculture which lacked a clear export strategy. Hence, in reaction to that, and mainly under pressure of large grain corporations and farm chemical companies (Cafruny, 1988, p.29), a change in American agricultural policy was provided by the Nixon administration through the Agriculture and Consumer Protection Act in 1973. With this Act, agricultural policy came to be focused on the expansion of exports. It meant a move away from high price supports and deficiency payments as the main instrument of farm income support. The depreciation of the dollar assured its success. Between 1972 and 1973 grain exports nearly doubled (Ingersent and Rayner, 1999, p.275).

During the 1970s, thanks to the expanding exports, American farm incomes and the prices of farmland went up. Price intervention supported a further rise in land prices. By 1980, over one-third of America's cropland was producing for export (Cafruny, 1988, p.18). Soon, however, the global character

of this model showed its limits. In the same period in which American export rose, European exports also rose rapidly. Wheat exports, for example, reached a level of 15% of the world wheat market (Cafruny, 1988, p.16), thus hindering the American export boom. As a consequence of this, and parallel to the world crisis of commodities whose relative prices were lower than those during the worst year of the Great Depression (Cafruny, 1988, p.19), the US saw a collapse in land prices and an increase of inflation which left American farmers with huge debts.

The Reagan administration responded to this crisis in 1985 through the Food Security Act. With this new Farm Bill the USA broke away from its policy of production control (through setting aside land) and directed its support measures towards the improvement of its export position. It meant a radical interruption of the New Deal model with its subsidies and production controls and underlined the important role of market forces in solving the problems in American agriculture.

At the same time, the US export enhancement programs raised the costs of the CAP. The greater competition on the world market led to trade wars between the USA and the EC.

DIVERGENT REACTIONS TO GLOBALISATION

Within the Second Food Regime, American and European production and policy models have grown very similar. However, the outcome of globalisation is not one of complete homogenisation but is affected by the different socio-economic starting points in the US and the EU, and by the way in which the actors cope with the domestic changes related to globalisation. Hence, in spite of a certain degree of homogenisation, important differences have continued to exist between American and European agriculture.

The differences in starting situations in the US and EU are mainly two. Firstly, in terms of their particular history of settlement and the endowment of natural resources the US and EU are very dissimilar. The US can be typified as a 'natural' exporter (Vorley, 2001). American agriculture is relatively extensive, large of scale, and has low production costs due to favourable climates and soils, and a sparse population. As a consequence, its productive capacity goes far beyond its own needs. In contrast, Europe is characterized by a very dense population which has suffered various food shortages in history. The European agricultural sector has evolved in close interrelation with society.

Secondly, and related to these geographical differences, there have been divergences in the system of interest intermediation between the US and EU. Whereas in the European states a corporatist model of interest intermediation developed during the 1930s which became the basis for a strong position of farmers in European agricultural policy, American agricultural policy was characterized by ad hoc coalitions and conflicts among farmers which were polarized through the separated powers in House and Congress and the regionally based party system (Sheingate, 2001, pp.132/3). In the US, this has led to a situation in which interest groups organised around the development of Farm Bills which used to start at the beginning of a new Administration. In addition, lobby-activities, as part of the general electoral campaign, have been strongly determined by the financial resources of interest groups. This has influenced the way in which the actors have coped with the forces of globalisation and the development of a new power balance in reaction to the forces of globalisation. As a result, changes in American agricultural policy have been much more influenced by crises in agriculture than European agricultural policy.

The Development of the American Model

Had the change in agricultural policy leading to the Farm Bill of 1985 been a direct result of the farm crisis and the related budgetary problems, the nature of the change was largely influenced by the power balance that had come to be dominated by a group of large American farmers and agro-industries due to the restructuring process.

For example, agricultural restructuring had enhanced the production of grains and oilseeds for export during the 1950s and 1960s. This increased export revenues and made the decision over a reduction of commodity programs more easily accepted among farmers. Besides a growth of capital intensive production, increasing specialisation, a reduction in the number of farms, and an increase in farm size, farmer debt doubled because of the increased purchases of expensive farmland (Buttel, 1989, p.51). This contributed to mainly two types of farms in American agriculture. By the 1970s and 1980s, medium sized farms, which were more vulnerable to financial stress than large or small farms, were mostly eliminated (Buttel, 1989, p.73-4). Those farms to remain were a small number of large-size commercial farms producing for the bulk of output, and a relatively large number of small, part-time farms producing comparatively little.

This impacted upon the organisation of agricultural interests. Whereas the small farms had mainly off-farm incomes, large farmers received a high proportion of net-farm income, were highly integrated with agro-industries and

trade companies (and banks), and received the greatest part of the benefits of commodity programs (Ingersent and Rayner, 1999, p.300). The latter had strong links with Republican and conservative Democratic policy makers. For example, the former agriculture secretary John Block, became the president of the National American Wholesale Grocers Association immediately after the Farm Bill, which had saved its members over \$1 billion per year, had passed (Ritchie and Ristau, 1986, p.122). This development meant that the Farm Bureau, which had traditionally represented the larger farmers, lost much of its role to the specialized commodity organizations (Constance et al, 1990, p.49). The latter took a leading role in the new Farm Bill, together with many agribusiness corporations and trade associations which had formed a front organisation, called the Farm Coalition Group. They were particularly influential in policy making due to the strong convergence of interests between the State and agribusiness firms as both enjoyed the revenues from increased production and high export demand (Constance, et al, 1990, p. 39).

