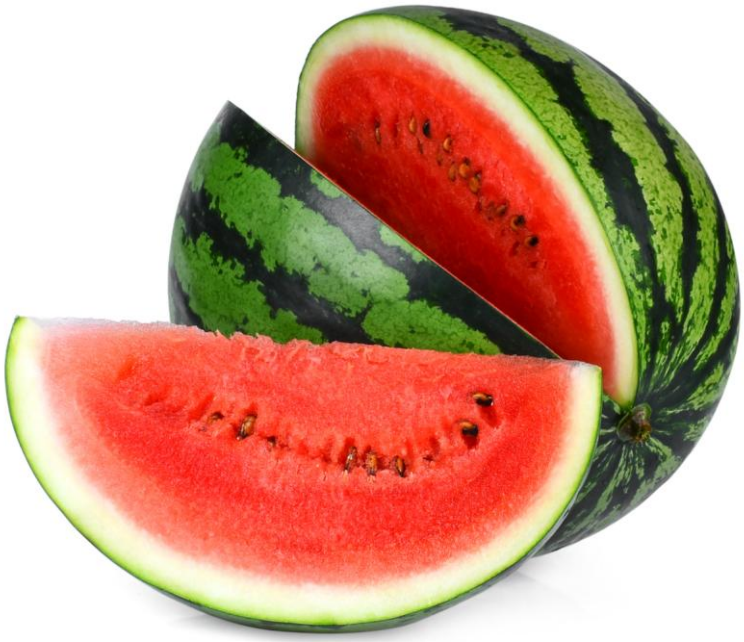
SITA
SURINAME INVESTMENT & TRADE AGENCY

PRACTICAL GUIDE TO EXPORTING FRESH FRUITS AND VEGETABLES TO THE EUROPEAN UNION



Fresh Watermelons

January 2024

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2.1 Scope of this Publication

This publication is intended to increase the understanding of Surinamese producers on the EU market for fresh watermelons, highlighting the opportunities, the market entry requirements, legal requirements, market requirements, storage and logistics and marketing channels.

This guide is NOT intended as export marketing research to support the identification of, and marketing to customers, or an export strategy. It intended to provide enough information to enable businesses to understand the practical steps to export watermelons if and when they secure clients. This is also important for the preparatory stage so when they do identify the market and begin marketing activities, they are able to demonstrate market knowledge and preparedness.

2.2 Definition of product

This guide covers the export of fresh watermelons to the EU market, whether or not sold bulk or in retail (ready to eat) packaging. It does not cover any processing or preserving beyond sorting and packing. Therefore, the information contained within this guide is not relevant for juiced (including paste or concentrate), preserved (jar/frozen) or part of a composite product.

In international trade, at present there is a wide catalogue of watermelon varieties, that are classified according to different agronomic characteristics, such as the colour of the rind, the size of the fruit, shape, taste, etc. There are also seedless varieties of watermelon.

Common varieties sold in EU markets:

- Varieties of rounded fruit and early cycle: "Sugar Baby" and " Black Pearl", all of dark green rind; "Yellow Doll", of pale green rind with streaks, and yellow pulp, and "Rubin", of pale green rind.
- Varieties of average-late cycle and rounded fruit: "Pileña', "Sayonara' and " Sweet from America", both with dark green rind, and "Imperial", with dark green or clear-green streaked rind.
- Varieties of elongate fruit and early cycle: " Striped Klondike", with a rind of green colour, mottled in dark green, and "Prince Charles", with a greyish green rind.
- Varieties of lengthy fruit and average-late cycle: "Fairfax" and "Congo", of pale green rind, with darker green streaks; "Blacklee", of dark green rind; "Charleston Gray", of pale green rind, and "Sweet Meat II WR", greyish rind with dark green streaks.
- Apart from these varieties, there are seedless watermelons, like " Queen of Hearts", bearing rounded fruits of pale green colour; " King of Hearts " and "Fummy".

2.3 HS Codes

As distinct from horticultural and buyer definitions, the customs nomenclature, which determines how products are traded, have a separate definition which shall be used in this guidebook as shown in Table 1 below. This shows that for traded products (export and import), no differentiation between type of fresh watermelons is given:

Table 1: Customs Classification for Fresh Pineapples

HS Code	Description
0807	Melons (including watermelons) and papaws (papayas), fresh
0807.11.0000	Watermelons

Source: TARIC Consultation Database (2023)

3 Market Overview

3.1 Introduction

The following section presents an overview of the Fresh Watermelons imports by the EU in recent years to provide information on demand. Where available, similar data is provided for production in the EU. This analysis is undertaken separately for both market and technical reasons:

EU agricultural supply chains and policies are highly integrated resulting in difficulty competing with EU producers so that imports complement production to meet demand. Therefore, Surinamese exporters are competing with other exporters.

3.2 EU Fresh Watermelons Imports

The following Dashboard provides an overview of recent EU imports, sources of supply, seasonality and average prices for Watermelons:

Table 2: Dashboard for EU Imports of Fresh Watermelons (HS0807.11.00)

Average EU Imports (2020-2022)

€ 275.7 mn

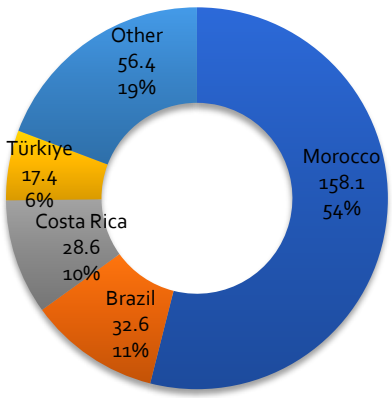
451,696 MT

Growth + 16.5%

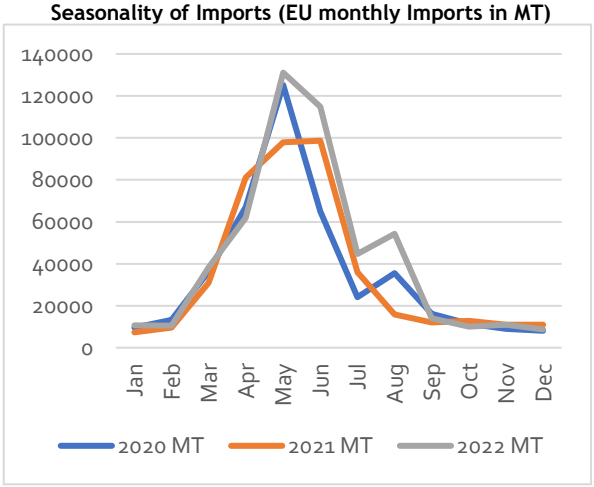
(5 year average annual)

Main Sources of Supply (2020-2022)

€ million



Seasonality of Imports (EU monthly Imports in MT)



Top Imports by Member State (2020-2022)

	Value (€ mn)	Volume (MT)	Average CIF Price (€/kg)	2022 CIF Price (€/kg)
Netherlands	81.37	116,235	0.70	0.77
France	78.02	105,228	0.74	0.79
Spain	71.95	117,571	0.61	0.66
Belgium	4.59	9,410	0.49	0.56
Bulgaria	4.58	13,665	0.34	0.35
Austria	4.44	8,291	0.54	0.54
Romania	4.19	9,654	0.43	0.47
Poland	4.12	11,020	0.37	0.46
Italy	3.76	7,920	0.47	0.47
Germany	2.85	4,642	0.61	0.63

Seasonal Prices (€/kg)

	J	F	M	A	M	J	J	A	S	O	N	D
Average (3 Year)	0.57	0.62	0.73	0.85	0.71	0.47	0.34	0.30	0.44	0.66	0.66	0.65
2022	0.58	0.57	0.76	0.86	0.86	0.50	0.39	0.39	0.57	0.87	0.84	0.79

SOURCE: EUROSTAT COMEXT (2023)

This shows that EU imports of fresh watermelons averaged €276 million over the last three years (2020-2022) and has been growing by an average of 16.5 per cent per annum over the last five years (2018-2022).

EU imports are dominated by Morocco who account for 54 per cent of imports, Brazil (11%) and Costa Rico (10%). Major imports (84 %) are shared between top 3 importers: Netherlands, France and Spain.

Seasonal import demand has been highest from April to June, accounting over 120 000 tons over the last three years from. Seasonal average prices have been higher from October to May over recent years (during those months when there is no production in EU).

Amongst EU member states, import prices are higher in France, Netherlands and Spain - the major importers.

3.3 EU Production of Watermelons

Based on available production and price data, the following dashboard provides an overview of EU watermelon production.

Table 3: Dashboard for EU Production of Fresh Watermelons

Average EU Production (2020-2022)

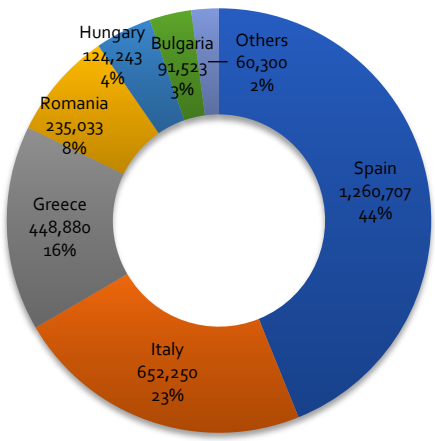
2,872,937 MT

Growth - 3.9%

(5 year average annual)

Main Sources of EU Production (2020-2022)

tons



Seasonal Prices for Cherry Watermelons (€/kg)

	J	F	M	A	M	J	J	A	S	O	N	D
Average (3 Years)					0.78	0.48	0.28	0.32	0.42	0.51		
2022					1.03	0.74	0.36	0.50	0.66	0.85		

SOURCE: EUROSTAT Farm Data and DG Ag AgriData (2023)

EU production of watermelons averages 2.9 million tonnes per annum. EU production of watermelons has been declining by an average of -3.9% per annum over the last five years.

Around 44% of production is from Spain with Italy and Greece accounting accordingly for 23% and 16% of EU production of watermelons.

There is noticeable increase of prices in 2022, comparing with average 3-year prices (ex-packhouse). For watermelons, prices are higher in the EU off season - May.

3.4 Market Opportunities

EU production of watermelons are approximately 6 times that of imports (by volume). However, in the last five years, imports unlike EU production have been growing (16.5 compared with 3.9% decline per annum) indicating a steady shift towards imports.

Highest demand for imports is in the off season (Apr-Jun) at over 120,000 MT per month.

Average EU import prices of watermelons (although subject to minimum entry pricing) appear slightly lower than EU produced watermelons.

Suriname already has begun penetration of the EU market ranking 29th largest supplier (average last three years) with exports to EU of 26567 MT valued at €20100 (average import price €0.76). Therefore, there appears to be further scope for developing this market both in terms of replacing third country competition and taking up future anticipated demand (assuming continued 16.5 per cent growth in next few years).

Figure 1: Key Take away

Market Opportunities for fresh watermelons

- ✓ EU imports of €276 mn per annum, growing by 16.5%
- ✓ Average import prices of €0.53 per kg (CIF)
- ✓ Over 84 % of imports go to Netherlands, France and Spain.
- ✓ Biggest import prices go to France, Netherlands and Spain
- ✓ Biggest competition in EU from Morocco (accounting for 54% of EU imports)

4 Market Access

4.1 Clearing the Border

Access to the EU Market involves crossing the border with a number of checks and procedures in place. These include:

- Import duties (tariffs and equivalent measures payable by importers)
- Border procedures
- Border document checks and testing requirements

This section describes the rules and processes for fresh watermelons entering the EU which is important practical knowledge in delivering to EU clients.

4.2 Import Tariffs on Fresh Watermelons

Although tariffs and restrictions of equivalent effect are paid by the importer, it affects the competitiveness of Surinamese exporters relative to both EU producers and current third country suppliers of fresh watermelons (depending upon customs restrictions applied). This differs from VAT whereby the tax is applied equally to both domestic producers and all imports.

