

AGRICULTURE AND SUPPLY SIDE ISSUES: WHAT ARE WE PRODUCING/IMPORTING?

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The EU is the biggest global exporter and importer of food and drink, with exports worth €98 billion and imports worth €72 billion in 2015.¹ The main items imported into the EU are animal feed, exotic products, wine, sugar, tobacco, and fruit and vegetables coming mainly from Brazil, Argentina, the USA, and China. The main exports of the EU are alcoholic drinks, animal products, animal feed preparations and smoking products. The main recipient countries of EU exports are the USA, Russia, Japan, Norway, Canada and Switzerland.

As set out in Chapter 1, diet is the leading cause of the global burden attributed to obesity and noncommunicable diseases (NCDs) such as cardiovascular disease (CVD), diabetes and cancer.²⁻⁵ There has been a paradigm shift in post-World-War II diets from plain diets towards less sustainable and less healthful diets with currently people consuming too much total energy, fat, sugar, and salt, while living less physically active lives, across the world.⁶⁷

As described in the first part of this chapter, the issue of dietary choices and how these choices might lead to the development of NCDs is complex with many different factors involved.⁸⁹ One of the key factors affecting dietary choices is undoubtedly the ready availability of some foods (with choices affected by the type of food, its quality and price). Agricultural policies therefore impact on dietary choices since they influence food availability. This chapter examines in more detail the Common Agricultural Policy (CAP), which is at the centre of the agro-food system in Europe.

1. Background

The CAP was the cornerstone of the European Economic Community (EEC) established by the 1957 Treaty of Rome.¹⁰ This followed a period immediately after the Second World War when there were widespread food shortages, devastating conditions of poverty, poor housing and unemployment in Europe. In response to this, governments decided to follow the acclaimed UK war-time policies of ensuring food security and fostering agriculture and food production with a specific bias towards generating a greater supply of cheaper meat, milk, butter, fats and oils. These commodities had been shown by Corry Mann to promote the growth of stunted children and to help supply sufficient food energy for both children¹¹ and adults,¹² before and during the war.¹³ The importance of food security then became a key pillar of national security and both sides of the European 'Iron Curtain' regarded national food production as a key priority for survival.

The CAP was then introduced after an agreement between the six countries forming the former EEC, now known as European Union (EU), and had three main objectives;

1) to create a stable common market, 2) to provide affordable food to all the citizens of the six countries of EEC, and 3) to provide a better standard of living for the farmers of the EEC.¹⁰ The emphasis on the adequacy of incomes for farmers also related to the need to foster farming in rural areas, which had become relatively depopulated during the huge wartime industrial effort. So, although cheaper food and promoting farmers' incomes were somewhat contradictory, two mechanisms were put in place to achieve them.

The first mechanism concerned the target price. Each product was allocated with a target price and products of the same kind entering the market from outside these six countries were allocated a 'penalty' tariff to ensure that the agreed EEC target price would not be challenged by lower-price imported products.

The second mechanism was triggered when the target price was not achieved for specific products within the EEC. If a product's market price fell below the target-price, then the countries would purchase all the lower priced produce of the specific product.¹⁰ By removing all the below-target-price items from the supply chain, this prevented a further fall in price. New country members adopted the same agricultural policies when they joined the EU.¹⁰ In keeping with these policies, there was a huge input to research funding for agriculture with many countries subsidising not only animal production and plant research but all the detailed, practical and technical advice to farmers as well as paying part or all the costs of new farm facilities, e.g. buildings, milking facilities, sheds etc. Cereal growing for animal feeding also became a top European priority, when it was discovered that feeding sheep and cattle cereals, rather than grass, markedly increased their growth rates and milk production. Sugar beet production was also introduced because it proved easy to grow in temperate climates and had soil enhancing qualities as well as producing desirable sugar to increase food energy supply. Safeguarding the importation of sugar from Europe's overseas territories and former colonies was also seen as important. Marketing boards were also created to help the farmers sell their burgeoning production and public institutions, e.g. schools and government establishments, ensured that the food served, often for free or at subsidised prices, included an ample supply of meat, full-fat milk, butter and animal and vegetable fats.¹⁴

