



Study on the mandatory indication of country of origin or place of provenance of unprocessed foods, single ingredient products and ingredients that represent more than 50% of a food

Executive Summary

Prepared by Food Chain Evaluation Consortium for the Directorate General for Health and Food safety

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Consulting

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A graphic of three stylized green plants with round leaves growing from a green base.

A blue stylized 'V' logo.
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Submitted by:

Food Chain Evaluation Consortium (FCEC)

*Civic Consulting - Agra CEAS Consulting -
Arcadia International - Van Dijk Management Consultants*

Project leader: Agra CEAS Consulting

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Executive Summary

S.1 Background and scope of the study

This study by the Food Chain Evaluation Consortium (FCEC) for DG SANCO under the leadership of Agra CEAS Consulting aims to provide evidence for the Commission to draft a report on the mandatory indication of country of origin, or place of provenance, of unprocessed foods, single ingredient products and ingredients that represent more than 50% of a food. The Commission must submit its report to the European Parliament and the Council by 13 December 2014¹. According to the Terms of Reference (ToR), the purpose of the study is to investigate:

- a. the need for consumers to be informed on the origin of foods falling within the scope of the three categories covered by the study; and,
- b. the operational feasibility of providing the mandatory indication of the country of origin or place of provenance, and an analysis of the costs and benefits of the introduction of such measures including the impact on operators along the food supply chain (additional costs, competitiveness), and implications for the internal market and international trade.

In terms of the first point, the aim is to explore potential market failures that may currently be in place. These may be due, for example, to a disparity of information between producers and consumers which works to the detriment of consumers, hence the need to investigate consumer attitudes towards origin labelling.

In terms of the second point, this study outlines the main issues with regard to the impact which would need to be explored further in a more detailed impact assessment. This study is **not** meant to provide an impact assessment as such.

The scope of the study covers pre-packed foods sold to the final consumer (including catering), except foods for which vertical legislation already exists²; as such, it extends over a large and diverse range of products. A broad classification of the three categories of food products has been followed for the purposes of the analysis³.

The FCEC data collection strategy has involved the use of a wide range of data collection tools including literature review; structured interviews with consumer organisations, Member State (MS) Competent Authorities (CAs) and relevant food business stakeholders (i.e. EU food supply chain representatives including processors, farmers and retailers; hereinafter referred to as Food Business

¹ Regulation (EU) No 1169/2011 of 25 October 2011 on the provision of food information to consumers (the 'FIC Regulation') introduced a set of provisions on origin labelling of foods; it also required the Commission to draft reports to assess the feasibility of mandatory origin labelling for several food categories (Art. 26(5)).

² Product specific origin labelling rules currently exist for: honey, fresh fruit and vegetables, fish, unprocessed beef and beef products, olive oil, wine, eggs, imported poultry and spirit drinks.

³ The study differentiates - to the extent this is relevant and possible - between the three categories of foods, as each category includes a diverse range of products, as follows:

- **Cat I: Unprocessed foods** is defined by reference to Article 2(1)n of Regulation (EC) No 853/2004 on the hygiene of foodstuffs. Example, covered by case studies: flour, rice, cut green vegetable salads);
- **Cat II: Single ingredient products.** As there is no definition in the EU legislation, for the purposes of this study, a common sense approach of the term has been followed for this category, i.e. what could be commonly considered to be single ingredient products, particularly by consumers. Examples, covered by case studies: sugar, vegetable oils other than olive oil, frozen potato fries;
- **Cat III: Ingredients that represent > 50% of a food** fall within the scope of what is defined in Article 2(2)q of the FIC Regulation as a "*primary ingredient*" with respect to the quantitative criterion of that definition. Examples, covered by case studies: fruit juices, tomato passata, flour in bread (bakery sector).

Operators - FBOs); a consumer survey⁴; and, an EEN SME panel hosted by DG Enterprise and Industry to provide evidence on specific impacts for SMEs. The results and main findings of the study were discussed by theme and endorsed by the Focus Group on this study, and comments have been incorporated throughout the Report as applicable.

S.2 Key findings of the study per Theme

Theme 1: Consumers' attitudes towards geographical origin labelling

The analysis covers consumer interest, understanding, awareness, and willingness to pay (WTP) in relation to information on the geographical origin of various food products within the scope of the study. Despite the caveats of making detailed comparisons between the various studies/surveys⁵, general conclusions can be drawn as follows.

From the reviewed evidence base⁶, it can be concluded that **consumer interest in origin labelling is strong** and that consumer understanding of origin requires significant detail in terms of the geographical level provided, generally referring to the country of farming and the country of processing.