Table 4 shows the applicable customs entry requirements for fresh watermelons from all countries without preferential arrangements (third country tariff), Suriname and Morocco, Brazil and Costa Rica (major suppliers of fresh watermelons to the EU).

Table 4: EU Customs Tariffs for Fresh Watermelons

HS Code	*Description*	3rd Country Tariff	Rate Applicable to Suriname	Rate Applicable major import suppliers of product
0807 11 00 00	Watermelons	*8.8%*	*0%*	***Morocco, Costa Rica:** 0%* ***Brazil:** 8.8%*

For Suriname, as well as to the biggest exporters of watermelons the tariff is 0%, apart from Brazil, which goes under Third countries tariff and charged an additional 8.8%

In order to benefit from this preferential market access, a rule of origin applies. For fresh watermelons from Suriname the rule of origin must be “wholly obtained”, that is grown in Suriname.

4.3 EU Border Interceptions

To enter the EU, all products must comply with their specific requirements. Non-compliant products can be assessed and rejected at the border, and either reused (eg for non-human consumption), returned or destroyed.

It should be noted that control of products is a serious issue and controlled at the border to ensure that EU requirements are complied with.

For watermelons, there are regular interceptions at the border, for example the following were rejected at the border:

- Oxamyl in watermelons from Spain (2020)
- Unauthorized pesticide (methomyl) in watermelons from Morocco. (2023)
- Methomyl and oxamyl in watermelons from Morocco (2023)

Therefore, it should be noted that the EU requirements and formalities at the border should be taken seriously and all requirements met (and be proven to be met) to ensure smooth crossings and minimising of costs incurred.

4.4 Selecting a Border Crossing

Crossing of the EU border requires clearance and for fresh fruits and vegetables, including SPS inspections. For the majority of plant products, a documentation check is all that is needed, plus random checking of consignments based on risk assessment. This can either be further documentation checks (reviewing test results accompanying the consignment) or full product testing. The costs of these extra tests are borne by the exporter, as well as delay in releasing the consignment, so the fewer checks, the better. However, EU takes border control of food products seriously and as we can see from the previous section, if consignments of fresh watermelons has been rejected and destroyed at the EU border for non-compliance, this is at the exporter's cost and no compensation will be provided by EU.

For specific high-risk products or products from countries where persistent border interceptions have occurred, EU requires all exporters of those products to cross an EU designated border control post, (BCPs), and assigns an inspection rate. The product can only cross into the EU where it crosses the border at a BCP that has facilities for testing the specific product. This BCP may be off the desired route and can add costs of transport.

Fresh watermelons in general are not a high-risk product and so no BCP is required. Also, currently, Surinamese watermelons have not been identified as a risk so consignments can cross at any border. However, with persistent rejections, the situation can change.

4.5 Documentation Requirements

At the border, the first "control" by EU authorities is documentation and it is important to have the required paperwork. Beyond these requirements, product checks (particularly SPS) first involve review of available documentation so that all documentation conveying compliance should be made available in case of additional/random checking of products (eg sometimes if a product is being reviewed for contamination, a certificate provided by a competent authority may be accepted without need/cost for further testing). It is in the exporter's interest to ensure its easy to prove compliance.

General Documentation

EU customs require the following commercial documentation at the border:

- Commercial invoice
- Customs Value Declaration
- Freight documents
- Freight insurance
- Packing list
- Single Administrative Document (SAD)

Certificate of Origin

In order to benefit from preferential market access (reduced tariffs), exported watermelons need to have an appropriate document confirming their origin. Under the CARIFORUM-EU Economic Partnership Agreement (EPA) importers have to be in possession of and ready to present EUR1, which are issued for each consignment during or after the export of the goods.

However, the issuance of a EUR1 certificate is not required and can be replaced by an invoice declaration of origin in cases where:

- the total invoice value of a consignment of goods originating in Suriname does not exceed €6,000 (to obtain preferences in the EU countries, the exporter independently declares the origin of goods from Suriname in the invoice declaration);
- the exporter has the status of an authorized (approved) operator;
- in the EU, goods are taxed at the zero rate of import duty of the Customs Tariff (except for the rules of origin regarding cumulation and quotas).

EUR1 Certificates of origin are issued for goods exported to the EU countries and comply with the rules of origin applicable under the EPA. Provided the customs administrations of the EU countries accept EUR.1 certificates to Surinamese-origin goods, exemption from customs duties is applied. The validity period of the certificate is 10 months.

Health certification

Control of imports of fresh fruit and vegetable products is set out in EU in Regulation 2017/625[1] (Official Controls Regulation - OCR) and allows national competent authorities in third countries to carry out official controls on all operators through the issuance of the official certificates. For fresh fruits and vegetables, a phyto-sanitary certificate (for plant health) issued by the national competent authority guarantees that the operators comply with EU requirements.

EU border control is then undertaken through documentary checks which can also require further identity checks and physical checks at its border posts.

Within Suriname the national competent authority (Afdeling Plantenbescherming en Kwaliteitskeuringen under the Ministerie Van Landbouw, Veeteelt En Visserij) issues a Phyto sanitary certificate. See section 8.5 for detailed procedures.

The European Commission's TRACES system is multilingual online platform to streamline sanitary and phytosanitary certification process and inspection by uploading documents prior to arriving at the border offering a fully digitised and paperless workflow.

More than 42 000 users from about 85 countries worldwide are using TRACES. TRACES is available in the 23 official languages of the EU and in 34 languages in total; this facilitates the use of TRACES also for the non-EU countries' competent authorities and trading partners. However, Suriname's competent authorities do not yet use this service to automatically send health certificates to the system but private operators could register and upload themselves.

Organic Products

Verification of the consignment at the border is undertaken through the review of the original organic certificate of inspection to the relevant Member State's authority by a recognised control body. This certificate can also be uploaded through the EU TRACES system.

Figure 2: Key Take away

Market Access for fresh watermelons

- ✓ Surinamese exports have zero import duties.
- ✓ The main import competitors (Morocco and Costa Rica) also face zero import duties so despite the EPA, Suriname only has tariff advantage for Brazil.
- ✓ Fresh watermelons can cross any EU border post, but reducing risk of inspection requires full documentation
- ✓ A phyto-sanitary certificate issued by the Suriname competent authority must be obtained for each consignment

[1]https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017R0625&from=EN#d1e2227-1-1

5 Identifying EU SPS Requirements and Marketing Standards

5.1 EU Requirements for Watermelons

EU Sanitary and phyto-sanitary (SPS) measures are legal food safety and plant/animal protection requirements that protect EU citizens from harmful effects and the wider environment from pests and disease based on risk assessment and control.

It is important that products entering the EU comply with all these SPS requirements and according to risk, may be verified at the border and actions taken against non-compliant products (see 4.3 above).

The Information in this section sets out the specific legal SPS requirements for fresh watermelons and the procedures for proving conformity in the following areas:

- Control of contaminants in foodstuffs
- Control of pesticide residues in plant and animal products intended for human consumption
- Health control of Genetically Modified (GM) food and novel food
- Health control of foodstuffs of non-animal origin
- Traceability, compliance and responsibility in food and feed

Whilst documentation that proves compliance is not required beyond the export health certificate, it is good practise to provide as much documentation as possible as this can smooth the passage through the border as competent authorities undertake document checks as a first point of control.

Note, when testing and providing certificates, these should be issued by an accredited laboratory for testing (ISO 17025) and the associated testing procedure.

5.2 Control of contaminants

Imports into the European Union (EU) of foodstuffs should comply with EU legislation designed to ensure that food placed on the market is safe to eat and does not contain contaminants at levels which could threaten human health.

Contaminants may be present in food (including fruits and vegetables) as a result of the various stages of its production, packaging, transport or holding, or also might result from environmental contamination. For watermelons, cadmium and lead have been identified as contaminants by the EU (Regulation 2023/915) and the following table details the maximum levels allowed in consignments.

Table 5: Maximum Contaminant Levels

Annex reference	Contaminant	Maximum levels (mg/kg wet weight)
3.1.4.1	Lead	0.050
3.2.4.1	Cadmium	0.050
6.3.1	Perchlorate	0.050

The maximum level applies to the wet weight.
The maximum level applies after washing and separating the edible part.

Although not required document, prior to sending the consignment, it is a good idea to confirm the products comply with tests on contaminants, usually once per harvest.

5.3 Control of pesticide residues

Plant and animal products exported to the EU must comply with maximum residual levels (MRLs) of certain chemicals to protect consumers from exposure to unacceptable levels of pesticide residues. The EU sets and regulates these levels for different products and chemicals used in the pesticides.

The EU pesticide database currently (October 2023) lists 515 pesticide residual applicable to watermelons, traces of these chemicals cannot exceed the limits give in Appendix 1.

Although not required document, prior to sending the consignment, it is a good idea to

confirm the products comply with tests on pesticide residuals, usually once per harvest.

5.4 Health control of Genetically Modified (GM) food

All foodstuffs consisting of and containing GMOs and produced from GMOs must be authorised and comply with the provisions on labelling (Regulation (EC) No 1829/2003).

Authorised food and feed are entered in the Community Register of GM food and feed and are valid for a maximum of 10 years (renewable). If Surinamese exports are GMO watermelons, then they will need to verify these are listed on the EU database prior to export.

5.5 Health control of foodstuffs of non-animal origin

There is a general obligation on all businesses in the supply chain to monitor the food safety of products and processes under their responsibility.

General hygiene provisions require that producers at all phases should develop appropriate procedures, based on Hazard Analysis and Critical Control Point (HACCP) principles, that is all business in the supply chain should have HACCP (or equivalent) procedures in place as verified by national competent authorities.

In addition, businesses need to ensure microbiological safety within certain limits set for each product. For all fresh vegetables, the criteria are set out in Table 6 (but this applies to pre cut and not whole watermelon).

Table 6: Table Microbiological Criteria for watermelons

Food category	Micro-organisms/their toxins, metabolites	Sampling plan		Limits		Analytical reference method	Stage where the criterion applies	Action in case of unsatisfactory results
		n	c	Vm	M			
1.2 Ready-to-eat foods able to support the growth of L. monocytogenes, other than those intended for infants and for special medical purposes	Listeria monocytogenes	5	0	100 cfu/g		EN/ISO 11290-2	Products placed on the market during their shelf-life	
1.19 Precut fruit and vegetables (ready-to-eat)	Salmonella	5	0	Absence in 25 g		EN/ISO 6579	Products placed on the market during their shelf-life	Not placed on the market
2.5.1 Precut fruit and vegetables (ready-to-eat)	E. coli	5	2	100 cfu/g	1 000 cfu/g	ISO 16649-1 or 2	Manufacturing process	Improvements in production hygiene, selection of raw materials

5.6 Traceability, compliance and responsibility in food and feed

The EU requires traceability through all stages of production, processing and transport of food and feed.

Although traceability provisions do not apply outside the EU, the requirement does extend to the EU importer since they must be able to identify from whom the product was exported in the third country.

Therefore, at the border, competent authorities of the EU verify, especially through relevant documentation or labelling information to facilitate its traceability. This usually requires a label with a Traceability code that will provide details on origin, product category and producer at each stage of production.

This could be back to individual farm or in the case of consolidated products, a batch number would contain the information leading back to the point of primary production. Systems that capture quality, date and time, harvest location and other information are essential.

5.7 Marketing Standards

All fresh fruits and vegetables must conform with EU marketing standards. These relate to how the products are presented and the class attributed and a competent authority in the EU must approve before retail sale.

Watermelons have general requirements, there are no specific requirements for retail sale of fresh watermelons.

If the watermelons are for processing, then these standards do not need to be adhered to, but in accordance with Commission Regulation (EC) No 543/2011, the packaging of products intended for processing must be clearly marked by the pack with the words 'intended for processing' or other equivalent wording.