Another effect of the restructuring process was the marginalisation of small farmers in agricultural policy. Those who were losing out in the restructuring process organised in the National Farmers' Union and the American Agricultural Movement to support supply-management and higher prices. These groups lacked the financial resources for lobbying and focused on their strength through local organizations and national coalition building. Finally, the drop in farm population reduced the willingness in politics to make consumers pay for farm support (Sheingate, 2001).

The new power balance which had thus developed determined the outcome of the Farm Bill of 1985 in response to the American Farm Crisis. In view of the Farm Bill, the small farmers formed a National Coordinating Committee and received support from trade unions, civil rights organizations, and churches. Also environmentalists were involved in the process. Nevertheless, it was the small group of large farmers together with agro-industries which appeared to have the greatest say in the Farm Bill of 1985. The principal actors in this group were the American Farm Bureau, but mostly commodity groups like the National Corn Growers, National Wheat growers, and the National Milk Producers Federation, and major grain corporations such as Cargill and Ralston-Purina, and suppliers like the Fertilizer Institute that spent millions of dollars on propaganda in favour of the Farm Bill (Ritchie and Ristau, 1986, p.113). These groups favoured a market-based solution to the farm crisis, arguing that subsidies and production controls, and not chronic overproduction and ensuing low prices, were at the root of the crisis. In addition to a reduction of size and role of government intervention in agriculture, they pushed for a transition from high and rigid price supports to flexible and market clearing

price supports and a gradually phasing out of acreage reduction programs (Ingersent and Rayner, 1999, p.293).

The Farm Bill of 1985 reflected the new power balance in that it focused on a reduction of the budgetary cost of agricultural support, for example by relying more on direct payments and by lowering target prices. This was made possible by the enhancement of export through an Export Promotion Program, and by promoting trade liberalization in agricultural commodities. A few environmental provisions, placed within the Conservation Reserve Program that major environmental groups had fought long and hard for but which did not affect agricultural production itself⁴, were accepted as trade-offs (Ritchie and Ristau, 1986, p.127). The Farm Bill was the first step towards a strong focus in American agricultural policy on the promotion of American exports. From that time on, various “export enhancement” programs including that in the 1988 trade bill have been adopted to promote American exports by subsidizing various commodities and enabling them to sell below the cost of production.

Thus, the restructuring process in American agriculture led to a dominance of a small number of large farmers, together with agro-industries and traders in the 1980s. This process was strengthened by the Farm Bill of 1985 which reflected a radical break with the New Deal policy. The largest beneficiaries of this policy turned out to be not the hard-pressed family farmers but multinational grain exporters and large corporate farms (Ritchie and Ristau, 1986, p.114). When the program, due to the farm crisis, nevertheless led to very high costs, all efforts focused on their reduction. The solutions were found in trade liberalization. Hence, a reform of the CAP became the major target of the efforts to reduce the costs in American agriculture.

The American program affected European agriculture in two ways. Firstly, after a reduction of farm support domestically, the US felt in the position to push the EEC to start the same type of change during the Uruguay Round of the GATT. Secondly, the Export Enhancement Program made the CAP support system suddenly much more expensive. In spite of that, the CAP did not undergo any serious changes until the early 1990s. Until that time, Transatlantic conflicts thus centred around the subsidy system of the CAP.

⁴ Examples are the prohibition against breaking fragile prairies or draining swamps and a paid environmentally oriented land bank program.

The Development of the European Model.

The Transatlantic conflicts over subsidies continued until the CAP was finally reformed in the 1990s. These conflicts resulted mainly from the successful replication of the American production model in the EC on the one hand, without the same flexibility in adapting its support system to farmers on the other hand thus causing barriers to American imports. Why didn't the CAP adapt in the same way and with the same speed as US agricultural policy? The answer can be found in the corporatist model of interest intermediation in the European Member States. This prevented rapid changes in European agricultural policy in response to external pressure or to changes in the agricultural structure. As a result and in addition to the divergent geographical characteristics between the US and the EU, the actors dealt with the changes in agriculture in a different way, leading to another power balance in European agricultural policy.

Whereas the changes in American agriculture had led to a straight forward victory of free market forces in agriculture, European agricultural policy rather saw an increase and incorporation of new actors with different agendas on top of the existing ones. Similar to the American situation, the CAP had contributed to increasing links between agro-industry and farmers, for example, by using sugar factories, grain dealers, and meat-packing plants as their agents in the fixing of farm prices. However, due to the powerful position of farmers in the CAP, besides the promotion of the links between farmers and processing industries, the CAP encouraged inefficient farmers to remain in farming. The model of interest intermediation thus remained in place for a long time, while the restructuring process changed the underlying power configuration within the food chain. At the same time, the restructuring process, enhanced by agricultural policy, saw an expansion of intensive farm practices which, given the relatively limited natural resources and space in Europe, soon appeared to have major polluting effects.

The combination of these elements in Europe led to two opposing tendencies. Firstly, the restructuring process led to increased differentiation among European farmers similar to the American situation. This created a legitimacy problem for the traditional farmers' organizations and contributed to the disintegration of the corporatist model. In response to this development and together with the growing tensions over the disproportionate budget for the CAP, support for protectionism of European farmers through price support policies declined. Moreover, under influence of the increasing dominance of large farmers and transnationally operating agro-industries and banks, a free trade view advanced in agricultural policy. In short, a trend towards market deregulation took place. Secondly, the polluting effects of the European

intensive farming practices became rather broadly perceived by the public in the mid 1980s. At the same time, consumers had gained a more important role in the food chain as food processors and retailers were differentiating their production in order to continue attracting the consumer in a situation of a saturated market. This led to a growing demand for alternative (for example, organic) products and enhanced the formation of new coalitions between environmentalists and organic farmers. Furthermore, in a time in which the corporatist model was declining but nevertheless still in place, environmental regulation under the CAP was also used as a way of continuing the support of weaker farms. Thus, parallel to market deregulation, environmental reregulation took place. Apart from stricter measures for polluting farming practices, this led to an increase of expenditures for rural development (with 4 billion Euro) and the reservation of around 4% of total agricultural support and nearly 2 billion Euro from national funds (Vorley, 2001).