Amongst the 11 food products covered by the 2014 FCEC consumer survey, interest in origin labelling was highest for pre-packed fresh cut salads, bread, fruit juices, frozen vegetables and vegetable oils: the survey results indicate that more than 70% of consumer respondents find it important that origin is labelled for these top five products. However, **no particular pattern emerges from these results for each of the three categories examined**. Origin was defined as being the place where the food product was produced and/or processed.

Nonetheless, existing studies indicate price and quality/sensory aspects to be the most important factors affecting consumer choice, well ahead of the origin of food: according to the evidence base, **origin of food products is the fourth or fifth** (depending on the study) **most important** aspect influencing food purchase decisions, generally listed **after taste, best-before/use-by dates, appearance, and price**.

Furthermore, despite the existence of a **large number of voluntary labelling schemes** the available evidence⁷ suggests that **consumer awareness of these schemes (including PDO/PGI/TSG) remains relatively low** across the EU-28 and particularly low in some MS.

The **reasons behind consumer interest in origin information** were explored in a number of studies (including: the FCEC 2014 consumer survey; and, BEUC's 2013 consumer research) and **quality and food safety issues** are key. The FCEC 2014 consumer survey also highlighted that for a large proportion of EU consumers (42.8%), origin labelling would be used **to favour national or local production** over other food origins. The available evidence therefore suggests that consumer attitudes to origin labelling are more generally connected to their overall trust and confidence in the food industry and the supply chain more generally. However, the importance of this issue was to some extent affected by the 2013 horsemeat scandal, although geographical origin is unconnected to this particular fraud case.

⁴ The FCEC consumer survey was carried out for the purposes of this study in April-May 2014 and involved a total sample of 5,250 in 15 MS (the selected MS account for 88% of the total EU28 population).

⁵ The various existing consumer surveys are using a variable number/range of factors to gather consumers' answers on this point, as well as different methodologies (notable, prompted or unprompted questions), therefore results on the ranking of each factor in the various surveys are not always directly comparable.

⁶ Including existing consumer research and literature, in particular BEUC's 2013 consumer survey, the 2013 DG SANCO study on voluntary food labelling, the FCEC consumer surveys (2013 and 2014) and information provided as part of the FCEC consultation process with MS CAs, food business operators and consumers.

⁷ Including Eurobarometer 389 and 410, and the 2013 DG SANCO study on voluntary food labelling.

While those consumers that are interested in origin labelling perceive a strong link between the origin of food and food safety, quality and compliance with other standards (e.g. animal welfare) and support of local/domestic economies and environmental impacts ('food miles'), there is concern that this is actually a misperception. Origin labelling does not actually convey this information (although there are some exceptions) and using origin labelling in this way is misleading and will not improve consumer information. For food safety and other EU quality standards in particular, the perception that there is a difference between food produced in different Member States undermines the strong safety/quality framework established in EU law.

A common criticism of existing consumer research is the lack of evidence on consumer willingness to pay (WTP). This is confirmed by the fact that most studies emphasise that sensory aspects and price are significantly more important factors influencing consumers' food purchase decisions than geographical origin. **WTP is a highly complex issue**, which can be addressed through different methodologies/models of consumer research and results tend to vary substantially between products. These two factors mean that results of the various studies are not directly comparable.

Where results exist (including: 2013 SANCO study on voluntary food labels; FCEC 2013 consumer survey; and some MS/sector specific studies) they point to the **generally low level of WTP**. The FCEC 2014 consumer survey addressed WTP across the diverse range of products covered by the present study on the basis of a Discrete Choice Model (DCM) approach. Results indicate that consumers are largely willing to pay more for origin information. Nonetheless, this reflects a declared or expressed interest in origin information rather than a confirmed purchase choice, i.e. consumers may not actually pay more if confronted by origin information and price increases. On average, 22% of EU consumers actually selected the *status quo* option ('no information and no price increase') in this survey, although there are variations between products and MS.

Other evidence that consumer WTP for additional origin information for food is relatively weak is the fact that **voluntary schemes remain confined to particular MS and product groups**. It is argued that if consumers were willing to pay more for additional origin information, there would have been a bigger proliferation of such schemes for commercial gain but this has not been the case up to now. Moreover, analysis of the uptake of such schemes demonstrates that a key constraining factor for consumers is the fact that these products are sold at a price premium. The extent to which origin labelling schemes currently exist for the products covered by this study is explored in Theme 2.

The contrasting findings of Theme 1 point to a **'paradox' in consumer attitudes**, in particular in terms of the stated strong interest in origin labelling versus actual purchasing behaviour.