For watermelons, specific marketing standards do not apply but they must conform to the general requirements. However, for consistent product presentation, the following non-legally binding standard can be used to provide clients with a standard that is followed: https://unece.org/fileadmin/DAM/trade/agr/standard/standard/fresh/FFV-Std/English/37_Watermelons.pdf

Table 7 summarises the marketing requirements for classification that must be detailed on the packaging.

Table 7: Marketing Standards for Fresh Watermelons

	Annex I Part A General marketing standard of Commission Implementing Regulation (EC) No 543/2011 (OJ L-157 15/06/2011)
1. Minimum quality requirements	
Subject to the tolerances allowed, the products shall be:	• intact • sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded • clean; practically free of any visible foreign matter • practically free from pests • free from damage caused by pests affecting the flesh • free of abnormal external moisture • free of any foreign smell and/or taste.
The condition of the products must be such as to enable them:	• to withstand transport and handling, • to arrive in satisfactory condition at the place of destination.
2. Minimum maturity requirements	The products must be sufficiently developed, but not over-developed, and fruit must display satisfactory ripeness and must not be overripe. The development and state of maturity of the products must be such as to enable them to continue their ripening process and to reach a satisfactory degree of ripeness.
3. Tolerance	A tolerance of 10 % by number or weight of product not satisfying the minimum quality requirements shall be permitted in each lot. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.
4. Marking of origin of produce	Full name of the country of origin. For products originating in a Member State this shall be in the language of the country of origin or any other language understandable by the consumers of the country of destination. For other products, this shall be in any language understandable by the consumers of the country of destination.
Marking: Each package (1) must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside.	
Identification	Name and physical address of the packer and/or the dispatcher (for example: street/city/region/postal code and, if different from the country of origin, the country). This mention may be replaced: — for all packages with the exception of pre-packages, by the officially issued or accepted code mark representing the packer and/or the dispatcher, indicated in close connection with the reference “Packer and/or Dispatcher” (or equivalent abbreviations). The code mark shall be preceded by the ISO 3166 (alpha) country/area code of the recognising country, if not the country of origin; — for pre-packages only, by the name and the address of a seller established within the Union indicated in close connection with the mention “Packed for:” or an equivalent mention. In this case, the labelling shall also include a code representing the packer and/or the dispatcher. The seller shall give all information deemed necessary by the inspection body as to the meaning of this code.
Origin	Full name of the country of origin. For products originating in a Member State this shall be in the language of the country of origin or any other language understandable by the consumers of the country of destination. For other products, this shall be in any language understandable by the consumers of the country of destination.

	Annex I Part A General marketing standard of Commission Implementing Regulation (EC) No 543/2011 (OJ L-157 15/06/2011)
	Packages need not to bear the particulars mentioned in the first subparagraph, when they contain sales packages, clearly visible from the outside, and all bearing these particulars. These packages shall be free from any indications such as could mislead. When these packages are palletised, the particulars shall be given on a notice placed in an obvious position on at least two sides of the pallet.

5.8 Organic Products

If a product is listed as organic, it must comply with EU regulations laid down by Council Regulation (EC) No 834/2007 (OJ L-189 20/07/2007).

These rules cover mainly the following aspects:

- Production, processing, packaging, transport and storage of products
- Use of certain products and substances in processing of food. A list of ingredient authorisations is available in the Data base of the Organic Farming Information System (OFIS) official website: http://ec.europa.eu/agriculture/ofis_public/r7/ctrl_r7.cfm?targetUrl=home
- Prohibition of use of genetically modified organisms (GMO) and of products manufactured from GMO in organic production
- European Union organic production logo: https://ec.europa.eu/agriculture/organic/downloads/logo_en
- Inspection measures and specific control scheme to be applied for this type of products by the appointed authorities in the Member States.

For third countries, inspections can be carried out by any Recognised Control Bodies and Control Authorities, the following listed for Suriname):[2]

Agreco R.F. Göderz GmbH, Germany
http://agrecogmbh.de

MOcert Latinoamérica Ltda, Bolivia,
www.imocert.bio

IMOswiss AG, Switzerland,
http://www.imo.ch

Ecocert SAS, France,
http://www.ecocert.com

Note: some buyers may additionally require private organic certification.

Figure 3: Key Take away

Regulatory requirements for fresh watermelons

- ✓ Ensure products comply with EU requirements through testing.
- ✓ Requirements for contaminants and microbiological criteria set limits for lead, cadmium, perchlorate, listeria monocytogenes, salmonella and e-coli.
- ✓ Pesticide residual limits depend on the chemical composition of pesticides used and limits provided accordingly.
- ✓ General marketing standards are provided for watermelons must be adhered to.

[2] http://ec.europa.eu/agriculture/ofis_public/pdf/CBList AnnexIV.pdf?uid=E1AF6FDD-0592-F636-B338F2FC9F1FC05F

6 Identifying market driven standards and requirements

6.1 Overview

Whilst regulatory requirements applied in the EU are mandatory, the majority of the EU supply chains require their suppliers to comply with private market standards. However, each product supply chain in EU member states require a different standard that must be complied with in order to sell in that market.

With regard to applying the most suitable market standard to the process there are a few basic simple rules.

Good agricultural practice (GAP) is applied to all field processes and can be described as everything before leaving the farm. The term pre-farm gate is often applied to GAP standards. Harvesting, picking and the gathering of agricultural products from the field is still within the scope of GAP

However, once the product undergoes a transformative process such as washing, chopping, drying or placing into consumer packs the product undergoes a good manufacturing practice (GMP) process and must be controlled under a food safety system.

Finally, as consumers are becoming more aware and/or targeting specific market niches, social, environmental and specific standards are needed (eg organic, fair or ethical standards).

Prior to engaging with potential customers, producers should decide on the standards needed for the target market and segment and put in place steps to begin the process of developing systems, documentation and certification for these standards.

6.2 Good Agricultural Practise Standards

GlobalG.A.P.

GLOBALG.A.P. is the world's largest farm assurance program and is an initiative by retailers belonging to the Euro-Retailer Produce Working Group to respond to ever growing concerns regarding product safety, environmental impact and the health, safety and welfare of workers and animals. It is a private standard and has an independent certification system for Good Agricultural Practice (GAP), which allows for a harmonised system used by all major retailers in the EU (and beyond). It is a voluntary standard and competent authorities, and border controls will not prevent trade without GLOBALG.A.P. certification but retailers do not buy unless suppliers comply or are in process of complying.

GLOBALGAP certifies 3 areas of production: Crops, Livestock, Aquaculture and consists of a total of 16 standards. The GLOBALG.A.P. Fruit & Vegetables Standard covers all stages of production, from pre-harvest activities such as soil management and plant protection product application to post-harvest produce handling, packing and storing.

Current GLOBALG.A.P. standards applicable to watermelons production are:

- All Farm Base, Crops Base, Fruit and Vegetables (Control Points and Compliance Criteria)
- General Regulations - Crops Rules
- General Regulations
- General Regulations Part I - General Requirements
- General Regulations Part II - Quality Management System Rules
- General Regulations Part III - Certification Body and Accreditation Rules

A producer wanting to comply with GLOBALG.A.P. standards must download the relevant standards for free. Once the quality systems are in place, GLOBALGAP approved certification body can conduct an on-site inspection. Once the standards compliance is confirmed, a GLOBALG.A.P. Integrated Farm Assurance Standard V5.4 certificate and unique number will be issued for the relevant scope. Buyers can then use this number to verify compliance to the standards (that is usually registered on the GLOBALG.A.P. certificate registry).

GRASP[3]

GLOBALG.A.P. Risk Assessment on Social Practice (GRASP) is a module designed to assess social practices on the farm. The requirement consists of 11 standardised requirements and one that addresses specific aspects of workers' health, safety and welfare.

Any GLOBALG.A.P. certified producer may apply for a GLOBALG.A.P. Risk Assessment On Social Practice. Once the assessment is completed, the results are valid for 1 year and are uploaded to the GLOBALG.A.P. Database.

Zerya[4]

Zerya is a private quality trademark based on a voluntary standard, created by agricultural specialists for any farmer or grower to develop a technical management system that facilitates the production of fruits and vegetables without pesticide residues in the final product.

The goal is to provide an opportunity for differentiation to companies with highly qualified technicians, through a coordinated effort and the conviction that it possible to produce safe food in a cost-effective way through a rational use of agricultural inputs and that can lead to a sustainable production system, environmentally friendly and capable of fulfilling customers' requirements.

Standard compliance is assured through a Certification Body that establishes an audit program to the producers and through accredited laboratories that take samples and run MRL analysis to verify the Standard fulfilment. The use of the Trademark is granted to the certified companies and allows the differentiation of these products in the market.

Since September 2013, Zerya is member of GLOBALG.A.P. and currently is taking part in their Sustainability Stakeholders Committee.

6.3 Food Safety Management Systems

Given that sorting and packing can be considered a manufacturing process, many buyers require further higher standards to demonstrate food safety. As a basic, ISO 22000:2018 Food safety is required (or equivalent) and many buyers will insist on private versions of this such as the FSSC 22000 certification system rather than the basic ISO, which raises costs.

Figure 4: Generic Food Safety Management System

1.0 Purpose
2.0 Scope
3.0 Relation to Food Safety Standard Applied
4.0 Our Company's Food Safety Management System
  4.1 General Requirements
  4.2 Documentation requirements
5.0 Management Responsibility
  5.1 Management Commitment
  5.2 Food Safety Policy
  5.3 FSMS Planning
  5.4 Responsibility and Authority
  5.5 Food Safety Team Leader
  5.6 Communication
  5.7 Emergency Preparedness and Response
  5.8 Management Review
6.0 Resource Management
  6.1 Provision of Resources
  6.2 Human Resources
  6.3 Infrastructure
  6.4 Work Environment
7.0 Planning and Realization of Safe Products
  7.1 General
  7.2. Prerequisite Programs
  7.3 Hazard Analysis Preparation
  7.4 Hazard Analysis
  7.5 Managing the HACCP Plan
  7.6 Updating the FSMS
  7.7 Verification Planning
  7.8 Traceability
  7.9 Control of Nonconformity
8.0 Validation, Verification, and Improvement of the Food Safety Management System
  8.1 General
  8.2 Validation of Control Measure Combinations
  8.3 Control of Monitoring and Measuring
  8.4 Food Safety Management System Verification
  8.5 Continual Improvement

Other buyers may require higher levels of food safety management such as British Retail Consortium (BRC) Global Standard, International Featured Standard (IFS) or Safe Quality Food (SQF) standards. Given the large number of food safety standards that exist, and to reduce the need for multiple certifications for different customers, the Global Food Safety Initiative was established to benchmark each standard so that buyers can understand which standards are equivalent and therefore, be more able to accept differing standards that match their requirements. **However, it is very much up to the buyer as to the specific**

[3] https://www.globalgap.org/uk_en/for-producers/globalg.a.p.-add-on/grasp/

[4] https://en.zerya.org/

standard they require as a prerequisite to buying.

6.4 Other Standards

Private standards have evolved in the last 20 years not just in food safety but in aspects such as social and labour conditions, environmental practices and more recently concerning ethical trade, equality and community rights. In addition, there are specific requirements such as vegan, halal and gluten free (although not applicable to fruits and vegetables.

These are not mandatory standards but depending on the market segment, may be required by the client or consumers in a specific niche.

As well as the dedicated standards described in the following sections, the private food safety management standards organisations are increasingly offering additional modules to address such concerns.

Labour Standards

There are nine core International Labour Organization (ILO) that are prerequisites to access export markets. Many of these conventions are already adopted and ratified in national laws but may be poorly enforced in some regions or sectors.

Third party labour rights audits are a requirement for most pack houses providing horticultural products to international retailers and manufacturers.