These opposite tendencies, market deregulation and environmental regulation, combined with the growing criticism of the problem of surpluses of agricultural production and pressure from the US for a dismantling of the CAP in the GATT, have affected the nature of the CAP reform in 1992. After various attempts, a proposal by the European Commissioner Ray MacSharry was adopted in the Council on May 21, 1992. As the Commission report on the agricultural situation in the EU stated: “the main thrust of the reform has been a switch from price support policy to one geared more towards direct aid for producers, but taking account also of growing concerns over the environment and the social development of rural areas” (Commission, 1993, p.10). The crops for decoupling were grains, oilseeds, and protein crops. An effort was thereby made to diminish the incentive for a continuous increase of production caused by the market and price policy. A new feature was the attempt to redistribute support to the benefit of more vulnerable farms through a compensation measure for lower prices and the setting aside of arable land. The quotas for sugar and milk were maintained. Although the changes in the CAP were considerable, for the US the reform did not go far enough. The transatlantic tensions were reflected in the Uruguay Round of the GATT.

Uruguay Round of the GATT

The above described changes which led to the MacSharry reform also played an important role in the GATT accord. This was reflected in the changed position of those European Member States that traditionally supported the CAP mechanisms. For example, Germany stood on the side of Trade Commissioner Leon Brittan when he urged flexibility on the French. Apart from the German interest in greater market access, Brittan was assisted by the general opinion that

the benefits of an agreement outweighed the costs to specific sectors or groups (Agra-Europe, 1993). Furthermore, the position of the influential European Round Table of Industrialists played an important role in the conclusion of the Round. This happened especially under pressure of the representatives of large food industries (Nestlé and Unilever), who were strongly in favour of free trade, and were reluctant to let themselves be “dictated” by the agriculture lobby (Van Apeldoorn, 1999, p.244). In this climate, the old system of farmers’ support was not important enough to sacrifice the position of the EU in the GATT negotiations and beyond. Liberalisation had openly become an option. However, compared to the US the changes were rather modest and important differences remained.

Initial European resistance to the American plans to virtually eliminate all trade barriers and export subsidies in ten years, was overcome by rescheduling the period over which the cuts were to be made to a period which was more convenient for European cereal producers (Grant, 1995, p.163). Furthermore, the most protected sectors in the EU, the dairy and sugar sector, were excluded from the agreement, and domestic agricultural subsidies were exempted from most challenges in the GATT. Also, direct income aid was not classified as trade-distorting, which created the possibility to continue farmers’ support.

The GATT accord was finally reached in 1993. The main outcome of the GATT for agriculture was a drop in internal support (production aid or prices) compared to the period between 1986 and 1988 for all products, with direct aid under the CAP reform, and American aid being excluded from this; a quota for oilseed production areas, which was consistent with the CAP reform; a 21% reduction in the volume of subsidized exports over 6 years, product by product; and additional import duties (market access) to eventually reach 5% of the consumer market. In addition, the Uruguay Round Agreement on Agriculture (URAA) entailed a long-term commitment of the contracting parties to remain within the quantitative constraints decided upon for three areas: market access, export subsidies, and domestic support (Buckwell and Tangermann, p.240, 1999). Further reform of agricultural policies was also agreed upon with the signing of the so-called ‘Peace Clause’ of the URAA. This Clause expires on December 31, 2003, and means that all agricultural policies which were legitimate under the URAA but are not in conformity with general WTO rules will be no longer exempted from countervailing and retaliatory actions.

In short, the Uruguay Round of the GATT clearly shows the general recognition that domestic agricultural policy decisions can have a great impact on other countries and that, at the international level, these decisions can be questioned. Although the agreement was not as radical as the US would have

liked them to be and was accompanied by a host of exemptions, safeguards, and sideline measures related to the environment and parallel to the dualistic approach in European agriculture, it reflects a clear shift away from increasing agricultural protection within both trade blocs. Furthermore, it shows the first occasion in which quantitative restrictions on imports and subsidies for exports were brought under some significant degree of control.

WTO

Since the Uruguay Round of the GATT, there has been an ongoing consolidation of the trend towards deregulation in American and European agriculture. In the US, this is represented by further deregulation of agriculture in the form of the Agriculture Improvement Act of 1996. This Farm Bill has introduced the concept of 'freedom to farm' which has led to the severe cut of set-aside programmes and other subsidies (Grant, 1997, p.199). In practice, it has meant the end of support for the family farm (hence to smaller farms to be squeezed out of business), and a greater flexibility of US farmers producing for the world market. In addition, the restructuring process, together with the declining prices for agricultural commodities as resulting from the Farm Bill of 1985, have led to an increase of productivity and an increase of intensive farming. This has resulted in the abandonment of careful soil and water conservation practices, forcing many farmers to begin tilling marginal, highly erodible soil (Ritchie and Ristau, 1986, p.127). Furthermore, cheap grain prices have accelerated the destruction of family-operated cattle ranchers by corporate feedlots. Without cows to graze on hillsides, farmers had little choice but to plant corn and soybeans on these fragile lands. Thus, while agricultural policies increased intensive production leading to environmental degradation, the Farm Bill of 1996 established some environmental programs in response to demands of environmental groups. These programs, however, did not focus on the integration with farm practices or the model of agricultural production in that they were resource driven (focusing on soil and water conservation) while the bulk of expenditures was allocated to the Conservation Reserve Programme (Vorley, 2001, p.13). Because of this separation between environmental conservation and agriculture, the cuts in domestic support system have had the largest impact on American agricultural production. Hence, while creating conditions for the expansion of the American export capacity in agricultural goods, they have resulted in continuous pressure from the US on the EU for further dismantling of domestic support systems in the WTO (which has entered into force in 1995).