This Europe-wide agriculture/food policy was extraordinarily successful, with farmers becoming more prosperous, rural communities better sustained and meat, butter, milk and fats and oil production rising steadily. However, what then emerged because of these European governments' actions and the EEC's pricing and purchasing policies was a surplus of all these products. This then led to the storage by the EEC of food 'mountains', despite special measures to increase consumption and to subsidise the European export of these products at lower prices. It was also beginning to be recognised that simply linking payments to production allowed those farmers with the largest production/land to receive automatically most of the payments, leaving small-scale farmers more vulnerable.¹⁰

In Central and Eastern Europe, which had been incorporated into the Eastern Bloc in the immediate post-war years, agriculture and food priorities remained heavily influenced by the Second World War experience of semi-starvation. So it was considered that, not only was local food production a national priority for security reasons, but that meat and milk production was critical to feed the increasing

populations of the Soviet Union. Therefore, in keeping with the Communist policies of public ownership and collective work, farms were collectivised in most countries and even in countries where 85% of farms retained their individual ownership (e.g. Poland) these farmers were neglected and all government subsidies, research etc. was focused on the collective farms. Russian nutrition experts also took on board the need for animal protein to promote the growth and well-being of children and to sustain the physical capacity of adults. However, they not only provided a clear food production and pricing strategy for the whole for the Soviet Union¹⁵ but also interpreted the evidence on animal protein needs to be two to three times higher than the newer Western thinking.¹⁶ This meant that far greater cereal production was considered important for beef and milk production, but for climatic and other reasons relating to inefficient agriculture, cereal production was inadequate for the perceived needs of the Soviet Union so they were forced to buy cereals on the world market and, in practice, from the US. This led to the KGB spying to find technologies to improve cereal production, with the CIA playing a major role in predicting future world cereal prices, and the need to use precious Soviet foreign currency reserves for cereal purchases.¹⁷ These prices depended on the likely cereal production in a swathe of countries from Ukraine through southern Russia into the east, spanning the extreme southern portions of Siberia, as well as cereal production in the mid-West of the United States.

By that stage it had become evident that food was not only important for children's growth and adult's working capacity but that some ingredients in the diet could lead to the newly recognised societal problem of heart disease. It was demonstrated that saturated fat increased blood cholesterol levels and that raised blood cholesterol levels markedly increased the risk of heart disease. It was also soon recognised that the average blood cholesterol level in the population was rising steadily and saturated fat intakes had risen markedly in response to all the government measures to promote butter, milk, and fat-rich meat production. Based on these concerns, Norway introduced, in 1962, a whole series of agriculture and pricing policy measures to reduce saturated fat consumption and to increase vegetable and fruit production.¹⁸ Later communities in Kuopio, Finland, demanded action as the death rates of middle-aged men was reaching epidemic proportions. This then led to the now famous North Karelia initiative to change the community's eating patterns based on individual and community action.

The changing nature of agriculture also led to the realisation in the West (but not the Soviet Union) that, with the marked increase in mechanised farming, fewer farmers were required. So, the European Mansholt Plan was introduced in 1968 as the first reform in CAP, which provided incentives for farmers to leave their farming businesses.¹⁹ Food companies were also beginning to change their policies on witnessing the medical concern about dietary saturated fat. So, Unilever in the Netherlands developed a polyunsaturated margarine, Flora, to help people reduce their blood cholesterol levels, but there were few if any links between societal health analyses and agricultural policies. As the food surpluses continued,²⁰ individual countries took their own initiatives—in the UK, for example, the then Prime Minister declared in 1982 that a drastic change in the subsidising and nurturing of farmers was required. This approach, however, was unusual and by now the expanded European agriculture and food industries lobbied intensively. They were helped by the Mediterranean countries, where poverty and low production levels persisted and

prevalence of heart disease remained low. The massive production of excess butter, full fat milk and fatty meats meant that each industrial component of the food chain was deploying their marketing techniques, lowering their prices and using all available measures to sell their commodities and products. From the 1980s onwards, the food industry also began to apply a variety of techniques to improve the general availability and marketing of very attractive flavour-enhanced foods, snacks and drinks, helped by the food industry's collaboration with the Monell Centre in the US.¹ They also focused on the Mediterranean and low-income countries that had not 'benefitted' from all the variety of attractive high fat, sugary and salty foods available in Northern Europe and America. So, the diet in the Mediterranean countries began to change markedly²¹ and the prevalence of obesity and diabetes began to rise at the same time as efforts began to sell low fat milks and spreads, to limit the fat in meats and to promote healthy foods. In practice, however, this involved diverting the residual fat into ice cream, baked products and snacks.