Our findings on consumer attitudes to origin labelling apply across the range of products covered by this study. Given the fact that each of the three categories includes a diverse range of products and levels of processing, no further conclusions can be drawn that are specific to each category. The only additional observation for Cat III products (ingredients that represent more than 50%), is the complexity of origin labelling for some products, in particular whether the origin of an ingredient is the relevant information for consumers when this is not the characteristic ingredient and of 'borderline' cases with ingredients, otherwise potentially considered as characteristic by consumers, that are present at just below 50%.

As an overall conclusion which was confirmed by the Focus Group discussion, there are **differences in consumer interest and approaches to origin labelling between Member States and between products**. Consumer interest is also related to the extent to which voluntary origin labelling occurs in MS and products and levels of awareness of such schemes. This suggests that a **harmonised horizontal approach across products and Member States may not be appropriate**.

Theme 2: Characteristics of the supply and processing chain

Even though no specific sourcing practice characterises the EU food and drink supply chain as a whole, the FCEC collection of data and evidence reveals that in most of the EU food and drinks

sectors, **manufacturers tend mainly to procure primary ingredients and raw materials from multiple sources**, whether EU only or EU/non-EU or non-EU only. Generally, food supply chain stakeholders indicated that, excluding PDO/PGI products and some niche products, single sourcing practices are limited, if not negligible. In order to maximise efficiency, the industrial production of food and drinks products requires an adequate volume of raw materials from different suppliers which are able to ensure desired quality regardless the origin of these raw materials. This is particularly the case for ingredients that are bulk commodities⁸ with standardised quality parameters. **FBOs using multiple supply sources also tend to change their mix of suppliers frequently.**

Most of the supply chain stakeholders emphasised that the flexibility offered by multiple sourcing practices is essential for companies operating in the EU food and drink sectors in order to respond quickly to any factor that may threaten the supply of raw materials⁹; neither multiple sourcing nor the switch in the mix of suppliers has a bearing on product quality or safety and, therefore – in their view – on product labelling. Thus, the **business reality of the EU food and drinks supply chain is that the various stages of production often take place in different MS** and there is significant trade of raw materials among the MS and with third countries. Typically, FBOs further down the chain are not informed about the origin of ingredients by suppliers, who in turn usually rely on multiple sources. Furthermore, in some specific product sectors e.g. flour, rice, pasta, the EU does not produce raw material in sufficient quantities and therefore is forced to rely on a mix of EU and non-EU sources.

The complexity of the various sectors and of their sourcing practices has significant implications in terms of the extent to which they currently practice voluntary origin labelling (VCOOL), which is also linked to traceability issues. The collected evidence¹⁰ indicates, generally across the EU, a **low presence of VCOOL in most sectors covered by the scope of this study**; where VCOOL occurs, it tends to be in the **high value segment of the food and drinks market**. Nonetheless, there appears to be a growing proliferation of private schemes, i.e. developed by producers or retailers, regarding the origin of food products. Although the specifications and conditions of the various schemes tend to be different, generally ‘origin’ refers to the place of processing of the ingredient and/or final product, the ‘know-how’ or ‘recipe’ and, less so to the provenance of the agricultural raw material.

VCOOL tends to occur where a) there is significant consumer interest; and b) traceability to the indicated level of origin is feasible and can be ensured at a reasonable cost. Our broad consultation with food supply chain stakeholders revealed that their demand and need for origin information varies greatly, largely depending on the type of products. In general terms, unless the

⁸ According to the results of the FCEC FBO survey, nearly 60% of the sector concerns mostly standard quality, commodity ‘bulk’ trading products with the remaining 35-40% being mostly high value products. In practice, every product sector has a combination of these two market segments.

⁹ Currently, food business operators’ (FBOs) sourcing practices reflect a procurement strategy that provides the flexibility to source raw material amongst a range of available geographical origins to ensure the required volumes at competitive prices and the appropriate quality specifications. Sourcing strategies are dependent on a wide range of external factors (i.e. factors beyond FBOs’ own control) that influence the availability, price and quality of raw materials, such as seasonality of supplies, weather, phytosanitary conditions, and the impact of those on yields, microbiological/safety issues, and changes in the availability of growing areas/regions (which in third countries can also depend on policy reforms and macro-economic/political instability). Furthermore, FBO sourcing strategies are adapted to the type of ingredients, country specificity and company size.

¹⁰ This study covers only schemes developed and approved at national or concerted industry level. It intends to provide an overview of the most commonly found current voluntary origin labelling practices. As such, it does not provide a systematic or exhaustive list of ad hoc, sometimes uncertified or with no further information provided, existing initiatives of individual actors involved in the food production and distribution chain across the EU28. Voluntary origin labelling is understood within the meaning of Article 26(3); for the purposes of this study it is assumed to refer to explicit indication of origin, such as ‘*made in (country)*’, ‘*products of (country)*’ or ‘*produced with (country) ingredient/s*’. The difficulty of ascertaining what is a voluntary indication/claim as such is noted, for which the implementing rules of Article 26(3) would provide further guidance.

above two conditions are met, there is currently very limited demand from food and drinks processors for information on the origin/provenance of ingredients.