Parallel to, or in interaction with (preparations for) the WTO negotiations and the continuous pressure of the USA, the European Commission has prepared further reform of the CAP in the form of a proposal called 'Agenda 2000'. Agenda 2000, put forward by Fischler in 1997, has been the most rigorous plan after the MacSharry reforms. The proposal focused upon the maintenance of the competitiveness and export potential of European agriculture. This implied a movement towards world prices, a reduction of intervention levels, and a greater decentralisation of policy implementation. In addition, the Fischler proposal had a more sector-based approach than the MacSharry reform. It aimed especially at substantial price cuts for beef and cereals (10%-30%), which were to be compensated by direct payments with the intention to avoid the necessity of using export subsidies and to improve the competitiveness of cereals on the internal market (Agra Europe, 1997). In the Commission's proposal, the dairy sector was subject to the least radical modifications. In addition to a price cut of 10%, changes in the existing quota system were planned to be postponed until 2006. Finally, the proposal covered the integration of rural development and agricultural policy. This proposal was accepted in March 1999 by the EU heads of government in Berlin. The reform was a somewhat watered-down version of the original proposal of the Commission in the sense that more importance was given to increasing national competitiveness. Nevertheless, it showed the growing reluctance of the Member States to continue the old CAP system based on price support to farmers. At the same time, it introduced, albeit on a voluntary basis, the integration of a new set of horizontal (environmental) measures. (Agra-Europe, April 1999).

The increasing accordance between the US and EU over subsidies is reflected in the WTO negotiations (Doha, November 2001) where, among other things, progress in the URAA has been discussed. Agenda 2000 has contributed to this in that it has led to a further shift of support measures from the Amber Box⁵ to the Blue box which should lead to a 20% reduction of Aggregate Measurement of Support (price support and government payments) in 2002 (when the Agenda 2000 decisions for cereals and beef will be fully implemented) (Anania, 2001). Further WTO negotiations, therefore, are not

⁵ Under the Uruguay Round Agreement agricultural support policies are subject to different levels of discipline. This system is referred to as Amber, Blue, or Green boxes, where policies are assigned a box, according to their degree of trade-distortion. The Green box refers to subsidies which do not, or to a very small extent, distort trade. Examples include food security stocks, direct payments to producers, and environmental programmes. Policies that affect production and are subject to reduction over time are found in the Amber box. Blue box policies are acknowledged to distort trade, but are allowed because they are aimed at limiting rather than enhancing production. They are often transition policies that pave the way to further reforms over time.

expected to be held up by conflicts over domestic support systems between the US and the EU. In this sense, the URAA has been a milestone in Transatlantic Conflicts over agricultural goods in that it reflects a greater homogenisation between American and European trade policy objectives and, as such, has marked the end of an era in transatlantic relations.

In sum, whereas the American agricultural model has been a relatively straight forward victory of free trade forces, the CAP has obtained a more dualistic approach. On the one hand, in the CAP market principles and deregulation play an increasingly important role. This benefits the strong European export sectors and, overall, brings it more into line with the US. On the other hand, the CAP focuses on the integration of environmental and agricultural practices through the application of multifunctionality principle.

TOWARDS A NEW FOOD REGIME?

The Second Food Regime has consisted in the partial replication and integration of the American and European agricultural model of production and regulation. As long as the replication and integration were not complete, this has led to conflicts, first over trade barriers at the border, and later over subsidies. With the adaptation of the actors to the changes in the underlying agricultural structure and the establishment of a new power balance, which has resulted in a trend towards deregulation and trade liberalisation in both the US and the EU, the conflicts over the old issues have diminished. At the same time, the American and European models have maintained important differences due to the way in which the domestic actors have reacted to the changes described.

Parallel to this situation of partial convergence and remaining differences, new structural changes are taking place in agriculture. So far, the reactions in the US and the EU have been completely different to these changes (especially in regulatory terms) and have already led to the emergence of a new type of transatlantic conflicts. Since the transatlantic relations are closely linked to the extent of convergence between the American and European model of production and policy, the analysis focuses again on the Food Regime.

Structural Changes

Over the last couple of years, production has undergone some important changes in the US and the EU. Biotechnology has come to play a more important part in agricultural production. New techniques which break field crops down into generic intermediate food ingredients for use in downstream processing have made the close identification with the specific crop redundant and has led to a

situation in which agricultural inputs give way to non-food crops for the food industry. This process, which is also denoted by Goodman (1991) as *substitutionism*, signifies the uncoupling of agricultural production from food processing, and hence a greater independence of processing industries from a specific input (Ruivenkamp 1989). This is likely to succeed the present, widely used practices of replacing 'traditional' inputs (such as wheat for fodder, with tapioca and soya, or sugar and sweeteners) on a global scale (global sourcing). With these technological innovations, together with ongoing processes of concentration, the flexibility of processing industries has increased considerably and strengthens their position with respect to primary producers.