The second European agriculture reform finally took place many years later, in 1992, and was initiated after international complaints expressed in the Uruguay Round of world trade talks about the way that CAP was manipulating prices and the mass availability of different food commodities.²² The changes then made included the extension of milk quotas to limit milk production, policies for set-aside land to limit the total amount of crops produced, and reductions in the level of institutional prices for cereals and beef. Farmers for the first time received direct payments independent of their production but based on land and per head of livestock owned. Additional CAP funds were also made available for programmes to assist the development of rural areas and for schemes where farmers pursued environmentally-friendly agricultural practices in return for additional payments.²³ The 1992 reforms were the first ones with an environmental element attached to them. Yet all these reforms were still being accompanied by ever-greater rates of food production, falling food prices and agricultural policies geared to benefitting the food chain producers and processors and with little regard to their health implications. Paradoxically, the availability of fruit and vegetables was restricted for many years while the EU decided to pay for the destruction of fruit and vegetable stocks to raise prices and improve financial returns to Mediterranean farmers. Such policies exacerbated the rising health problems of the European population associated with limited fruit and vegetable intakes. Yet there was already clear evidence that consumers were particularly sensitive to the price changes in vegetables and fruit and reduced their purchases when prices rose.²⁴

In 2000, further European agricultural reforms extended the 1992 measures with further reductions in institutional prices and an increase in the rural development and agro-environmental schemes.²⁵ In 2003, more reforms were agreed but mainly on specific sectors of agriculture, such as sugar (introduced in 2005) and fruit and vegetables (introduced in 2007). In 2004, 10 new Central European member states with significant agricultural industries but very poor population health joined the EU. This, combined with further international pressures for trade liberalisation, led to the introduction of the 'single farm payment'.²⁵ This was a set amount paid annually to each farm to encourage farmers to make their production decisions based on market

¹ See: http://www.monell.org/support_sponsorship/corporate_sponsorship/

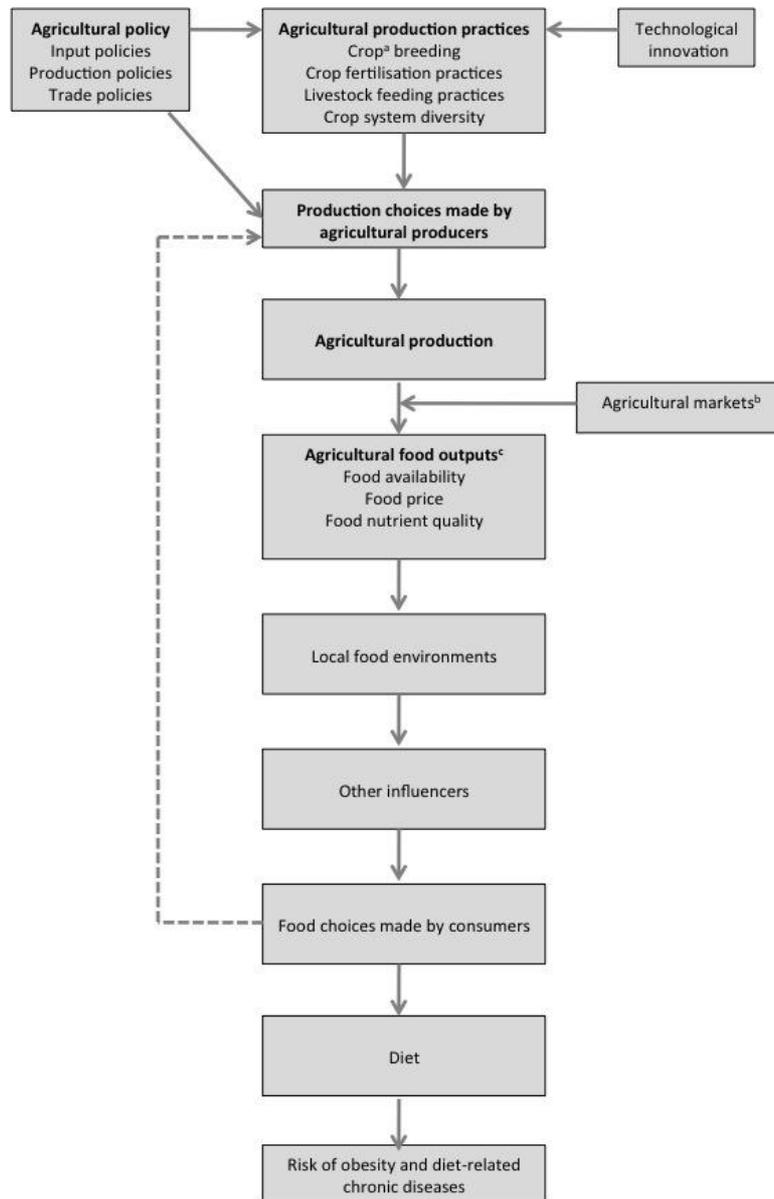
demand and production costs.²⁵ The latest CAP reform took place in 2013, focusing mainly on strengthening rural development, direct payments to farmers and encouraging environmentally friendly production of agricultural products²⁶ followed by the abolition of milk quotas on 31 March 2015.²⁷