Traceability is currently set up only ‘one step back - one step forward’ which according to the General Food Law principles (Regulation (EC) No 178/2002) is the necessary and sufficient level for food safety purposes. Furthermore, the ‘one step back - one step forward’ provides information at the level of the immediate supplier and subsequent recipient, not at the level of the product’s geographical origin. As such, existing traceability systems do not gather all the product information that has accumulated through the supply chain (“*cumulative traceability*”), nor the geographical origin information which would be required for origin labelling purposes¹¹. **The more detailed the origin labelling** (e.g. options/modalities requiring information on the country/region of harvest of the agricultural raw material), **the more extensive the supply chain adaptations required**. For each of the options/modalities, the structure of the supply chain will determine the nature and extent of impacts in terms of ensuring traceability for the various products. As a general principle, **the more complex the supply chain and the more advanced the level of processing** (i.e. passing through several stages in the production process), **the more difficult traceability becomes** for the purposes of origin labelling. One of the critical factors determining the extent of the impacts for FBOs of the potential options/modalities for indicating the origin is the nature of their production processes, i.e. whether it is **batch** or **continuous**; the food industry is characterised by a combination of these two basic production models.

In the case of bulk commodities with continuous production processes and extensive blending (e.g. flour, vegetable oils, sugar), ensuring traceability for origin labelling purposes would involve re-designing the production process to ensure segregation by origin. In most cases, **the segregation required is in addition to segregation for quality reasons**, therefore increasing the complication and multiplication of storage and production adaptations needed. These challenges are further amplified for more complex products, in particular multi-ingredient and further processed foods with longer supply chains, for which origin labelling becomes more complex and burdensome.

The conclusions reached under Theme 2 are independent of the product category, and no specific conclusions can be drawn for each of the three categories covered by this study. *A priori*, unprocessed or single ingredient products would be expected to face fewer challenges to ensure origin traceability than ingredients representing >50% of a product, but the results of the analysis indicate that this depends on the product and the situation varies on a case-by-case basis. For example, the increased complexity of origin labelling for bulk commodities with continuous production processes and extensive blending transcends the three categories examined by the study: e.g. flour (Cat I; ingredient in Cat III), vegetable oils and sugar (Cat II; ingredient in Cat III).

Theme 3: Impact of the potential options/modalities of mandatory origin labelling

A range of options and modalities were assessed, including the ‘*no policy change*’ option.

Options and modalities

Options on geographical level of origin labelling based on:

1. *i) EU/non-EU origin or ii) EU/third country;*
2. *Member State or third country;*
3. *Other geographical entities as place of provenance (region).*

Modalities considered for each of the 3 above options:

- a. *Place of the last substantial transformation of the product (i.e. as determined in accordance with the EU Customs Code);*

¹¹ Less than a third of the sectors/FBOs that responded to the FCEC FBO survey indicated that they practice traceability beyond ‘one step back - one step forward’, mostly in relation to existing voluntary quality assurance schemes; over three quarters (78%) of the sectors/FBOs indicated that the current traceability system is not suitable for origin labelling purposes and that significant adaptation or a total change of the system is needed.

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- b. Place where the main ingredient was harvested;
c. Both of the above.

According to the majority of consulted MS CAs and FBOs (across the food supply chain), ensuring the effective implementation of voluntary origin labelling rules under Article 26(3) of Regulation (EU) No 1169/2011 would provide a sufficient and satisfactory solution for responding to EU consumer calls for geographical origin labelling for the three categories of food covered by the study. Moreover, most of the MS CAs and food supply chain stakeholders are against the introduction of mandatory rules on a horizontal basis for the three categories, due to the diversity of products potentially covered and the lack of common understanding for the ‘single ingredient’ category. It was therefore generally considered **more appropriate to determine whether mandatory rules need to be introduced on a case-by-case basis**, i.e. for particular products / product sectors, as is the case with other existing vertical legislation in this field (e.g. olive oil, honey, fresh meat, etc.).

Article 26(3) is therefore considered as a partially or entirely satisfactory solution by 15 MS CAs (out of the 24 MS CAs that responded to the consultation), on condition that implementing rules for voluntary origin labelling are clear and meaningful to consumers and that costs of implementation are taken into consideration in all cases¹².