The growing importance of biotechnology has influenced the relations within the food chain. Leading chemical firms have strengthened their position internationally and in the food chain by mergers and acquisitions. In this way, 'crop development conglomerates' have developed in which the transnational chemical firm maintains links not only with one or more plant breeding firms, but also with software firms and public research institutes through takeovers or through collaboration (Pistorius and Van Wijk, 1999, p.118). Also processing industries have started to diversify their activities within the food chain in order to maintain control over the rest of the food chain (Goodman, 1991, p.44). Nestlé and Unilever, for example, do much of the distributing themselves, and Ferruzzi is not only involved in the trade of cereals and sugar, but has also commenced activities in the chemical industry by purchasing Montedison. This process of concentration has created a greater homogeneity in strategy between the vertically organized segments of a commodity chain.

Although the relations within the food chain remain to a large extent dominated by the upstream part, based on input oriented corporate capital, today they are increasingly associated with the control and construction of value from the point of production. This empowers near-consumer agencies. In other words, retailers have come to play a more and more significant role within the food chain as the quality of food has gained in importance. This has influenced the power structure within the food chain. Given the greater role of the demand side on the food market, retailers are in the position to impose a certain mode of production by establishing conditions and quality standards for products. With this development, a shift can be noticed from quantitatively regulated food policies to qualitative ones. That is, the basis of social action within the food chain has tended to move from control on inputs and standardisation to quality, regulation and consumption (Marsden, 1995).

This general picture of changes shows some variations within the US and EU which are reflected in the positions of both trade blocs and cause the emergence of a new type of transatlantic conflicts. American policy underlines support of the export position of its farmers according to free trade principles, and European agricultural policy has sought to include the interests of the various actors. The resulting dualistic approach of the CAP, which seeks to integrate environmental with agricultural policies and uses the principle of multifunctionality⁶, is often perceived by the US as a way to continue the support of farmers through other means.

This part of the CAP approach contributes to the emergence of a new type of transatlantic conflicts which focus on food. A good example of such conflict is the ban of American and Canadian red meat from animals treated with the growth hormone BST which provoked the US and Canada to launch a WTO dispute settlement panel case against the EU regime in 1996. Although the panel strongly upheld all the principles argued by the US and ruled that the EU ban was inconsistent with the principles of the Sanitary and Phytosanitary (SPS) Agreement, the EU has not taken adequate actions to comply with WTO rules. This remains a source of transatlantic conflict.

Consequently, this new type of issues is added to the list for negotiations in the WTO. This list now includes policies protecting food quality, food safety, and solutions for trade distorting measures imposed to protect the environment or labour conditions. It reflects the attempts by the EU to protect its agricultural sector on the basis of these new issues. For example, the EU is in favour of increasing the green box in order to accommodate “non-trade concerns” such as food security, animal welfare.

Thus, whereas trade conflicts until the first half of the 1990s have mainly focused on the barriers to trade at the border of states (such as the conflict over imports of bananas in the EC) and domestic support measures, the emerging situation is one in which tensions over domestic support policies seem to have decreased and transatlantic conflicts have shifted to regulations which restrict trade on the basis of arguments concerning food safety and environmental measures. The conflicts stem from the fact that the European bans are imposed with the argument of the health risks they pose for European consumers, while they are perceived in the US as disguised barriers to trade and as an alternative way of continuing to protect European farmers. At present, most tensions of this type focus on trade of genetically modified crops.

⁶ According to the principle of multifunctionality farmers receive their income not only through the marketing of agricultural goods, but also through subsidies for environmental tasks and the management of the landscape.

Transatlantic Conflicts over GMOs

Genetic modification through the transfer of isolated genes into the DNA of another organism has been possible since 1973. The commercial application of transgenic crops started only in the 1980s in the US, when the US Supreme Court extended patent protection to new types of plants and plant parts, including seeds, tissue cultures, and genes. The FlavrSavr® tomato was the first genetically modified food licensed for human consumption. This is a tomato which is genetically modified to ripen on the stem without losing its colour or taste properties and without softening after harvesting. It was manufactured by the Calgene Company and launched into the American marketplace in 1994. By 1996, GM field crops were released for large-scale commercial use by US farmers and, since then, have expanded rapidly. In 1999, roughly half of US soybean crops and one third of corn were genetically modified. This has led to a situation in which the US accounts for 70% of worldwide sowing of GM crops (Paarlberg, 2000, p.26).⁷

The increased commercial importance of GM crops in American agriculture clashes with the severe regulatory restrictions on the production and commercialization of GMOs as a result of the increased weight of environmental and groups in European agricultural decision making. The restrictions are mainly based on Council Directive 2001/18, which is the EU directive governing the approval for environmental release and commercialization of “living” genetically-modified organisms which was passed on February 15, 2001. Exporters should work with Member State authorities to register their product and to obtain insight in the member states’ interpretation of EU rules. On the basis of the predecessor of this law (Council Directive 90/220), a blocking minority of European Member States has maintained an ad hoc moratorium on new product approvals since 1998, which has effectively blocked the bulk of shipments of US corn to Europe.⁸ The obstacles to imports of GMOs in the EU which result from this regulation, have left the USA with a growing fear for international trade to become paralyzed. In fact, over the past few years, American farmers have seen their access to the European market disintegrate

⁷ Other major producers of GMOs are Argentina and Canada.

⁸ In addition, the EU applies the Novel Foods Regulation 258/97, which requires labelling of all new processed foods and food ingredients, including those made from GMOs. Besides, regulation 49/2000 sets a one percent threshold for adventitious (accidental) contamination during cultivation, harvest, transportation, storage and processing. Evidence must be supplied to the competent authorities that appropriate steps are taken to avoid the presence of GMOs. Finally, the EU uses Commission regulation 50/2000 which provides specific labeling requirements for food and food ingredients containing additives and/or flavorings that have been genetically modified or have been produced from GMOs.

because of US insistence that Europe purchase GMOs. Between marketing year 97/98 and 98/99 corn exports dropped from 2 million metric tons to 137,000 tons. Soybean sales showed a drop from 11 million tons to 6 million tons during the same period (Farmers weekly, February 2000).