2. The CAP, nutrition and NCDs

Throughout its lifetime, the CAP has come under heavy criticism mainly because of its significant financial cost relating to the farming industry, which is an ever-smaller component of the economic and industrial sector in each EU country. In the 1970s and 1980s, the CAP absorbed about two-thirds of the European Commission's entire annual budget, so European taxpayers were paying higher taxes than would have been the case in the absence of farm support. By setting target and intervention prices substantially above the prices prevailing on world markets, the cost of food for European consumers also rose.²⁸ CAP has also been criticised at an international level because farmers in developing nations could not compete with the import levies and with the lower price of the excess European produce exported to low and middle-income countries.

As described above, at the time of its introduction the CAP was not designed primarily to address any nutritional issues but rather to encourage a resurgence in the devastated rural economies after the Second World War. The focus on priorities for subsidies, however, did take into account original public health nutritional analyses of the need for hungry people to have more food energy, whether as fat or sugar, and for children's growth animal protein was already recognised as beneficial. The first discussions on the lack of modern nutritional considerations emerged in the early 1960s in Scandinavia. It was only in the mid 1980s, due the epidemic of heart disease in Europe since the Second World War, however, that there was general recognition in the public health community that Europe was engaged in inappropriate crop and food production proprieties created in part by the effects of CAP.^{29,30} Linking the current CAP with nutrition and specially to include the aim of preventing NCDs might be possible but the synergies between the web of CAP's effect on dietary intake and NCD development are not straightforward (Figure 28).