Standards such as SA 8000 by Social Accountability International, The Business Social Compliance Initiative (BSCI) and Ethical Trade Initiative (ETI) provide codes of practise and standards that are broadly equivalent in content although the systems of measurement and demonstration of conformity are different.

Some of the requirements are simple to meet such as paying the legal wage and supplying worker contracts. However, some of the aspects are more challenging for smaller farms, family farms.

Environment Standards

Many of the retailer and manufacturers own standards and the private market standards contain specific requirements for continuous improvement in environmental management. These requirements include use of water, energy and reduction of waste.

Risk assessment generally based around the ISO 14001:2015 Environmental management systems is required for the majority of international customers in an effort to prove that natural resources are not being degraded.

6.5 ITC Standards Map

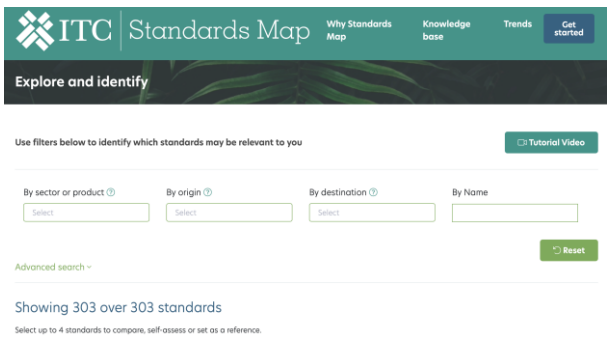
There are a very broad range of private market standards available for producers of fresh watermelons to apply.

ITC standards provides free access to information on over 300 standards to enable a producer to see the range of standards that specific markets generally require for specific products.

The standards include those for food safety, environmental protection, worker and labour rights, economic development, and business ethics.

The database applies not only for private standards applied in the EU but globally.

Using the tool, https://standardsmap.org/ , producers can identify the accepted standards in each market for specific products. More than one could be available in each category.



ITC Standards Map provides:

- Identify standards: Review 300+ standards by product, sector, area or focus and more
- Compare standards: Compare up to 4 standards side by side across 1650 criteria

- Monitor trends: Helps to make informed decisions regarding production trends among standards
- Self-assessment: measure the gap between the standard and current processes to assess compliance readiness

Figure 5: Key Take away

Market standards for fresh watermelons

- ✓ Choose the right standard for the right market thus talk to EU buyers always to understand want is needed
- ✓ Prioritise and decide which standards are applicable for your product and target market (as requirements differ)
- ✓ Start to build your management systems and undertake self-assessment prior to engaging specialist consultants or auditors
- ✓ Some standards are free (GLOBALG.A.P., IFS) but some have a fee (BRC Global Standard)
- ✓ All standards require certification from accredited body

7 Packing and Labelling

7.1 Introduction

Fresh watermelons exported to the EU are required to arrive in a fit state for sale and clearly inform the user/end customer about the product and its provenance. Therefore, EU and retailers set out detailed packing, packaging, labelling and product names (production of use of names by designation).

These are both legal and market requirements and for fresh agricultural products, producers need to comply with the following.

- **Packing (size) and loading requirements** for specific products to ensure they are not damaged during transport and storage is both legal and market requirement, so the fresh watermelons arrive intact and saleable.
- **Packaging materials (protective, marketing and sustainable)** are governed by EU regulations for food (including fresh fruits) as well as buyer requirements that reflect consumers demands (eg less use of plastic).
- **EU labelling requirements** ensure consumers are provided with specific information regarding food products, including fresh watermelons and labels must contain information on the label affixed to packaging, individual products or the retail box label for lose product.
- **Bar coding conventions (GS1) and Global Location Numbers (GLN)** are requirements are driven by the market but also serve as a tool for food safety and traceability throughout the value chain.
- **Regulation of protected names** that are not allowed to be used unless they accurately describe the product or are varieties/products from specific geographic regions.

7.2 Packing and Loading Requirements

There is a general requirement as per Annex I Part B of Commission Implementing Regulation (EC) No 543/2011 (OJ L-157 15/06/2011) for packaging of all food products, including fresh watermelons that *"must be packed in such a way as to protect the produce properly. The materials used inside the package must be clean and of a quality such as to avoid causing any external or internal damage to the produce."*

There are no legal specific requirements as to the size, weights, loading or materials for packing but there are specific conventions that apply to fresh watermelons.

For logistics purposes most of the buyers require that:

- the packaging conforms to the specified minimum stability and does not open unintentionally
- crates and boxes are stackable
- the dimensions correspond to the ISO modular sizes - ISO 3676:2012 Packaging — Complete, filled transport packages and unit loads — Unit load dimensions

This means fresh watermelons are generally packed in trays/boxes 6, 10 or 12 pieces which is 12-20 kg, or packed in nets which is more convenient for transportation.

Retailers and wholesalers have specific preferences for pack sizes and loading to trays and boxes depending on consumer purchase trends and the product transport requirements.

There is also a movement in some smaller retailers for sustainable covered card packaging.

7.3 Packaging

The EU regulates the packaging (both protective and marketing) that is used for food, including fresh watermelons, must comply with the following (as applicable):

- Food contacts materials
- General packaging waste regulations
- SPS on Wooden Packaging, including pallets

Whilst this is the responsibility of the packaging manufacturer, border checks mean that if the packaging does not comply, the product can be intercepted and subject to border controls (rejected or even destroyed at the border).

Food Contact Materials (FCMs)

Food Contact Materials (FCMs) directive[5] of the EU affects materials in direct or indirect contact with food, including containers for transporting food, machinery to process food and packaging materials so that the materials used do not: *"transfer constituents into food at levels that endanger human health".*

For plastic materials and articles intended to come into contact with foodstuffs, a positive list of monomers and additives that can be used in plastic food contact materials is given. Regulations also list epoxy resin derivatives in coated materials, plastics and adhesives. In selecting suppliers of such materials, only packaging that is approved for EU markets should be used.

Exporters of fresh watermelons should ensure the packaging used complies with FCM and is marked accordingly, including glass and fork mark and should obtain a copy of declaration of conformity stating compliance.

Figure 6: Required Food Contact Material Compliance Mark

Packaging Waste and recycling

The EU packaging Directive provides aims at limiting the production of packaging waste and promoting recycling, re-use and other forms of waste recovery. Therefore, all packaging used for transport and sale of watermelons must conform to these requirements.

There are also market driven initiatives introduced by retailers that aim to avoid, reduce, improve waste management. For this, exporters may need to introduce measures that avoid excessive packaging or, if this is not possible, to reduce essential packaging or redesign it using more environmentally friendly materials (e.g. paper, bio-plastic).

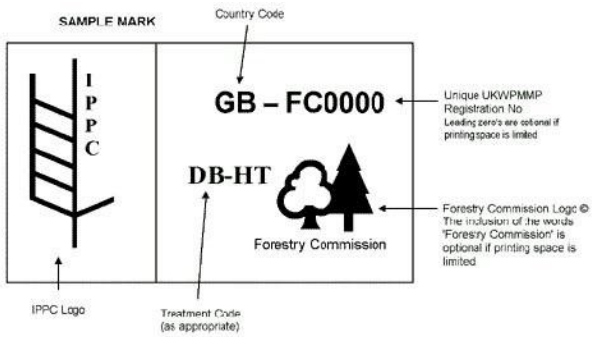
SPS on wooden packaging

To prevent the introduction of pests and disease from wooden packaging, including wooden pallets, and crates EU legislation is based upon FAO International Standards for Phytosanitary Measures ISPM 15 Regulation of wood packaging material in international trade.

In Suriname, the "agency" is the (Afdeling Plantenbescherming en Kwaliteitskeuringen under the Ministerie Van Landbouw, Veeteelt En Visserij)

Pallets must have specific markings produced by the certified company from the Registry and exporters should ensure all pallets used contain such authentic marks or risk interception at the border.

Figure 7: Visual Examples of Markings



7.4 Labelling

Legal Labelling requirements

General legal food labelling requirements[6] so that the following information is available on all food products including fresh watermelons:

1. Name of food as specified in the marketing standards "marking" (this is the legal name and cannot be replaced with a name protected as intellectual property, brand name or fancy name);
2. List of Ingredients (Preceded by the word "Ingredients", the list shall include all ingredients (including additives or enzymes) in descending order of weight as recorded at the time of their use in

[5] Regulation EC 1935/2004 (on materials and articles intended to come into contact with food)

[6] Regulation (EU) No 1169/2011 on the provision of food information to consumers

the manufacture and designated by their specific name).
3. Net quantity (units of mass kilogram, gram)
4. Minimum durability date (the date shall consist of day, month and year in that order and preceded by the words "use before" or "use before end");
5. Storage conditions or conditions of use
6. Country of origin as specified in the marketing standards “marking”
7. Lot marking
8. Nutrition declaration (Mandatory content: energy value and the amounts of fat, saturates, carbohydrate, sugars, protein and salt)

For fresh retail packs, the labelling requirements must be applied to each individual pack. For loose packed products, it must visible on the commercial/trade packaging on display.

Commercial/retail labelling requirements

Additionally, there are specific labelling requirements (information) introduced by retailers. Detailed guidelines are developed with instructions to suppliers and mainly refer to point of sale aids for processing transactions.

Retailers often require bar coding of products that conform to international standards GS1 (formerly EAN numbers/bar codes) that are used to identify and capture data on products supplied, stored and sold.

GS1 standards include standards that define unique identification codes (called GS1 identification keys) and associated bar codes which may be used by an information system to refer unambiguously to a product:

- trade item description
- logistics unit
- physical location
- documents
- service relationship
- other entity

The location requirement then uses a 13-digit Global Trade Item Number (GTIN) and the barcode number of the product then comprises both the GTIN and GS1 number combined.

These are assigned to each producer with a unique company number, standardised trade item number etc. This ensures for traceability (risk management) of suppliers throughout a food chain, with no possibility of confusion and easy scanning options at the cash desk.

GS1 is an international organisation and registers companies and products, and issues GS1 numbers, GTIN and bar codes based on registration and annual membership. These fees are undertaken through national representative offices, although not in Suriname so can apply in the Netherlands:

GS1 Netherlands

Stroombaan 16
1171VX
Amstelveen
Netherlands
Phone:
+ 31 20 511 3888
Website:
https://www.gs1.nl
Email Text
Email: info@gs1.nl.

There are no specific labelling requirements specifically developed for watermelons. GS1 provides Guidelines on Requirements for Labels on Fruit & Vegetables that could be found in this link https://www.gs1.nl/sites/default/files/agf_handleiding_legal_labelling_requirements.pdf

7.5 Protection of names (geographic Indications)

For certain products, the use of name/designation to identify, describe or otherwise a product is limited. These limitations can be limited by definition of ingredients (eg only products with certain cocoa solids can be called chocolates and other by geography (based on the method of production in a distinct geographic region).

For fresh produce, specific varieties of fruit and vegetables can be protected when grown in a specific region, with specific characteristics and quality. These are called

geographical indication (GI) and if these are listed on the EU register, no other product from another region can claim or identify itself by the name, if the variety, characteristics are the same. For the fresh watermelons the protected names which no exporter can use are:

- **Anguria Reggiana.**

Figure 8: Key Take away

Packing and Labelling Requirements

- ✓ Watermelon exporters should load and pack products to industry best practise to protect the product during transport and storage.
- ✓ Retail and wholesale pack sizes have to correspond to standardised pallet loading requirements as dictated by the retailer.
- ✓ Both marketing and protective packaging must comply with EU FCM, waste and SPS requirements (whilst the packaging manufacturer is responsible, the exporter should ensure this as consignments with non-compliant packaging can be intercepted and rejected at the border)
- ✓ Mandatory information is required on labels and most retailers expect standardise bar code (GS1) and location (GTIN) numbers.
- ✓ The use of certain protected names (Geographical Indications) for watermelons is forbidden and never be used.