Divergences between the American and European food chain

At the root of this new type of Transatlantic conflicts stands a divergence in the way the agricultural restructuring and the related models of interest intermediation have developed in the US and the EU so far. For one thing, the actors within the American and European food chain have reacted in different ways to the process of globalisation. The development of new biotechnologies has predominantly been done in the US. This has mostly been a development driven by the private sector. As a result, in 1998 almost 60% of the patents was issued by American multinationals such as Monsanto, and only 20% of patents in biotechnology was in hands of European companies (Pistorius and Van Wijk, 1999). Beside the dominance of the American private sector, also US public spending on biotechnology research is higher than in Europe. The American public budget is approximately four times higher than the combined total of Member States and Community Programmes in Europe (COM, 2001, p.9). Together with the 'brain drain' of European scientists to the US, this development has given American upstream companies a relative advantage over the Europeans.

But there are also differences which are related to the relative position of the actors within the European and American food chain. In Europe, retailers have obtained a more important market position relative to upstream producers. Together with particularly outspoken consumer protests against GMOs, under influence of various food crises (such as the one around BSE or 'mad cow disease'), and the visible environmental damage intensive agriculture has already caused, they have given a greater voice to consumer interests in food production.⁹ Since European retailers are highly concentrated¹⁰, they have a huge leverage over the rest of the production chain. In practice they control food producers (farmers and processors) through contracts in which they establish the quality standards of the goods which may regard the characteristics of the goods as well as those of the production process itself. A good example is Europ-GAP,

⁹ According to a NIPO survey, only 15% of Dutch consumers say they would buy products containing genetically modified ingredients if they were available on a large scale in the shops. In response, the number of Dutch companies using genetically modified ingredients in their products is falling, according to Greenpeace.

¹⁰ For example, in Germany and the UK, five supermarket chains control two-thirds to three-quarters of the dominant supermarket and superstore sector (Vorley, 2001).

a regime of Good Agricultural Practice which has gone into force in June 2001. Food producers who do not comply with the standards set in Europ-Gap will not be able to distribute their goods through the thirty European supermarket chains which have signed it. This situation, in which protests by consumers have been joined by some supermarket chains at the European level, has led to more attention for quality products in Europe.

In US on the other hand, supplying companies and food processors have a stronger position in the food chain also mainly as a result of increased concentration. For example, between 1996 and 1998, supplying company Monsanto took over four major US maize breeding companies (Holdens' Foundation Seeds; DeKalb Genetics Corporation; Delta&Pine Land; and Cargill's seed divisions) (Pistorius and Van Wijk, 1999, p.119). Another example is DuPont which has taken over the US agri-chemical business of Shell. The result is that the top three of these industries account for 20% of the world market in seeds (European Commission, 2000). In addition, supplying companies control the inputs of farmers. A good example is the introduction of Roundup Ready Soya by Monsanto. With this Monsanto has found a way for the supply of both seeds and pesticides. Through genetic modification, the soya-plants have become immune to the pesticide Roundup and farmers are forced to buy the pesticides once they have bought the seeds from Monsanto.

This development is enhanced by a process of concentration in the food processing and trading companies. For example, Tyson has become a giant 23 billion dollar meat producer that controls 30% of the US beef market, 33% of the chicken market, and 18% of the pork market (Vorley, 2001). Another example is the increased power of Cargill through its purchase of Continental's world-wide grain operation which has increased the company's already powerful grip on grain and oilseed exports from Gulf of Mexico ports to between 40 and 45% (Vorley, 2001. p.30-1). The stronger position of upstream companies in the American food chain has focused the attention to efficiency in production. Therefore, GM crops which make production more efficient for farmers and traders have formed an important part of their strategies of processors. Consumer protests have mostly been received with a countermobilisation of agri-food businesses and some scientist communities.

These differences have led to a situation in which American retailers have adopted a wait-and-see approach to the introduction of GMOs, while European retailers have moved first to meet and further to shape the demand for non-GM food. This has had a considerable impact upon the European upstream producers, farmers and processors, who have been more reluctant to sowing or processing GM crops.

Divergences between American and European regulation

Related to the divergences in the food chain, the American and European situation regarding the regulation of GMOs show some important differences. Firstly, there is a very different perception of GMOs on both sides of the Atlantic. In the US, GMOs are considered to be substantially the same as similar non-GM crops and are therefore subject to the same regulation. For example, the safety of food with GMO ingredients is based on the concept of substantial equivalence, i.e., if a food containing GM ingredients is substantially equivalent to a food that does not contain GM ingredients, the GM food is considered safe. In the EU, instead, GMOs are perceived of as something fundamentally different and therefore fall under different rules than non-GM crops. In regulatory terms this leads to a situation in which in Europe the precautionary principle applies. This formal parameter of regulatory decision making establishes that as long as there is no scientific evidence of the safety of the product its production and use fall under certain restrictions. In the US, the burden of proof of safety of a product lies entirely on the corporation.