Figure 28 Links between Agricultural Policies, Diet and NCDs



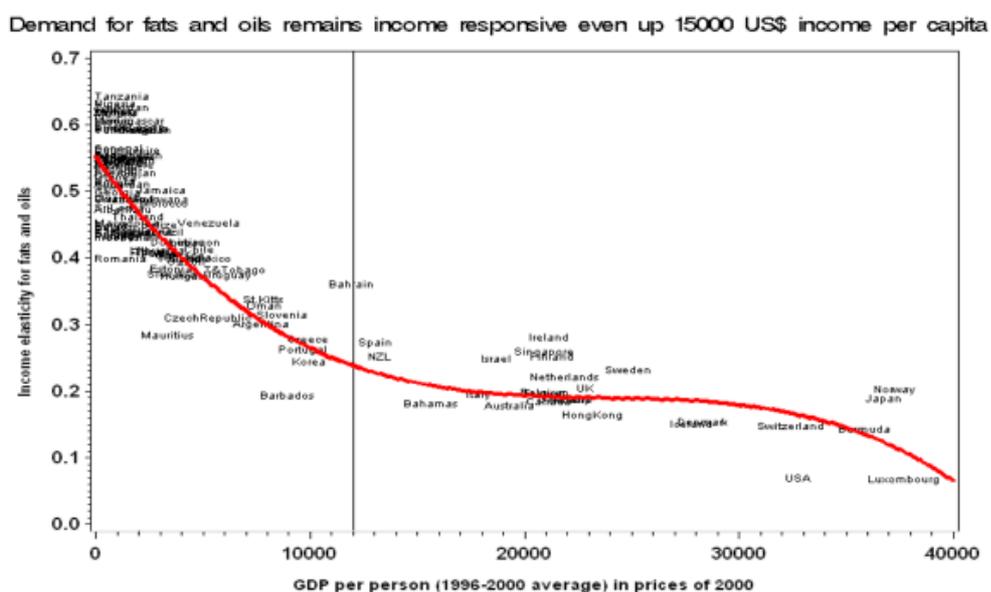
Adapted from: Hawkes, 2007³⁰

Broadly speaking, CAP can define which products are produced and promoted, with big retailers having a major influence over which products are finally going to reach consumers and at what price.³¹ Hence, there is debate about the extent to which CAP promotes unhealthy diets and NCDs.

The relative price of a health-promoting diet compared to an unhealthy diet depends on the specific context. In some situations, for example, a health-promoting diet is not more expensive than an unhealthy diet. In many cases, however, the maintenance of high prices and limitation of the availability of certain foods, especially those associated with healthful eating patterns like fruit and vegetables, may promote consumption of foods linked to CVD such as high fat, high sugar processed food.³² A

recent review and meta-analysis by Rao and colleagues revealed that healthier diets cost on average \$1.48/day (\$1.01- \$1.95) more than unhealthy dietary patterns.³³ CAP was shown to promote the production of beef and dairy products—both being sources of saturated fat³²—and therefore a driver of the huge effort in cereal production (70% of which goes into animal feeding, a use which is grossly inefficient). Yet only after 2008 was fruit and vegetable production subsidised rather than having fruit destroyed to prevent it reaching the market.³⁴ It was estimated then that approximately 5 000 CHD deaths and 2 000 stroke deaths were directly attributable to an inadequate fruit and vegetable supply.³⁵ It has been also estimated that 7 000 CHD deaths per year and 2 000 stroke deaths could be prevented if CAP removed subsidies from products rich in saturated fat like beef and milk.³⁶ On the other hand, the economist Schmidhuber reports that, due to the high food prices caused by CAP, overconsumption of fat is discouraged (Figure 29).³⁷ This is a common economic argument which has merit but neglects the vast sums of money used in subsidising the beef, sheep, pig and poultry industry as well as butter and milk production to a stage where these sectors have substantial economic and political power in Europe. Thus the consensual strategic transformation of the food chain by government subsidies over the decades has induced a food supply which is geared to selling ever more food thereby inducing obesity and diabetes with heart disease as one facet of this transformed food chain.

Figure 29 Income elasticity for fats and oils



Note: The ordinate indicates the degree to which consumers respond to changes in price of a commodity. So, the higher the elasticity the greater the change in the purchasing of that product. The abscissa specifies the group or community's income and reveals how that the poorer the community the greater the responsiveness to a price change in fats and oils.

Source: Schmidhuber, 2003³⁷

The same argument applies to sugar, another product controlled by CAP, and European sugar prices are currently being kept higher than the world sugar prices by CAP, thereby discouraging the intake of sugar or its use by industry in food products. As the Fabian Society noted³⁸ '...food commodities where the CAP kept consumer prices high is dairy and sugar. For both milk and sugar, the stimulus to production due

to high producer prices was controlled by quota limitations. Dairy quotas were removed on 1 April 2015 and sugar quotas will be removed on 1 October 2017. For both commodities, other things being equal (and in the case of both dairy product and sugar markets, there is very high price volatility), the removal of quotas will lead to a fall in prices relative to what they otherwise might have been. In the case of dairy production, academic studies have pointed to a possible fall of up to 10% in raw milk producer prices and of up to 22-23% in the case of sugar beet. The fall in milk prices is mainly due to the impact of increased EU production and exports on world market prices, as EU dairy product prices are now aligned to world market levels.’