8 Transport, Storage and Logistics

8.1 Introduction

To ensure fresh watermelons arrive in the best condition, safe and saleable, a cold chain is required with specific storage and handling requirements.

8.2 Post-Harvest Handling

Commercial melons for distant markets are usually harvested when mature, but before full ripeness, to minimise handling damage and flesh breakdown. They are at their best for eating when mature but pre-climacteric. Immature melons have a pink flesh, mature melons are red to dark red, and over-mature ones have orange flesh. Actually, the red colour and flavour of watermelons improve during storage for 7 days at or above room temperature, while at 10°C or below colour fades. After watermelons reach optimum harvest maturity, soluble solids content (brix) does not increase during storage.

Immediately after harvest, fresh fruits and vegetables needs to be cooled as soon as possible and within 24 hours, to extend the shelf life and to sustain quality of fruits. However, the pre-cooling technique is hardly used in the storage of watermelons; in case they are subject to this technique, the temperature must be over 7ºC, so as to avoid the fruit damage. Field packing should be stored in shade until transport to the pack house for sorting and packing. Following packing, produce should be transferred to cooling and storage. Cooling helps to inhibit the growth of pathogenic bacteria in fresh produce. In the cooling process, excessive heat is removed from the product by a cooling medium, in most cases by air, water or ice.

When packing, storing and transporting vegetables, the climatic and environmental conditions can affect the storage life and condition at the point of delivery in terms of disease, mould, discolouration and general deterioration of the product within its class.

Watermelons may be affected by several problems during their storage, like diseases produced by fungi and bacteria, chilling injuries or excess of ethylene in the storage room.

Chilling injuries: they occur at temperatures below 4ºC; they are characterised by brown spots in the rind and a bad taste. The low temperatures cause the loss of the pulp's red colour.

Damages caused by ethylene: watermelons are sensitive to ethylene; if they are stored together with this gas they undergo several alterations like loss of firmness and thickness of the rind, reducing their quality in great extent.

Diseases: watermelons may be attacked by diverse fungi or bacteria during their storage. The main entry point is the peduncle area; therefore, it is important to keep a small piece of stem in order to avoid the micro-organisms penetrating through the wound.

8.3 Storage/handling

The watermelon is quite sensitive to cold temperatures and they may be damaged at temperatures below 4.5-7ºC. However, if they are put under high temperatures before their cold storage, they bear much better the low temperatures. For instance, it has been proved that watermelons which have been kept for 4 days at 26ºC are later on stored at 0ºC for 12 days without any damage. If they are not subject to this pre-treatment, they last only for 4 days.

Watermelons cannot be preserved for more than 2-4 weeks. In optimal conditions and for very carefully handled fruit, they may last for 2-3 months, although they lose flavour quality.

Watermelons are sensitive to ethylene, so they must not be transported or stored with produce giving off this gas. If so, the fruit loses the pulp's red colour, it softens and gives off bad smells.

The transport must last at the most between 14 and 21 days. The optimal temperature is 10ºC, and the moisture level must be between

90 and 95%, however relative humidity is not critical, since watermelons do not readily lose moisture.

Watermelons are not adapted to long storage. At low temperatures (<7˚C) they are subject to various symptoms of chilling injury and loss of quality, and at high temperatures they are subject to decay. Around 10˚C is a good compromise. Watermelons should keep at this temperature range for 2 or 3 weeks; some will keep longer. Watermelons held 6 weeks at room temperature will have poor flavour.

Although decay is usually not a major form of deterioration, extended storage at warm temperature will result in more decay than at cooler temperatures. Rough handling will result in serious losses. Watermelons should not be dropped, thrown, or walked on, as internal bruising and flesh breakdown will occur.

The precise treatment of the product by level of maturity is provided in Table 8.

Table 8: Optimum Storage Requirements for Watermelons, post production and during Transport

Product	Temp in ^{O}C	Humidity %	% O^2	% CO^2	Ventilation	Storage life (post harvest to delivery)
Watermelons	8 - 10	90 - 95%	3-5%	10-20%	25 m^3/hr	2-4 weeks

However, it should be noted that watermelons stored at 10˚C have been rated lower in flavour and aroma than those held at 13˚C.

8.4 Transport logistics

When loading from storage into containers/lorries, the acceptable product temperature is a maximum of two degrees Celsius above the carrying temperature and therefore it is recommended to use temperature-controlled loading areas.

In addition, transport trailers and containers should be pre chilled. In damp weather (rain, snow), the cargo must be protected from moisture, as there is otherwise a risk of premature spoilage.

A written cooling order must be obtained from the consignor before loading is begun. This order must always be complied with during the entire transport chain.

8.5 Issuing of Phyto-sanitary (Plant Health) Certificate

As detailed by EU regulation on control at the border, the national competent authority in Suriname is required to issue a plant health certificate to accompany each consignment of watermelons exported. This is issued by the Afdeling Plantenbescherming en Kwaliteitskeuringen under the Ministerie Van Landbouw, Veeteelt En Visserij

For shipments destined for Europe, the exporter must be in possession of an export code (issued by the Agriculture Sub-directorate of the Ministry of Agriculture, Livestock and Fisheries).

The procedure for obtaining the required phyto sanitary health certificate has several steps.

- The exporter applies for inspection of his shipment by submitting an export application form to the Plant Protection and Quality Inspections and contains the following information:
  - The inspection address;
  - Name and address of the sender and recipient;
  - The product(s) to be inspected and their quantities;
  - Production area
  - Country of destination
- Conditions for phytosanitary inspection upon export include:
  - providing a complete statement of the product type and their quantities. This information must correspond with the invoice drawn up.
  - ensure that the inspection takes place on a good facilitated inspection place,

where the shipment is clearly recognizable per product type, and is also stored spatially separate from other shipments and/or production process (including packaging, sorting, etc.)
- ensure that the consignment remains together as units and is identifiable until the phytosanitary inspection is completed.
- do not carry out any actions on the export products after the inspection that could influence the inspection result.

- The department carries out a random inspection. The method of inspection and any phytosanitary measures to be applied) takes place based on the type of export product and the phytosanitary requirements of the destination relevant country of import.

If the competent authority of Suriname is not registered on EU TRACES system, the exporter can upload to his own account so that the plant health certificate is available at the border electronically, together with any other official certificates.

Figure 9: Key Take away

Transport and Storage Requirements

- ✓ Temperature control during sorting, packing and transporting.
- ✓ Store and transport with very precise control over environmental factors, not just temperature (oxygen, humidity etc) to ensure delivery of product in good condition
- ✓ Phyto-sanitary health certificate is needed for each consignment, issued by the Afdeling Plantenbescherming en Kwaliteitskeuringen under the Ministerie Van Landbouw, Veeteelt En Visserij.

9 Identifying Export Marketing Channels

9.1 Introduction

All export marketing strategies are a process, beginning with contact with nominally interested buyers for that market and specific product through to contracting. To identify and "market" to these potential buyers, a marketing mix is used and can include a range of communications activities that will generate interest through the available marketing channels.

The specific channels that a company can use will depend upon the marketing mix of the company itself but can include:

- Advertising and sponsorships (trade press, trade associations, directories, award ceremonies, trade fair brochures, newsletters/websites of professional bodies)
- Optimised Website in the target market (key words and service providers for optimisation, pay per click service, translation, national hosting)
- Networking and face to face (trade fairs, conferences, industry events including awards, trade association membership, professional body membership
- Social Media with targeted sector (general such as LinkedIn, but also specific such as blogs and foras for the sector)
- Editorial review (trade press, trade association, trade fairs)
- On-line buyer and seller platforms (international and national sites that are used by buyers in that market for specific products)

See Appendix 3 for how these channels work

To support this effort, the following section will detail lists of EU related for fresh fruits and vegetables in general, and watermelons specifically:

- Trade press
- Trade associations
- Industry Directories
- Trade Fairs
- Conferences
- National e-market platforms (open platforms for B2C and B2B)

B2B trading platforms (matchmaking offers and sourcing sites based on specific offers rather than product advertising)

These can be used in implementation of the suppliers own marketing strategy.

9.2 Trade press

Journals and trade press can be used as sources of information, advertising and editorial promotion.

FreshPlaza

FreshPlaza is a global trade media platform for the fresh produce industry, providing its readers with the latest information about market developments and trends. A team of writers and editors sources news globally and every weekday an e-newsletter is sent out with dedicated editions by region including Europe.

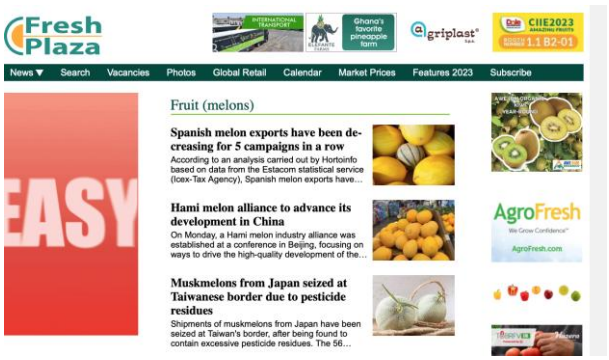
Circulation: 70,000 subscribers

Advertising Cost: https://www.freshplaza.com/europe/content/euro/

contact info@freshplaza.com

Publishing Press releases

url: https://www.freshplaza.com



Send press releases: info@freshplaza.com

To submit editorials: nicky@freshplaza.com

Horti Daily

Daily news magazine for the horticulture sector with read by international growers, suppliers and researchers in the global horticultural industry in many sectors including : technique, cultivation, crop protection, energy, marketing and food safety.

Circulation: 55,000

Advertising cost: https://www.hortidaily.com/content/euro/ info@hortidaily.com

https://www.hortidaily.com/content/contact/

Eurofruit

Eurofruit is a leading magazine for fresh produce buyers and suppliers in Europe and the Middle East. Eurofruit offers access to information, helping industry decision-makers along the supply chain, from production to procurement, from seed developers to supermarkets.

Circulation: 31,000 subscribers

Advertising Cost: https://www.fruitnet.com/eurofruit/advertise

advertising@fruitnet.com

url: http://www.fruitnet.com/eurofruit

Eurofresh

An international distribution magazine for fresh produce and retail sector in EU.

Circulation: 20,000 subscribers

Advertising Cost: https://www.eurofresh-distribution.com/advertisment-charter/

contact info@eurofresh-distribution.com

url: https://www.eurofresh-distribution.com/about-us

9.3 Trade Associations (European Level)

Associations can be used to get in-market contacts, advertising and through membership opportunities for networking.

FruitVegetables EUROPE (EUCOFEL)

EUCOFEL is the European Association representing the EU Fruit and Vegetables production and trade at European level. Members are National and Regional Federations/Associations (mainly PO and APO) and companies from the main European fruit and vegetables producing countries (France, Germany, Greece, Italy, Poland, Portugal and Spain).

Website and direct advertising: eucofel@eucofel.eu

News website: https://eucofel.eu

Freshfel

Freshfel Europe is the European Fresh Produce Association representing the fresh fruit and vegetable supply chain in Europe and beyond. It is a membership association, where its members and associated members are national associations, organisations and companies along the whole supply chain from producers to wholesalers, traders, logistics and retailers.

Membership: Freshfel Europe's members include over 113 companies and national associations of producers, importers, shippers and exporters, distributors, wholesalers, retailers and their service providers, such as logistics and reefer transportation, as well as seed companies and crop protection companies.

Membership cost: from €2,305 per annum

Free access to the annual Freshfel Europe Consumption Monitor normally for purchase at €1,000

Website advertising: not applicable

News website: https://freshfel.org/newsroom/

Events/conferences: https://freshfel.org/annual-event/general-information/

PROFEL: Representing the processed fruit and vegetable sector in Europe

Represents over 500 companies in 11 European countries through national associations or direct company membership.