Secondly, the American decision making process is conducted in a relative social vacuum by regulatory agencies such as the Food and Drug Administration (FDA), the US Department of Agriculture (USDA), and the Environmental Protection Agency (EPA). In addition, for environmental and other civil groups the regulatory system is very hard to penetrate (Buttel, 2000). By contrast, in the EU, the European Commission draws its proposals for new legislation on the basis of the input of various interest groups including consumers and environmentalists. Moreover, whereas in the EU it is accepted that life-science technologies and production include not only standards of health, public safety, and risk criteria, but also political components. This is for example stated in the White Paper on Food Safety (COM, 1999): “Risk management can be taken on the basis of scientific advice alone, but in some cases other factors are also relevant”. Hence, the final decision is taken by a politically accountable body. By contrast, in the US, decisions are basically ‘science driven’ and socio-political considerations are supposed to have no standing.

Convergence of the American and European models?

The different reactions in American and European agriculture to the restructuring process have developed divergent power configurations in the respective food chains with consequences for the outcome in policy models on both sides of the Atlantic. Thus, according to the interpretation of Food Regime, replication and integration of the new characteristics of agricultural production

and policy has not taken place. The question at this point is, therefore, to what extent the new Food Regime which is emerging, will be based on the characteristics of the dominant model in the US or on that in the EU. Much will depend on the success of the present model for a great number of actors within each trade bloc. Some contradictory indications are emerging.

The new Food Regime will be characterized by the progress made in the application of biotechnology and questions about who benefits from this progress, starting with those who own the patents. At the moment, this development is driven by American private companies. European companies are relatively behind, which is partially caused by the negative public opinion. There is evidence, however, that in the EU efforts are made to catch up with the US based on public investments. Some national governments in the EU have taken the initiative to finance research in agri-biotech. In the Netherlands, for example, the Dutch Ministry of Economic Affairs finances with 50 million dollars, a five year plan for the development of agri-biotechnology to give the Netherlands a place among the more progressive European Member States (especially the UK) in this field. After the enlargement of the EU, these countries may encounter support for these actions in the Council. In preparation of their accession, central European countries such as Hungary, Poland, and the Czech Republic have drafted legislations similar to the EU countries. Nevertheless, there is doubt about the extent to which these countries will continue to support the European position, once they have entered the EU. Firstly, there is no pressure from consumers in these countries to ban GMOs. Secondly, leading life science companies such as Monsanto Hungary are preparing to launch GMOs on the Central European market which they claim will take place within five years (The Bulletin, 2001).

In addition to national initiatives, the European Commission has recently started a program which is based on the conviction that biotechnologies are fundamental for the transition towards a competitive knowledge-based and sustainable European economy. The Commission wishes to contribute to a development of a forward looking strategic approach to life sciences and biotechnology in Europe. To this purpose, it will present an action plan (looking ahead to 2010) for new EU biotech initiatives by the end of 2001.

While in Europe attempts are made to broaden the basis for GMO production, in the US the use of GMOs is increasingly questioned. At the regional level, several campaigns have been launched to educate farmers on the benefits and risks of GM crops, so that they are able to take into account not only the financial advantages of GMOs but also the negative side-effects on farmers. However, the growing reluctance among US farmers to use GMOs is

mostly a result of some food scandals with gentech maize StarLink, produced by Aventis. The use of StarLink was restricted to animal feed for fears of health risks (allergic reactions) by humans. The first scandal was in October 2000 when, in violation with EPA, amounts of StarLink were found in taco shells produced by Kraft Foods. In response, Kraft removed all taco shells and Aventis blocked the distribution of Aventis seeds. The US government decided to buy the StarLink harvest of 2000 for destruction, while the costs were for Aventis. In addition, Aventis developed a detector for StarLink maize which was given to the disposal of processors of maize. Total costs for Aventis were approximately \$100 million. In March of the following year another scandal with Starlink ravaged Aventis when Greenpeace detected a certain amount of it in buns made by Kellogg. All buns and StarLink were removed. However, some traces of StarLink (less than 1%) were still found in maize seed of that year which, upon a decision of the FDA, had to be removed. Aventis paid again, this time between \$15 million and \$20 million. Similar scandals have taken place outside the US, in Canada (Canola) and in Europe (GM maize from Monsanto).

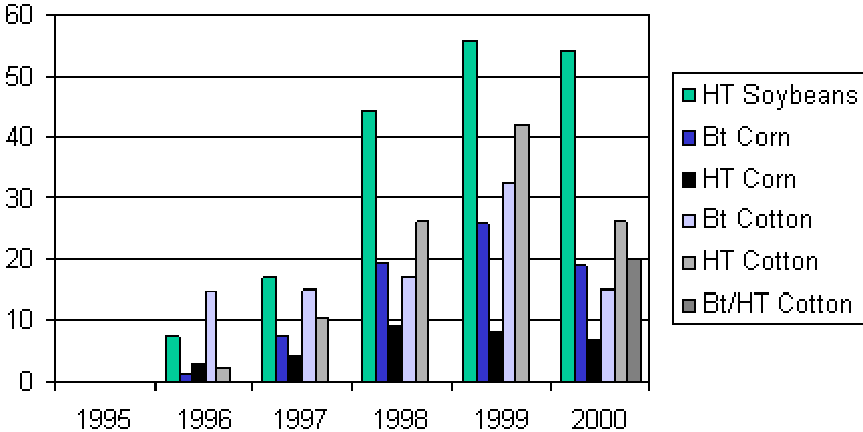
The consequences of these scandals in the US have been considerable. Apart from the financial loss for Aventis, which has announced to drop its agri-biotech division, the scandals have led to a decreasing demand for US maize abroad. For example, Japan which imports 30% of total American maize production reduced the imports in reaction to the StarLink scandals between November 2000 and February 2001 with 27% equal to 0,3 million tons less than the year before (FDS, 2001). Furthermore, the StarLink incidents have contributed to the delay in the introduction of new GMOs such as Roundup Ready wheat (Monsanto) in the US. In addition, the scandals have confronted American consumers with the negative aspects of GMOs which has affected their confidence in these goods. For example, consumer concern in wheat-producing Montana was translated into the introduction of bills in both houses to place a two-year moratorium on the introduction of GM wheat in 2001. The legislation would have established a committee to study the potential impact of GM wheat on the areas of major wheat production. Monsanto lobbied successfully to eliminate the bills. On the national level, environmental consumer groups (Center for Food Safety) and some lawyers on Capitol Hill are calling for mandatory testing and labeling of GMOs. In reaction to increasing consumer attention, in March of 2001 EPA has decided to ban the use of GM crops for animal feed unless they are safe for human consumption too (AGNET, 2001).¹¹