Consumers are sensitive to food price changes, as shown in Table 7.³⁹

Table 7 Mean percentage change (95% confidence interval) in food demand for 1% increase in food price by country wealth category

Food groups	Country wealth category		
	Low income(n=1412)	Middle income (n=827)	High income (n=1124)
Fruit and vegetables	-0.72 (-0.77 to -0.66)	-0.65 (-0.71 to -0.59)	-0.53 (-0.59 to -0.48)
Meat	-0.78 (-0.83 to -0.73)	-0.72 (-0.78 to -0.66)	-0.60 (-0.66 to -0.54)
Fish	-0.80 (-0.85 to -0.74)	-0.73 (-0.79 to -0.67)	-0.61 (-0.67 to -0.55)
Dairy	-0.78 (-0.84 to -0.73)	-0.72 (-0.78 to -0.66)	-0.60 (-0.66 to -0.54)
Eggs	-0.54 (-0.67 to -0.42)	-0.48 (-0.61 to -0.35)	-0.36 (-0.49 to -0.23)
Cereals	-0.61 (-0.66 to -0.56)	-0.55 (-0.61 to -0.49)	-0.43 (-0.48 to -0.36)
Fats and oils	-0.60 (-0.65 to -0.54)	-0.54 (-0.60 to -0.47)	-0.42 (-0.48 to -0.35)
Sweets, confectionery, and sweetened beverages	-0.74 (-0.82 to -0.65)	-0.68 (-0.77 to -0.59)	-0.56 (-0.65 to -0.48)
Other	-0.95 (-1.01 to -0.90)	-0.89 (-0.95 to -0.83)	-0.77 (-0.83 to -0.71)
All food groups combined	-0.74 (-0.79 to -0.69)	-0.68 (-0.73 to -0.62)	-0.56 (-0.61 to -0.50)

*Predictions based on multiple regression model with random effects. Values of all covariates in the model are set to their mean for the purposes of predicting values, with the exception of year of data, which is set to 2008.

Source: Green et al, 2013 ³⁹

Sugar prices have already started falling from about €700 per tonne in 2012 (before the reform) to about €400 in 2015. In the study on the ‘Post-Quotas Sugar sector period’ conducted by the European Commission, it is estimated that in the next decade, EU production of sugars will increase by around 15%. This increase will also include an increase in high-fructose corn syrup (HFCS) production.⁴⁰ Hence, it is anticipated by the European Commission that Europeans citizens will be consuming more sugar in the coming decade and it will be more economically viable for food companies to incorporate more sugar or HFCS in their products.⁴¹

Diets are like living organisms that keep evolving over time, being influenced by many factors with complex interactions between household income, food prices (which will affect the availability and affordability of healthy foods), and beliefs, cultural traditions, as well as geographical, environmental, social and economic factors and individual preferences. These all interact in a complex manner to shape individual dietary patterns. Therefore, promoting a healthy food environment, including food systems that promote a diversified, balanced and healthy diet, requires multipronged involvement across multiple sectors and stakeholders. Promotion of meat, milk butter etc. by European governments over many decades, through multiple actions, has proven to be highly effective in changing the whole dietary pattern of the

European continent. Many branches of government and the public and private sectors now need, therefore, to become involved to rectify the mistakes of the past.

The availability of low-cost and safe food remains an essential priority for a large share of the population, now that income inequality has increased so markedly in Europe.⁴² However, the quality of food, production methods and their impact on the environment, animal welfare, biotechnology, and fair-trade are also now seen as priorities. The UN Sustainable Development Goals (Agenda 2030)⁴³ require, for example, that forests and national parks are maintained and protected, biodiversity preserved and the ecological richness of the countryside defended in a sustainable manner. An adequate response to these objectives and concerns is not an easy task as current preferences vary widely and a balance of different options may differ from country to country within Europe. It is also important to bear in mind the considerable changes in climate and the capacity for different food production in various parts of Europe (See section 3.4 later in this chapter).

The current CAP is the outcome of a long historical process and an accumulation of policy devices in response to emerging problems, but focused mostly around markets. Hitherto, despite all the reforms, CAP is still disconnected from nutrition and public health policies and often contradicts other EU policies that deal with competition⁴⁴ and consumer protection.³² CAP will distribute more than €150 billion across the EU countries between 2017 and 2020 to support the production of mostly livestock and industrial crops. This is clearly contrary to the new demands for a sustainable planet and public health.

Governments have a central role in creating a healthy food system that enables people to live in a healthful food environment and adopt and maintain healthful dietary practices. A radical change in food consumption and production in Europe is unavoidable if we are going to conform with the UN Agenda 2030⁴³ acceptance of the need for agro-food systems to become more sustainable and resilient and now newly aligned with our current understanding of the needs of public health.