Membership: Fruit and vegetable processing companies established in a European country. PROFEL membership is presently comprised of 14 national associations representing the fruit and vegetable processing industries in the EU, and 7 corporate members.

Membership cost: https://profel-europe.eu/membership/membership-advantages/

Website advertising: not applicable

News website: https://profel-europe.eu/news/

AIJN - European Fruit Juice Association

AIJN is the representative association of the fruit juice industry in the EU since 1962. It defends the interests of the juice industry including the entire value chain and promotes the sector by engaging with the EU Institutions and other relevant stakeholders.

Membership: Full members are national fruit juice associations from EU Member States and observer Members include individual companies from non-EU countries who are suppliers of raw materials to the EU juice industry and/or associations representing these suppliers.

Membership cost: https://aijn.eu/en/aijn-membership

Website advertising: not available

Events/conferences: https://aijn.eu/en/events

Key national sector associations

- Deutscher Fruchthandelsverband (German association of the fruit and vegetable sector) https://dfhv.de/?id=2
- Chambre Syndicale des Importateurs Français de fruits et légumes frais (France) https://www.csif.eu/sites/en/
- Fresh Produce Centre https://freshproducecentre.com
- Fresh Trade Belgium https://freshtradebelgium.be/en/home/

9.4 Industry Directories

Industry directories can provide very specific buyer lists for use in export marketing activities.

Organic Bio

International directory of organic food wholesale and supply companies. The database contains more than 2000 product groups and addresses of producers, wholesalers, retailers, certification companies and organisations that actively encourage organic production. In addition, the database includes news from important organic organisations and provides a schedule of more than 50 trade shows.

Number of listings: 14,000 companies

Cost of access: €90/year

url: suppliers and manufacturers https://www.organic-bio.com/en/service/production/

Europages

Directory of European companies; a professional portal that encourages business-to-business exchanges.

Number of listings: 3,000,000 companies

Cost of access: contact for prices https://promote-your-business.europages.com/EN/

url: https://www.europages.co.uk

Kompass

Global platform to find & contact product or service suppliers

Number of listings: 57+ mn companies

Cost of access: min €740 for 1,200-3,000 contacts https://gb.kompass.com

9.5 Trade Fairs

Either as exhibitor, visitor or reference to exhibitor catalogue, trade fairs and exhibitions are a good source of contact information. In addition, advertising at the event, in event

magazines and sponsorships, provide a marketing opportunity.

Fruit logistica

FRUIT LOGISTICA covers every single sector of the fresh produce business and provides a complete picture of the latest innovations, products and services at every link in the international supply chain. It thus offers superb networking and contact opportunities to the key decision-makers in every sector of the industry.

Exhibitors: 3,300 from 91 countries

Visitors: 63,000 trade visitors from 140 countries

Stand cost: €216 per m^2

Advertising costs: https://www.fruitlogistica.com/en/exhibitors/registration/

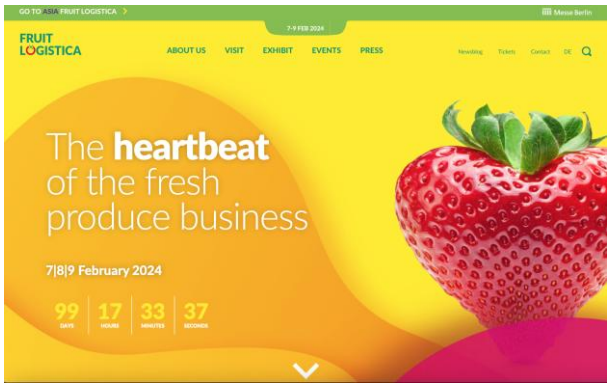
Frequency: Annual

Next event: 7-9 February 2024, Berlin Messe

Duration: 3 days

List of exhibitors (2023 event): https://www.fruitlogistica.com/en/trade-visitors/exhibitor-search/

Event url: https://www.fruitlogistica.com/en/about/



Fruit Attraction

Fruit Attraction is face to face event for the Fruits and Vegetables Industry.

Exhibitors: 2,000 from 137 countries

Visitors: 90,000 trade visitors

Stand cost: From 6 to 32 m^2: €450/m^2

Advertising costs: https://www.ifema.es/en/fruit-attraction/advertising/spaces

Frequency: Annual

Next event: 16-18 April 2024, Sao Paulo, Brazil

Duration: 3 days

URL: https://www.ifema.es/en/fruit-attraction

MACFRUT

Macfrut is a vertical exhibition that represents the entire supply chain, with 11 sectors involved: Seeds, Plant Breeding & Nursery, Crop Technologies, Production, Trading & Retail, Processing Machinery, Packaging Materials, Fresh Cut, Dried Fruit, Logistics and Services.

Exhibitors: 1,115

Visitors: 49,700 visitors

Stand cost: https://www.macfrut.com/en/c/42/design_exhibition_stand

Frequency: Annual

Next event: 8-10 May 2024, Rimini Italy

Duration: 3 days

Event url: https://www.macfrut.com/en/

Anuga

Anuga is the world's largest international food and drinks trade fair based in Cologne, Germany which has had in 100th anniversary in 2019.

Exhibitors: 7,900 from all over the world

Visitors: over 140,000 from 200 countries

Stand cost: https://www.anuga.com/for-exhibitors/become-an-exhibitor/stand-cost-calculation/

Frequency: every two years

Next event: 4-8 October 2025, Cologne

Duration: 5 days

List of exhibitors: https://www.anuga.com/anuga-exhibitors/list-of-exhibitors/

Event url: https://www.anuga.com

Sial

For over 50 years, SIAL Paris has been bringing together industry players to the French capital to share experiences and establish contacts and highlight future industry trends.

Exhibitors: over 7,500

Visitors: not available

Stand cost: https://event.sialparis.com/2024/en/customer-zone/participation-record/informations.htm

Frequency: every two years

Next event: 19-23 October 2024, Paris

Duration: 5 days

List of exhibitors: https://www.theshowp.com/en/sial-paris-exhibitor-list

Event url: https://www.sialparis.com/

9.6 Conferences

Conference attendee lists are a source for buyer lists, but also for advertising and networking (as participant or speaker).

The German Fruit & Vegetable Congress:

Event with plenary presentations and parallel forums about all the major current issues in the supply chain. Includes European importers as well as German retailers, which makes it a relevant venue if you can find a way to meet them efficiently within a day.

Number of Participants: 150 companies represented

Cost of participation: €795 or €195 for online

Frequency: Annual

Next event: n/a

Duration: 2 days

Participating companies DOGK 2020

Fresh Market Conference

Organized annually in Poland since 2008, this event brings together suppliers of fruits, vegetables, and flowers with buyers from retail chains in Central and Eastern Europe

Number of Participants: 200 companies

Cost of participation: not available

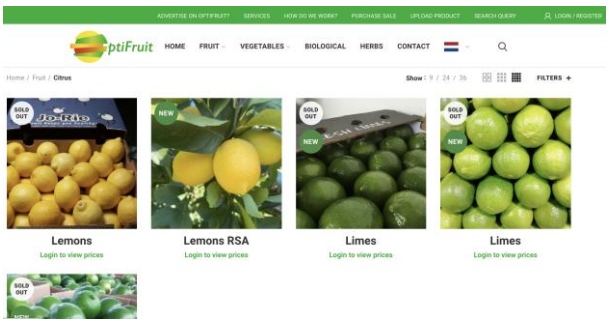
Participants: https://freshmarket.eu/fresh-market-2023/participants/

Date of next event: na

URl: https://freshmarket.eu

9.7 National e-market platforms

Open platforms for B2C and B2B) where both buyers and suppliers can register and transactions are undertaken through the platform.



Agri Marketplace

B2B cloud-based digital marketplace company that specializes in utilizing e-commerce and food traceability with blockchain to create more efficiency and transparency in food

distribution and along different channels of the AgriFood sector.

Registered Buyers: +2200 buyers and sellers

Costs: pricing is based on transaction's value & volume

URL: https://agrimp.com

Artos

Artos Marketplace matches premium buyers with sellers of high-quality ingredients to make thoughtful products.

Registered Buyers: not available

Suppliers: not available

Costs: from €120 per month

URL: https://www.artos.io/company

9.8 B2B trade website

Matchmaking website advertising offers and sourcing based providing connection to the supplier and/or buyer (transactions do not take place through the platform).

AgroMarket24

Modern online marketplace where you may buy and sell agricultural products. Users may offer all kinds of fruits and vegetables and easily communicate with buyers.

Subscribers: not available

Costs: not available

URL: https://agro-market24.eu/about-us

FRUCTIDOR

Fructidor is a leading B2B website for the fruits and vegetable sector.

Subscribers: 10,0000 buyers and importers

Costs: €1490 per year (1,000 visits guaranteed)

URL: https://www.fructidor.com/SoBaPresentation.aspx

Global buyers online

Online advertising platform for FMCG including agricultural products providing trade leads from buyers and importers from all over the world.

Subscribers: 10,000

Costs: €220 per year

URL: https://www.globalbuyersonline.com

Liberty prim

An advertising platform dedicated to all professionals of the fruit and vegetable sector. It connects buyers, sellers or agricultural service or sales companies to each other through offers and advertisements posted on the platform and offers numerous online tools to develop the business.

Subscribers: not available

Costs: not available

URL: https://www.libertyprim.com/en/fruit-and-vegetable-offers

Green Trade Marketplace

This French run website registers any company that buys or sells Organic certified products and provides international visibility with the world's largest database of the industry.

Subscribers: not available

Costs: not available

URL:http://www.greentrade.net/directory/to_buy/490/Fruit+%26+vegetables.html

10 Making the Offer

10.1 Introduction

As indicated in section 2.1 Scope of this Publication, this is not a strategy document for entry to the EU, but rather an aid to provide practical assistance at each stage of the exporting process.

When engaging with potential buyers, the most important thing is to provide enough information to enable a positive impression and decision to engage further to explore business collaboration possibilities. This requires a flexible and open approach to demonstrate the capabilities as a potential supplier.

To do this, a supplier needs to

- Determine the Point of Difference (POD) or selling point that will be the message delivered to potential customers that differentiates the supplier from competitors
- Company profile that sets out the capabilities and capacities available (not only current products/production, but future possibilities)
- Price quotes that demonstrates a realistic understanding of the market and gives the potential buyer a benchmark base to start negotiating
- Safety systems and standards used to reassure the potential buyer that the supplier understands food safety and hygienic production practises
- Open approach so first introductions to potential buyers are positive and lead to further discussions (rarely does the first approach lead to an immediate contract)

10.2 Determining POD

The selling point of the supplier does not always have to be "unique" but does have to be attractive to the prospective buyer; that is, meet some specific needs they buyer has. The POD is what differentiates the supplier from the majority of the competition and makes them appealing to the buyer

This can be reliability, production and supply in off season, or quick response to additional demands in season, large supplier of single product or bulk supplier of a range. A POD could be a niche that is not widely available and so sought after. Whatever the POD, it needs to aim at the buyer and market requirements/trends. Once the POD is identified, it should be communicated consistently.

10.3 Supplier Profile

The supplier profile is the basic document that is required to get the potential buyer interested. The focus again is providing sufficient information to the prospective buyer.

Whether this information (or at least how much of this profile) is made public (eg on the webpage) and how much is just held back for individual prospective buyers, is up to the company itself, but all information should be available.

The basic information required by buyers include:

Composition of business: details of the supplier and its associates such as single farm, farm with out-growers or group of suppliers/cooperative. For larger buyers, volumes can be an issue so knowing the size and composition of the "total" group is important.

Climate, soil and water availability: sometimes buyers consider trends and forecasts of product demand (and shortages) that they will have to bridge in the future. Understanding the climate, soil and water availability on offer can encourage collaborations that the supplier has not thought of.