¹¹ Significantly, very shortly after this decision, EPA has announced in October of 2001 that, after reviewing the contentious BT corn (StarLink), it has found no scientific evidence that it poses a threat to human health or the environment. It is expected that this decision will take

More importantly, American processors of GMOs have shown increased concern about GMOs. Beside incidents such as the temporary stop in the shipping and milling operations of GM corn related to tests for StarLink traces by ConAgra Foods Inc (America’s second-largest food manufacturer) and Azteca Milling, some food processors have taken more serious steps. For example, the American Tyson Foods Inc, the world’s largest poultry producer, has stopped feeding its chickens with gene-altered corn since October 2000. This company, which has been the first food company to stop the use of StarLink corn as an animal feed, is said to have taken such precautionary measures in order to avoid consumer confusion. In addition, America’s fast food Restaurants such as McDonald’s, Burger King and Wendy have announced to use only GM-free potatoes which has an enormous impact upon American potato farmers which send around 80% of their production for processing.

Adoption of genetically modified crops

United States, 1995-2000 (percent of acres)



Source: Data from ERS/NASS surveys.

away many of the doubts of farmers and processors based on problems concerning the segregation of GMOs and non-GMOs.

The changing attitude of consumers and processing industries, and the lack of guarantees by supplying companies about the preservation of the identity of non-GMOs in fields near GMO crops (which is a problem for farmers who export a lot to countries that require non-GMO goods), has led to a decrease in the adoption of GM crops in the US (see figure below: Economic Research Service of the USDA, 2001). This is not strictly related to the scandals with StarLink as, in a poll conducted by Reuters at the annual convention of the American Farm Bureau Federation, already in January 2000, farmers announced to cut GM maize plantings with 23%, GM soyabeans by 15%, and GM cotton by 26% in view of growing consumer concern towards GMOs (Farmers Weekly, February 2000).

CONCLUSION

This article has sought to contribute to a greater understanding of transatlantic conflicts over agriculture by studying the dominant production and policy models within the US and the EU and the extent to which these models have integrated with each other. The analysis is based on the assumption that this integration (which is part of a global food regime) is strongly related to transatlantic conflicts. It has been shown that, with the further integration of the two models transatlantic conflicts over domestic farm support and trade barriers have decreased. The remaining divergences which result from different reactions to the globalisation of the actors within both blocs, form the basis of new transatlantic conflicts to emerge, inciting further changes.

New transatlantic conflicts center around food safety issues. These conflicts are strongly connected to new technologies (genetically engineering) which are widely applied in American agriculture and may form the basis of a new production model, while the EU bans the commodities (GMOs) resulting from these technologies. The present situation is similar to the start of the Second Food Regime in that the changes have started in the US and will probably be replicated by the EU. The main difference with the previous period is, however, that the cause for the restrictions in the EU, hence the cause of transatlantic conflicts, are not based on a delay in the adaptation to new developments. The collapse of the European corporatist model, which has resulted from the former wave of changes in agriculture, has had two outcomes. On the one hand, changes in European policy may take place with a greater speed. On the other hand, new actors have come to play a role in European agricultural policy making. As a result, whereas American agricultural policy has seen a victory of free trade forces which support the present introduction of new technologies, European agricultural policy has obtained a dualistic approach which on the one hand focuses on deregulation, but on the other hand

supports the integration of environmental issues with agriculture. The restriction of GMOs is a direct result of this situation.

So far, two important understandings about the emerging Food Regime have come about. Firstly, in both trade blocs the role of farmers in production and regulation will continue to lose importance and the development towards a new Food Regime will heavily depend on other actors in the food chain and in policy making. Important new actors in the US are life science companies, whereas important new actors in the EU are retailers, consumers, and environmentalists.

Transatlantic relations in the next coming years will be dominated by food safety and quality. A considerable change with previous situations is that further integration between the American and European models will not be based on the replication of the American model but will involve aspects from both the American and European model. On the one hand, the development of a type of GMOs that is safe for human health and is more environmentally friendly than conventional crops is just a matter of time and is expected to eventually lead to broad acceptance also among European consumers. On the other hand, GMOs which provide higher output will lead in the US and EU to the necessity to set aside more land in order to keep prices up, which may be supported through environmental subsidies. Moreover, organic food production will probably expand rapidly in both the US and the EU in reaction to consumers' demands for a larger choice in food.

What does this mean for transatlantic conflicts? Given the high probability that the scenario of a "mixed" new Food Regime will take place, transatlantic conflicts in the new Food Regime will probably shift to issues regarding the expansion of major American and European agri-biotech companies. Therefore, transatlantic conflicts in the new Food Regime will be less and less dominated by strictly agricultural issues and will most likely come to focus upon market access in developing countries and Intellectual Property Rights.

Marjoleine Hennis
Lecturer at Trinity College , Rome

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