In terms of the potential options/modalities, both MS CAs and FBOs generally indicated that **the higher the level of processing and sector complexity** (particularly for products with multiple sourcing practices and continuous production and blending processes), **the lower the level of detail that it is feasible to provide** on the origin/provenance of foods, with Option 3 considered to be not feasible¹³.

On the basis of evidence collected during the consultation with **FBOs**, the following conclusions can be drawn on the **technical feasibility** of the options and related modalities:

1. **Option 1 is always considered more feasible** (or at least less challenging) than Option 2. However, all of the consulted stakeholders along the food supply chain pointed out that in the case of continuous production process and blending of EU / non EU ingredients, mandatory origin labelling even under Option 1 would pose serious operational challenges and require radical adaptations.
2. **Generally, mostly modality ‘a’** (origin as determined in accordance with the EU Customs Code - mainly corresponding to the country of the last substantial transformation) **under Option 1 is considered technically more feasible** by FBOs.

The main reasons why some **options/modalities** are considered **not feasible relate to current business practices**, in particular: incompatible sourcing patterns and practices (multiple sourcing, frequent changes, extensive blending from early on in the supply chain in some sectors); need to switch to smaller production batches and/or to interrupt continuous phases of the production process in order to achieve segregation by origin within the plants; and, systematic adaptation of labelling/packaging to changes in the origin(s) of food ingredients. The most crucial elements are the need to perform very significant adaptations in the production processes and sourcing practices (both

¹² On the other hand: as implementing rules for Article 26(3) are not known yet, seven MS CAs could not assess the necessity to introduce origin labelling rules on a mandatory basis, while this also depends on the products; furthermore, for two MS CAs Article 26(3) is not sufficient/satisfactory, as it only covers the primary ingredient and could be difficult to establish this for certain categories of multi-ingredient foods, while there could still be a significant gap where voluntary schemes are not widespread or do not exist.

¹³ **Option 3** (label indicating other geographical entities as place of provenance [*region*]) was generally **considered by both MS CAs and FBOs to be not feasible**, for the following reasons: 1. there is no universally accepted definition of ‘*region*’; 2. traceability is more complicated than in the other options and is even considered not feasible in some cases; and, 3. there is potential for overlap/confusion with existing EU quality schemes (PDO/PGIs) that could undermine the added value of these schemes.

for suppliers of raw material and for processors of the final product), in order to ensure traceability for origin labelling purposes.

In terms of implementing those **options/modalities considered technically feasible**, the **costs of the required adaptations are a key concern**. By and large, the consultation of FBOs has revealed **two main scenarios** that would emerge, so as **to achieve full (cumulative) traceability along the supply chain** for the purposes of origin labelling¹⁴:

- A. In scenario A (adaptations in sourcing practices), there would be a loss of flexibility in sourcing with implications in terms of the availability, quality and prices at which raw materials can be obtained. This is one element of the estimated operational costs.
- B. In scenario B (adaptations in the production process), there would be:
 - i. Additional costs for investment in duplicating/extending production capacity, e.g. in silos, storage and new production lines. The costs of this scenario are particularly high, to the point that it is considered not feasible from an economic point of view (and in many cases not feasible from a technical point of view).
 - ii. Where possible, instead of undertaking such an investment, FBOs would opt to convert to batch production, or shift to smaller batches. In this case, there would be efficiency losses resulting from the discontinuation of the previous (continuous or larger batch) production process model due to the required disruptions when switching between origins. In addition, there would be cleaning costs between batches (to avoid origin cross-contamination), and additional logistics/stock management/waste costs; these costs, which are less substantial than efficiency losses, depending also on the tolerance level that would eventually need to be set, are another element of the estimated operational costs.

The evidence collected on **the potential additional operational costs**¹⁵ that would emerge from the above scenarios is **very heterogeneous between products / product sectors, MS and individual FBOs**, due to the diversity of the sectors and situations that can prevail. Even though caution is required in extrapolating and drawing general conclusions¹⁶, the following overall patterns emerge:

- **For each option/modality, the extent of additional costs can vary considerably**, and will depend on the specific operational situation prevailing for each FBO at the time of the potential introduction of the rules, therefore the adaptations that would be considered most feasible to pursue. This will depend on the current features of the particular supply chain, as determined by the factors highlighted in Theme 2, i.e. including sourcing practices, the production model (whether continuous or batch), the degree of vertical integration, the presence of SMEs and scale of operations, the competitive structure and resulting bargaining power along the supply chain, and the current status of traceability systems and practices. Thus, plant-level or MS-level estimates can differ significantly. For this reason, in most cases, no EU-average level estimates could be provided in the present analysis.

¹⁴ In both scenarios, there would be additional labelling/packaging costs, administrative costs and burden, and further impacts in terms of competitiveness, internal market, international trade and environmental issues.