Production: is the current offer and will include for each product, the varieties, areas under cultivation, seasons, production and yields through the season.

Post Harvest ***Facilities***: Packhouse (including cool down areas) and storage facilities available (including volumes, temperature and other factors) and description of how the supplier(s) handle the product quickly and efficiently.

Logistics: Dispatching turnaround (order to dispatch time) and overall delivery times by market to indicate lead times.

Quality and certifications: any certification of farm or facilities and testing facilities available/used.

Contact details: should have the "call to action" which explicitly state what steps to take next.

Always include messaging (point of difference) throughout the marketing materials.

Figure 10: Template for Supplier Profile

[Name of Company]: Profile

INTRODUCTION

- Short history of the business and ownership

COMPOSITION OF BUSINESS

- Total area of cultivation (actual and potential); detail under cover and open
- Number of businesses involved areas, structure of businesses and organisation (eg joint packhouse and independent farms)
- Employees (full time and casual)

CLIMATE, SOIL AND WATER AVAILABILITY

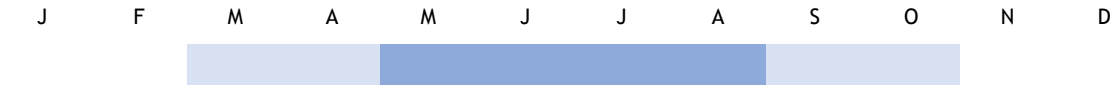
- Climate profile: climate zone designation, monthly rainfall, temperature, hours of sun
- Soil profile[7]
    - Type: [for example]
        - Brown earths. Fertile soils, characteristically pH range of 5.5 – 6.5, originally formed under broad-leaved woodlands
        - Podzols. Acidic soils, leached of nutrients, formed under coniferous forest or heather moorland with distinct layers or horizons
        - Gley Soils. Restricted drainage, formed under meadow, alluvium or estuarine conditions
        - Peat. These soils are high in organic matter. Formed in cool climates and a product of anaerobic conditions. These soils are not necessarily acidic
        - Calcareous. Characterised by high calcium content and a pH range of 6.5–8.0.
    - Texture: Clay, Silt, Fine sand, Medium sand, Coarse sand, Stones
    - Chemical Analysis: Standard soil analysis for phosphorus (P), potassium (K) and magnesium (Mg), or other nutrients (except nitrogen)
- Water availability from rainfall and irrigation (sources, volume and flow rates)

PRODUCTION

Product X *For each Variety*

[7] For example, UK soil association guidelines https://www.soilassociation.org/farmers-growers/technicalinformation/technical-guides/

- Average Size
- Class
- Packaging size and grade(s) available (assured FCM safe and recyclable)
- # pack per box (or lose) specify weight of box
- # box per pallet
- Total yield per annum (estimated or range of Metric tonnes produced)
- Seasons (either indicate colour or production levels)



POST HARVEST FACILITIES

- Packhouse facilities: description of process (field, cooling, sorting, packing, storage, testing, dispatch; including timings and volumes)

LOGISTICS

- Optimum Storage Requirements post production and during Transport

Product	Temp in ^{O}C	Humidity %	O2	%	CO2%	Ventilation (flow rate)	Storage life (post harvest to delivery)

- Loading, routes to market (ship, road) and timings

QUALITY AND CERTIFICATIONS

- List certificates
- Details of in-house laboratory and testing facilities
- External laboratories used and accreditation

CONTACT DETAILS

- Call to action {state what an interested buyer should do}
- Contact information – specific name, email and phone number

10.4 Price Quotes

Prices are largely dictated by the buyer but there is flexibility so showing an understanding will help in negotiations.

This needs a demonstration of understanding the margins with a recommended retail price matching current prices and wholesale pricing.

If sending a mixed crop, there may be possibilities to leverage margins across the group of product. The price listing should therefore be prepared for each client and each month.

Be prepared to negotiate as retailers will expect initial discounts and in-season, may offer consumers discounts that they will pass part on (eg 2 for 1 offers, although will come with higher volumes).

To determine retail and wholesale prices use the following resources:

- GS1 (EAN) number (see above)
- Supplier price to distributer/importer (CIF) (refer also to competition on Eurostat)
- Distributer price to Retailer (wholesale price equivalent): Use EU market observatory or national sites (eg BZL[8] in Germany). Care should be taken for price per volume (eg quoted price per kg versus packaging size)
- Recommended retail price (RRP): can be estimated from online retail shops
- VAT rate: for each market given on DG Trade Market Access database by product (HS Code)

Figure 11: Price Offer Template

[Name of Company]: Price Offer

Art.-Nr	Product	ITEM	Packaging	Content / Volume	EAN (now GS1)	Distributor price net net [A]	Distributor margin [B]	Retailer price net [C]	Retail margin [D]	Consumer Price net [E]	VAT [F]	RRP [G]	Total Margin [H]
	CATEGORY												
3101	Fresh Watermelons	Ready to Eat Cherry (VINE)	Plastic punnet, closed pack	250g	4007460065422	€1.12[9]	12.5 %	€1.28	28.1%	**€1.64**	**7%**	**€1.75**[10]	31.7%
							=[C-A]/C		=[E-C]/E	=RRP/(1+F)			=[E-A]/E

10.5 Quality Control and Standards

Whilst accredited facilities and certified standards are desirable, these are often costly. For a buyer, the important thing is that they first can see a "system" and understanding of legal and market requirements.

Therefore, although eventually they are likely to require certification, demonstration of a system in place that can be certified in future is important; that is, the supplier can show that they are on a path to good farming practise and food safety standards. This gives reassurance and confidence to prospective buyers. It also does not lock the supplier in to a particular standard that the buyer may not want (eg BRC versus IFS). The supplier can offer to move towards the desired certification once orders are in place.

However, this means that to demonstrate the progress made, the protocols, procedure manuals and documentation for a basic system should be in place and available for review by the buyer. Larger buyers have been known to provide support in completing the process to their requirements if they see long term benefits for their investment.

Since the buyer may request a review of the systems the supplier have, it is important to have documentation available for review.

Here you must distinguish between good agricultural practise (GAP) and food safety standards. A farm with packhouse will need

[8] https://www.ble.de/DE/BZL/Daten-Berichte/Obst-Gemuese/obst-gemuese_node.html;jsessionid=D79C6521BD4477A3B1E16AB2375D1DF2.2_cid335#doc8978758bodyText1

[9] Entry price as of April 2021 per kg /4 but cherry is more expensive, in retail x4 approx. to round

[10] Retail price as of April 2021 (premium)

both, GAP for the field, FSSM for the packhouse.

If the supplier has an in house laboratory (whether or not it is accredited or certified), detail the tests that can be undertaken, the equipment and consumables used.

Also detail the external tests that are undertaken in which facilities and their accreditation/certification.

Details of all the quality systems can be prepared in a document/brochure and made available to potential buyers.

Figure 12: Quality Systems Template

[Name of Company]: Quality Systems in Place

GAP and Food Safety Systems Used by the Supplier

1. Good Agricultural Practice (documents available on request) (if certified detail)
   - Manual (FSSM): setting out the outline for defining policy and approach to food safety and quality control based on ISO 22000
   - FSSM Procedures: providing detailed procedures for each process
   - Forms: quality control forms used to document implementation of procedures
2. Food Safety System (documents available on request) (if certified detail)
   - Manual (FSSM): setting out the outline for defining policy and approach to food safety and quality control based on ISO 22000
   - FSSM Procedures: providing detailed procedures for each process
   - Forms: quality control forms used to document implementation of procedures
3. In-house Testing Facilities

   For each test, list equipment (EN standard if applicable), consumables used (eg test trips) with EN standard as applicable [can include water quality, micro biological testing, pesticide residual etc)
4. External Testing Facility

   For each test sent to external laboratories detail the accreditation number (ISO 17025) and the test undertaken to which standard

10.6 First Introductions

Export marketing interactions with are rarely a one-off meeting/contact which leads to an immediate contract. Exporting marketing is a process from identifying nominally interested buyers (those buyers that are purchasing the product you are offering) to eventually making a sale itself with a new buyer. Therefore, export marketing of fresh fruits and vegetables to the EU is all about relationship building over time.

Figure 13: Export Marketing Process

1. Nominally interested buyers: buyers in the target market that currently purchase the product being supplied

2. Qualified leads: buyers in the target market that are looking for alternative suppliers
3. Sales ready opportunities: buyers that express interest in the specific supplier
4. Interested prospects: buyers that engage in serious discussions
5. Sales: those buyers that enter into contracts or purchase agreements

This is also true for B2B events such as trade fairs and although many exhibitors expect a contract at the end of a 3-day show, this is unrealistic. The point of the trade fair is to get contacts of qualified leads (those contacts that are looking for new suppliers) or sales ready opportunities (those expressing interest in the specific supplier); and in both cases, these need follow up.

The marketing strategy of the individual supplier will detail how it intends to use its own marketing mix to go through the export marketing process (using marketing channels as specified in chapter 9). However, the first approach can make a difference in converting buyers at each stage of the export marketing process.

To build a relationship and increase marketing conversion rates, it is important not to be too direct or blunt (product name, volumes, price – sign contract or leave it; most will leave it).

The first introduction must be to be open and friendly and responding to their needs. To do this:

- Inform them on the offering
- LISTEN to their requirements
- Adapt as necessary to meet the needs in mutually beneficial cooperation

Appendix

Appendix 1: Pesticide Residuals

1	1,1-dichloro-2,2-bis(4-ethylphenyl)ethane (F)	0.01*
2	1,2-dibromoethane (ethylene dibromide) (F)	0.01*
3	1,2-dichloroethane (ethylene dichloride) (F)	0.01*
228	1,3-Dichloropropene	0.01*
2830	1,4-dimethylnaphthalene (R),(F)	0.05
229	1-Naphthylacetamide and 1-naphthylacetic acid (sum of 1-naphthylacetamide and 1-naphthylacetic acid and its salts, expressed as 1-naphythlacetic acid)	0.06*
3030	1-methyl-3-(trifluoromethyl)-1H-pyrazole-4-carboxamide (PAM)	
3030	1-methyl-3-(trifluoromethyl)-1H-pyrazole-4-carboxamide (PAM)	
4	1-methylcyclopropene	0.01*
6	2,4,5-T (sum of 2,4,5-T, its salts and esters, expressed as 2,4,5-T) (F)	0.01*
7	2,4-D (sum of 2,4-D, its salts, its esters and its conjugates, expressed as 2,4-D)	0.05*
5	2,4-DB (sum of 2,4-DB, its salts, its esters and its conjugates, expressed as 2,4-DB) (R)	0.01*
2530	2,5-dichlorobenzoic acid methylester (sum of 2,5-dichlorobenzoic acid and its ester expressed as 2,5-dichlorobenzoic acid methylester)	0.01*
2397	2-amino-4-methoxy-6-(trifluormethyl)-1,3,5-triazine (AMTT), resulting from the use of tritosulfuron (F)	0.01*
2343	2-naphthyloxyacetic acid	0.01*
2058	2-phenylphenol (sum of 2-phenylphenol and its conjugates, expressed as 2-phenylphenol) (R),(F)	0.01*
2418	3-decen-2-one	0.1*
2605	6-Benzyladenine	0.01*
2318	8-hydroxyquinoline (sum of 8-hydroxyquinoline and its salts, expressed as 8-hydroxyquinoline)	0.01*
8	Abamectin (sum of avermectin B1a, avermectin B1b and delta-8,9 isomer of avermectin B1a, expressed as avermectin B1a) (R),(F)	0.01*
9	Acephate	0.01*
2930	Acequinocyl (F)	0.01*
10	Acetamiprid (R)	0.2
232	Acetochlor	0.01*
11	Acibenzolar-S-methyl (sum of acibenzolar-S-methyl and acibenzolar acid (free and conjugated), expressed as acibenzolar-S-methyl)	0.15
233	Aclonifen	0.01*
234	Acrinathrin (F)	0.02*
235	Alachlor	0.01*
12	Aldicarb (sum of aldicarb, its sulfoxide and its sulfone, expressed as aldicarb)	0.02*
13	Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin) (F)	0.03
2694	Ametoctradin (R),(F)	3.0
236	Amidosulfuron (R),(A)	0.01*
2671	Aminopyralid (sum of aminopyralid, its salts and its conjugates, expressed as aminopyralid) (R)	0.01*
2080	Amisulbrom	0.01*
14	Amitraz (amitraz including the metabolites containing the 2,4 -dimethylaniline moiety expressed as amitraz)	0.05*
15	Amitrole	0.01*
237	Anilazine	0.01*
2330	Anthraquinone (F)	0.01*
16	Aramite (F)	0.01*
238	Asulam	0.05*
17	Atrazine (F)	0.05*
239	Azadirachtin	1.0
18	Azimsulfuron	0.01*
19	Azinphos-ethyl (F)	0.02*
20	Azinphos-methyl (F)	0.01*
21	Azocyclotin and Cyhexatin (sum of azocyclotin and cyhexatin expressed as cyhexatin)	0.01*
22	Azoxystrobin	1.0
23	Barban (F)	0.01*
240	Beflubutamid	0.02*
24	Benalaxyl including other mixtures of constituent isomers including benalaxyl-M (sum of isomers)	0.15
241	Benfluralin (F)	0.02*
2488	Bensulfuron-methyl	0.01*
26	Bentazone (Sum of bentazone, its salts and 6-hydroxy (free and conjugated) and 8-hydroxy bentazone (free and conjugated), expressed as bentazone) (R)	0.03*
242	Benthiavalicarb (Benthiavalicarb-isopropyl(KIF-230 R-L) and its enantiomer (KIF-230 S-D) and its diastereomers(KIF-230 S-L and KIF-230 R-D), expressed as benthiavalicarb-isopropyl) (A)	0.01*