Governments' policy responses

1. Nutrition Taxation

Nutrition taxation has been used as a policy tool for increasing the price of 'unhealthy' products to discourage the purchase and consumption⁴⁵ (See Chapter 4). Even though, the political success of nutrition taxation varies, with sugar quotas expected to be removed in 2017, introducing a European-wide taxation on the sugar content as a commodity rather than a retail tax on processed foods and drinks could help prevent the anticipated increase in sugar consumption.

2. Investments to improve the food supply

Competitive supply chains require both investment and appropriate government policies. Improving rural infrastructure and market access while developing and conserving natural resources is key to a successful food supply chain. After the latest CAP reform, there has been some consideration about rural development and conservation, with six priorities identified in the policy planned for 2014-2020⁴⁶ but there is a lot of room for improvement. Well-functioning input and output markets

would also reduce domestic food price volatility and offer more healthy and affordable food to all citizens.

3. *Aligning of public health policies with agriculture and food policies or other trade negotiations at the EU level—Improving collaboration between the public and private sectors*

There has been insufficient consideration both from the public health and agricultural policy areas, to date, of the significance of each other in shaping population health.⁴⁴ Public health policymakers need to collaborate with agriculture, food and trade policymakers to ensure that all citizens have access to nutritious and affordable food. More predictability and transparency, both at government and private sector levels, should be pursued through the sharing of market information and various arrangements for public–private partnerships. Preparations of policy interventions to be introduced in subsequent periods of time should be made public and opportunities for anti-competitive behaviour and corruption in the supply chain should be reduced or eliminated.

Farmers’ and consumers’ responses

1. *Creation of shorter supply chains/ Food price reductions*

The current food system encourages the retail sector to concentrate its bargaining power and primary producers now have only a subordinate economic role. Thus, on a European basis, farmers received on average 31% of the retail price in 1995 but this proportion of retail prices fell to 21% by 2011 although since then it has risen somewhat.⁴⁷ By reducing/eliminating CAP, farmers would be encouraged to create shorter supply chains for their products as that would give them higher prices for local purchases and thereby more bargaining power. This would help with consumers having access to fresh, local, seasonal produce at lower prices because the extra marketing costs etc. of the retailers would be limited and farmers could obtain higher prices for their produce. Food wastage could also be reduced with the use of a shorter supply chain. By avoiding large multi-national retailers, consumers’ money spent on local food and local retailers would stay in the community. Overall food prices could be reduced which will have a great impact on poorer consumers that are also mostly affected by NCDs. Society would also benefit from not having to fund food support programmes for the poorer and vulnerable sectors of the population.

2. *Alignment of sustainable food production with sustainable dietary guidelines across Europe*

There is a need to encourage consumers to demand healthful sustainable foods and meals. This could be achieved by; 1) promoting consumer awareness of a healthful sustainable diet through the sustainable dietary guidelines, 2) increasing demand for producers to grow and sell fresh seasonal fruits and vegetables more directly to the consumer.

As has been seen, food systems are highly complex and driven by many different factors; economic, cultural, and environmental. Exploring and understanding these factors better and their interactions help to improve policies related to food systems and food consumption. We need to achieve sustainable and healthful diets for every citizen without compromising the living standards of the farming community, while

minimising the environmental impact of food production and consumption, so that they become sustainable. CAP undoubtedly has shaped the current food environment and dietary patterns both in the countries of the European Union and internationally. However, simply eliminating or completely removing CAP will not solve all the problems faced by farmers, consumers and countries when it comes to nutrition. A collective effort from all different stakeholders is required while implementing robust systems for monitoring compliance of any policies.

In conclusion, CVD can be prevented by modifying major CVD risk factors. CAP along with other policies has a strong role in creating an environment conducive of positive dietary changes, one of the major risk factors for developing CVD. There is a need to thoroughly assess the nutrition and health benefits of substantially reforming or abolishing the CAP, compared to the current—or a minimally modified—CAP. A radical rethink of the CAP, for example, could contribute greatly to the promotion of foods such as fruit and vegetables, known to be protective against CVD and other NCDs. In order to maximise the benefits from changes in CAP, those should be accompanied by other relevant public health policies and food industry and retailers' policies.

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