¹⁵ The specific aspects considered in the study were as follows: adaptation of sourcing practices and possible changes in the mix of suppliers; adaptation of production process of the final food product; adaptation of packaging and labels/labelling process; adaptation of marketing practices of the final product; adaptation/implementation of traceability systems; implementation of additional internal controls required to ensure compliance with mandatory origin labelling rules; any other possible aspects specified by FBOs.

¹⁶ Despite our attempts to harmonise the data collection and the scenarios/assumptions followed in the analysis of the options/modalities, this is inevitably subject to the specificities and data availability in each sector. This makes it difficult to carry out a systematic analysis of the data and not possible to compare quantitative estimates, as they refer to specific product sectors and assumptions.

- From the case studies conducted under the study it can be concluded that **adapting the structure of the supply chain** (such as: simplifying sourcing practices, reducing batch sizes, reducing intermediaries, increasing scale, repositioning product range) is **more cost effective than investing** in the adjustments that would be required in the production process to ensure for example complete segregation of the supply chain under current sourcing practices.
- The **most impacted cost items** have been identified by food supply chain stakeholders to be as follows: adaptation of sourcing practices and possible changes in the mix of suppliers; adaptation of production process of the final product; and, adaptation of packaging and labels. Traceability costs could not be distinguished as such; as to ensure full traceability would require the above adaptations, **traceability costs are embedded in the costs related to adaptation of sourcing practices/production process** in particular.
- Bearing in mind the above issues, the **additional costs under Option 1 are generally lower**, or much lower, **than under Option 2**. Similarly, **additional costs under modality ‘a’ are generally lower**, or much lower, **than under modality ‘b’**.
- **In principle**, costs would likely be mitigated if rules allowed for the labelling of ‘EU and non EU’ (Option 1) or several countries (e.g. a group of MS in Option 2). The extent to which labelling a group of MS would enable the mitigation of costs depends on the specific operational situation of FBOs, notably on their sourcing practices. Similarly to the other options examined, the extent of **additional costs can vary considerably** depending on the sector / plant. There were concerns that these alternative options could mislead consumers if not all labelled countries are always involved in production, leading to potential consumer mistrust. Moreover, the added value to consumers was questioned in this case.
- With all due caveats relating to the limited comparability of data, the scale of impacts can be distinguished between the two broad scenarios of required adaptations (A and B) as follows:
 - a. **A scenario where the adaptations pertain to duplicating/expanding the production process** (scenario B.i): in particular, for ‘bulk’ commodities with continuous production process, and extensive blending of EU/non-EU sources (e.g. sugar, vegetable oils, flour). In these cases, the required investment costs - even under Option 1 - are too high for the scenario to be feasible in economic terms, while they are often also not feasible in technical terms (e.g. planning permission not possible for plants located in urban zones).
 - b. **A scenario where feasible adaptations of the existing production process can be made** (scenarios A and B.ii/iii). **Additional costs under Option 1 range from negligible** - where there is no mix of EU and non EU origins (e.g. tomato passata; pre-packed cut green salads; some products in the rice sector) - **up to +30% of production costs**, where there is a mix of EU and non EU origins. **Additional costs under Option 2 range from +15% to +>35% of production costs**. These costs are specific to the production of the final products, and are – at least partly - in addition to the costs likely to be incurred at the earlier stages of the supply chain (where the latter were not the place of the last processing of the final product).
- In most cases (i.e. under the various options/modalities and for the range of products/product sectors), the **additional costs exceed the current levels of profitability** as the consulted sectors indicated that operating margins are generally tight (i.e. <5%).

Even though it is difficult to identify clear trends, in the event that rules need to be introduced, the **preferred policy options/modalities of MS CAs** are as follows:

- Option 2 (label indicating the MS or third country) is considered more relevant in some cases for consumers than Option 1 (label indicating EU/non-EU origin or EU/third country), This depends on products: Option 2 was supported by 13 MS CAs, and Option 1 by 8 MS CAs.

- Those supporting Option 1 indicated that, since all standards in the EU should be applied in the same way, an "EU / non EU" indication would indicate a high level of quality and safety for all food, particularly for ingredients that represent more than 50% of processed multi-ingredient foods, which is more important for consumers than their origin.
- For most of the MS CAs that supported Option 2 (and Option 3), the appropriateness of modality 'a' or 'b' would depend on individual products concerned and can only be established on a case-by-case basis. Generally, if food products are processed: mostly modality 'a'; if unprocessed: mostly modality 'b'.
- Some MS questioned the relevance of origin information for certain products as established under the Community Customs Code. A food product's last, substantial, economically justified processing or working in some cases also includes packaging, while in other cases it may not include processing as this might be understood by consumers (e.g. sugar refining is not considered as substantial transformation).

A key concern of MS CAs and FBOs remains the **feasibility and effectiveness of enforcement based on paper documentation**, as there are no other methods to control origin of food products. In third countries, this would be very hard to enforce. Within the EU, in the context of constrained budgets allocated to official controls, the need to prioritise to maintain focus on food safety would jeopardise the enforcement of any new rules. **The complexity of enforcement and lack of effective controls would increase the risk both of genuine errors and potential fraud.**

In terms of the **additional administrative costs and burden**¹⁷, the general observation is that mandatory origin labelling would lead to an increase in costs; the greater the level of detail the higher the cost. Additional costs of controls for the three categories covered by the present study are expected to be higher than previous estimates of such costs in the case of meat, as for the latter there is an established system of traceability starting from animal identification –and this is most developed in the beef sector – which can serve as the basis for the MC CA controls. In particular:

- For MS CAs, **familiarisation with the IOs/training and data inputs/record keeping related to inspections and audits (verification checks)** are the main areas expected to be affected. The resulting increase in control costs is in terms of the **number of staff needed to perform verification checks at FBO point**. However, only seven MS CAs provided some quantitative estimates of the scale of the anticipated additional costs. In particular, two MS CAs indicated that the introduction of mandatory origin labelling rules for the three categories of products covered by the study would result in **up to a 3-fold and 10-fold increase** in their current levels of control costs. The other five MS CAs that provided some data indicated that the **increase in costs could range from 5% to 20-30%**. No further distinction in terms of costs per option/modality was provided, beyond the general observation that the greater the level of detail the higher the cost.
- In the case of **FBOs**, additional costs are also expected, beyond BAU. These costs are in addition to any potential cost transfer from MS CAs to FBOs through (increased) fees charged to perform controls. In some of the examples provided the **total control costs are negligible in the case of Option 1, but become more substantial in the case of Option 2** (ranging from €16,000 to €210,000 per plant per year) **although they account for a relatively small share of the total additional costs of mandatory origin labelling.**

¹⁷ It has not been possible, neither for MS CAs nor for FBOs, to separate the costs resulting from what might be the new information obligations (IOs) generated by future legislation on mandatory origin labelling from control costs more generally (following the Commission's Standard Cost Model).

It is **not considered possible**, at least in the short to medium-term, **to mitigate the traceability and control costs through advances in technology** (e.g. radio-frequency identification (RFID), isotope analysis), as the technology uptake, effectiveness and efficiency, is virtually non-existent¹⁸.

Certain **factors *de facto* mitigate the severity of the anticipated impacts for micro/small-enterprises (SMEs)**: smaller companies tend to source raw material locally where possible, particularly in perishable food sectors (e.g. processed fruit and vegetables), and are not as present in sectors relying on the generally higher investment continuous production models which are the prevailing models in these sectors to optimise efficiency/ competitiveness (e.g. sugar, vegetable oils, flour, starch-based products etc.). However, **where these mitigating factors do not occur, SMEs and micro-enterprises are considered likely to be particularly/disproportionately affected** by mandatory origin labelling rules, as also indicated by the response of 17 MS CAs (out of the 22 MS CAs the responded to this question in the FCEC MS CA survey).

In terms of potential impacts on the **internal market**, available evidence suggests that Options 2 and 3 would affect the competitive position of FBOs particularly in terms of: MS that are not self sufficient in raw materials (which will vary by product / product sector); FBOs using a range of ingredients and producing a range of products, as the complexity of providing origin labelling would multiply in this case; and, FBOs sourcing from third countries in sectors where imports play a key role (i.e. EU is not self sufficient). In addition, potential changes in intra-EU trade flows (with a particular disadvantage for FBOs situated in MS border regions), and the risk that patterns of “food chauvinism” may emerge, have been identified by stakeholders as potential impacts in terms of disturbing the free movement of goods in the EU.

In terms of **international trade**, the potential impacts identified are in terms of changes in the geographical structure / volume of trade flows between the EU and third countries, a risk that patterns of “food chauvinism” may emerge, and reduced export competitiveness of EU FBOs vis-à-vis third country competitors. The need to ensure compliance with international WTO/TBT obligations was also highlighted as a key concern in the event that implementation of any new rules creates conditions of discrimination vis-à-vis imports from third countries.

In terms of potential **environmental impacts**, although views on these tend to be less unanimous amongst stakeholders, the following were identified as the most important: mandatory origin labelling could provide an incentive to consume products produced in proximity; on the other hand, it carries the risk of creating packaging waste where frequent/unforeseen changes in sourcing result in obsolete packaging costs. Other potential environmental impacts include the increase in actual food waste, in the case of errors and recalls (the occurrence of which was considered likely to be frequent due to the complexity of ensuring traceability and controls), which contradicts ongoing joint EU food supply chain initiatives to minimise food waste.

S.3 Overall conclusions

The analysis of consumer attitudes towards geographical origin labelling (Theme 1) indicates evidence of a **‘paradox’ in consumer attitudes towards origin labelling, in that there is a discrepancy between declared strong interest and actual purchasing** behaviour. The findings also indicate that there are differences in consumer interest and approaches to origin labelling by Member State, as well as between products. This suggests that a harmonised horizontal approach across Member States and products may not be appropriate. Member States where there is greater interest in origin labelling might want to come forward with specific vertical legislation as is currently the case with voluntary origin labelling. In this context, it is noted that there is no uniform pattern across the

¹⁸ By and large, both MS CAs and FBOs, remain unconvinced that isotope analysis can provide a cost-effective solution for wider implementation of origin verification controls, as the costs of this testing are high, the available test methods are not widely tested yet, and the technology is not applicable across the range of food products, particularly where ingredients are mixed.

EU or food products in terms of consumer understanding of origin labels (particularly whether these should refer to place of harvest or processing), or awareness/uptake of voluntary origin labelling schemes; this partly explains why voluntary schemes remain confined to particular Member States and product groups. While those consumers that are interested in origin labelling perceive a strong link between foods' origin and food safety, quality and compliance with other standards (e.g. animal welfare) and support of local/domestic economies and environmental impacts ('food miles'), there is concern that this is a misperception. Origin labelling does not actually convey this information (although it will sometimes do so) and using origin labelling in this way is misleading and will not improve consumer information. For food safety and other EU quality standards in particular, the perception that there is a difference between Member States undermines the strong safety/quality framework established in EU law.

Overall, on the basis of the available evidence on the EU food supply chain structure ([Theme 2](#)) and potential costs and impacts of the possible options/modalities of mandatory origin labelling ([Theme 3](#)), the study concludes that the **technical feasibility, costs and impacts of the various options/modalities differ significantly by product/product sector**. For many options/modalities and product/product sectors assessed, mandatory labelling would entail considerable increases in cost.

For certain sectors, in particular 'bulk' commodities with continuous production process and extensive blending of EU and non-EU supplies (e.g. sugar, vegetable oils, flour) and those with complex supply chains involving trade on the world spot market, the required investment and operational costs - even under Option 1 (EU/non EU or EU/third country) - are often not technically feasible and, where feasible, costs are too high. For other products/product sectors, the challenges posed may not be as extensive, but can still be considerable, as shown by the analysis of each sector in Theme 3. An indication of the extent to which origin labelling can be feasible is provided by the prevalence of voluntary origin labelling; as concluded in Theme 2, this generally tends to occur: a) where there is significant consumer interest; and, b) where traceability to the indicated level of origin is feasible and can be ensured at a reasonable cost, that consumers are willing to cover in a premium or that manufacturers are prepared to cover.

As the three categories covered by the study include a diverse range of products, no further conclusions on costs and impacts can be drawn for each of the three categories. For example, in the case of 'bulk' commodities, these can be found in all three categories (e.g. flour: Cat I and ingredient in Cat III; sugar/vegetable oils: Cat II and ingredient in Cat III). Furthermore, there is lack of common understanding as to which products the 'single ingredient' category includes, while the definition of ingredients that represent >50% of a food is too general and raises boundary issues vis-à-vis the same/similar products with the same ingredients present just <50% in a product. Thus, an **extrapolation from any considered product product/sector case to a 'category' as a whole** is considered not only impossible, but could also be **potentially biased**. **Therefore, introducing rules on a horizontal basis for the diverse range of products potentially falling within the scope of the three categories covered by the study is, in practice, not feasible**. In conclusion, the adverse effects that the generalised introduction of mandatory origin labelling on a horizontal basis of the three categories of foods covered by the study may have on costs, the internal market and EU trade and competitiveness would outweigh the benefits that it could possibly bring to consumers.

Furthermore, a key constraining factor in the introduction of generalised rules on origin labelling on a mandatory basis is the difficulty in enforcement, as also highlighted by the expert Focus Group. There is therefore considerable concern that the challenges to effectively enforce any new rules could create a risk for potential fraud. The question of liability along the supply chain also arises.

All stakeholders noted the **need for a full scale impact assessment** in the event regulatory measures should be envisaged. It was also highlighted that any future rules will need to **ensure consistency with implementing rules for voluntary origin labelling under Article 26(3) and with existing mandatory origin labelling rules in specific sector**.