2333	Benzalkonium chloride (mixture of alkylbenzyldimethylammonium chlorides with alkyl chain lengths of C8, C10, C12, C14, C16 and C18)	0.1
2415	Benzovindiflupyr	0.01*
2536	Bicyclopyrone (sum of bicyclopyrone and its structurally related metabolites determined as the sum of the common moieties 2-(2-methoxyethoxymethyl)-6-(trifluoromethyl) pyridine-3-carboxylic acid (SYN503780) and (2-(2-hydroxyethoxymethyl)-6- (trifluoromethyl)pyridine-3-carboxylic acid (CSCD686480), expressed as bicyclopyrone)	
27	Bifenazate (sum of bifenazate plus bifenazate-diazene expressed as bifenazate) (F)	0.5
243	Bifenox (F)	0.01*
28	Bifenthrin (sum of isomers) (F)	0.01*
2148	Biphenyl	0.01*
2517	Bispyribac (sum of bispyribac, its salts and its esters, expressed as bispyribac)	0.01*
30	Bitertanol (sum of isomers) (F)	0.01*
2693	Bixafen (R),(F)	0.01*
2344	Bone oil	0.01*
244	Boscalid (R),(F)	3.0
2510	Bromadiolone	0.01*
245	Bromide ion	30.0
31	Bromophos-ethyl (F)	0.01*
32	Bromopropylate (F)	0.01*
33	Bromoxynil and its salts, expressed as bromoxynil	0.01*
246	Bromuconazole (sum of diasteroisomers) (F)	0.01*
2631	Bupirimate (R),(F),(A)	0.3
248	Buprofezin (F)	0.01*
249	Butralin	0.01*
250	Butylate	0.01*
2275	Cadusafos	0.01*
34	Camphechlor (Toxaphene) (R),(F)	0.01*
35	Captafol (F)	0.02*
36	Captan (Sum of captan and THPI, expressed as captan) (R)	0.03*
37	Carbaryl (F)	0.01*
38	Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim) (R)	0.1*
251	Carbetamide (sum of carbetamide and its S isomer)	0.01*
39	Carbofuran (sum of carbofuran (including any carbofuran generated from carbosulfan, benfuracarb or furathiocarb) and 3-OH carbofuran expressed as carbofuran) (R)	0.01*
2346	Carbon monoxide	0.01*
41	Carbon tetrachloride	
252	Carboxin (carboxin plus its metabolites carboxin sulfoxide and oxycarboxin (carboxin sulfone), expressed as carboxin)	0.03*
2633	Carfentrazone-ethyl (sum of carfentrazone-ethyl and carfentrazone, expressed as carfentrazone-ethyl) (R)	0.02*
44	Cartap	
2670	Chlorantraniliprole (F)	0.3
2378	Chlorate (A)	0.08
45	Chlorbenside (F)	0.01*
46	Chlorbufam (F)	0.01*
47	Chlordane (sum of cis- and trans-chlordane) (R),(F)	0.01*
254	Chlordecone (F)	0.02
48	Chlorfenapyr	0.01*
49	Chlorfenson (F)	0.01*
50	Chlorfenvinphos (F)	0.01*
253	Chloridazon (sum of chloridazon and chloridazon-desphenyl, expressed as chloridazon) (R)	0.03*
51	Chlormequat (sum of chlormequat and its salts, expressed as chlormequat-chloride)	0.01*
52	Chlorobenzilate (F)	0.02*
772	Chloropicrin	0.005*
53	Chlorothalonil (R)	0.01*
258	Chlorotoluron	0.01*
54	Chloroxuron (F)	0.01*
55	Chlorpropham (R),(F)	0.01*
56	Chlorpyrifos (F)	0.01*
57	Chlorpyrifos-methyl (R),(F)	0.01*
255	Chlorsulfuron	0.01*
256	Chlorthal-dimethyl	0.01*
257	Chlorthiamid	0.01*
58	Chlozolinate (F)	0.01*
773	Chromafenozide	0.01*
59	Cinidon-ethyl (sum of cinidon ethyl and its E-isomer)	0.05*
259	Clethodim (sum of Sethoxydim and Clethodim including degradation products calculated as Sethoxydim)	0.5
260	Clodinafop and its S-isomers and their salts, expressed as clodinafop (F)	0.02*
60	Clofentezine (R)	0.02*
774	Clomazone	0.01*
261	Clopyralid	0.5

775	Clothianidin	0.02*
262	Copper compounds (Copper)	5.0
2465	Coumaphos	
263	Cyanamide including salts expressed as cyanamide	0.01*
2351	Cyantraniliprole	0.4
61	Cyazofamid	0.15
62	Cyclanilide (F)	0.05*
2500	Cyclaniliprole	0.01*
3050	Cycloxydim including degradation and reaction products which can be determined as 3-(3-thianyl)glutaric acid S-dioxide (BH 517-TGSO2) and/or 3-hydroxy-3-(3-thianyl)glutaric acid S-dioxide (BH 517-5-OH-TGSO2) or derivatives thereof, calculated in total as cycloxydim	0.09*
776	Cyflufenamid (sum of cyflufenamid (Z-isomer) and its E-isomer, expressed as cyflufenamid) (R),(A)	0.05
3031	Cyflumetofen (sum of isomers)	0.01*
63	Cyfluthrin (cyfluthrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.01*
64	Cyhalofop-butyl	0.02*
265	Cymoxanil	0.4
65	Cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.2
266	Cyproconazole (sum of isomers) (F)	0.05*
267	Cyprodinil (R),(F)	0.6
66	Cyromazine	0.01*
68	DDT (sum of p,p´-DDT, o,p´-DDT, p-p´-DDE and p,p´-TDE (DDD) expressed as DDT) (F)	0.05*
84	DNOC	0.01*
268	Dalapon	0.05*
67	Daminozide (sum of daminozide and 1,1-dimethyl-hydrazine (UDHM), expressed as daminozide)	0.06*
69	Deltamethrin (cis-deltamethrin) (F)	0.02*
2518	Denatonium benzoate (sum of denatonium and its salts, expressed as denatonium benzoate)	0.01*
70	Desmedipham	0.01*
71	Di-allate (sum of isomers) (F)	0.01*
72	Diazinon (F)	0.01*
270	Dicamba	0.05*
271	Dichlobenil	0.01*
272	Dichlorprop (Sum of dichlorprop (including dichlorprop-P), its salts, esters and conjugates, expressed as dichlorprop) (R)	0.02*
73	Dichlorvos	0.01*
274	Dicloran	0.01*
74	Dicofol (sum of p, p´ and o,p´ isomers) (F)	0.02*
2332	Didecyldimethylammonium chloride (mixture of alkyl-quaternary ammonium salts with alkyl chain lengths of C8, C10 and C12)	0.05
275	Diethofencarb	0.01*
276	Difenoconazole	0.2
277	Diflubenzuron (R),(F)	0.01*
278	Diflufenican (F)	0.01*
2383	Difluoroacetic acid (DFA)	0.15
279	Dimethachlor	0.01*
75	Dimethenamid including other mixtures of constituent isomers including dimethenamid-P (sum of isomers)	0.01*
280	Dimethipin	0.05*
76	Dimethoate	0.01*
281	Dimethomorph (sum of isomers)	0.5
282	Dimoxystrobin (R),(A)	0.01*
283	Diniconazole (sum of isomers)	0.01*
284	Dinocap (sum of dinocap isomers and their corresponding phenols expressed as dinocap) (Where only meptyldinocap or its corresponding phenol are detected but none of the other components constituting dinocap (including their corresponding phenols), the MRLs and residue definition of meptyldinocap are to be applied.) (F)	0.02*
77	Dinoseb (sum of dinoseb, its salts, dinoseb-acetate and binapacryl, expressed as dinoseb)	0.02*
2322	Dinotefuran	
78	Dinoterb (sum of dinoterb, its salts and esters, expressed as dinoterb)	0.01*
79	Dioxathion (sum of isomers) (F)	0.01*
80	Diphenylamine	0.05*
81	Diquat	0.01*
82	Disulfoton (sum of disulfoton, disulfoton sulfoxide and disulfoton sulfone expressed as disulfoton) (F)	0.01*
285	Dithianon	0.01*
83	Dithiocarbamates (dithiocarbamates expressed as CS2, including maneb, mancozeb, metiram, propineb, thiram and ziram)	1.5
286	Diuron	0.01*
2345	Dodemorph	0.01*
287	Dodine	0.01*
289	EPTC (ethyl dipropylthiocarbamate)	0.01*

3010	Emamectin B1a and its salts, expressed as emamectin B1a (free base) (R),(F)	0.008
85	Endosulfan (sum of alpha- and beta-isomers and endosulfan-sulphate expressed as endosulfan) (F)	0.05*
86	Endrin (F)	0.01*
288	Epoxiconazole (F)	0.01*
290	Ethalfluralin	0.01*
2228	Ethametsulfuron-methyl	0.01*
87	Ethephon	0.05*
88	Ethion	0.01*
2632	Ethirimol (R),(F),(A)	0.15
89	Ethofumesate (Sum of ethofumesate, 2-keto–ethofumesate, open-ring-2-keto-ethofumesate and its conjugate, expressed as ethofumesate)	0.03*
292	Ethoprophos	0.01*
293	Ethoxyquin (F)	0.05*
90	Ethoxysulfuron	0.01*
91	Ethylene oxide (sum of ethylene oxide and 2-chloro-ethanol expressed as ethylene oxide) (F)	0.02*
294	Etofenprox (F)	0.01*
92	Etoxazole	0.05
295	Etridiazole	0.05*
93	Famoxadone (F)	0.01*
94	Fenamidone	0.01*
95	Fenamiphos (sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos)	0.01*
96	Fenarimol	0.05
2692	Fenazaquin (F)	0.07
297	Fenbuconazole (sum of constituent enantiomers)	0.3
97	Fenbutatin oxide (F)	0.01*
98	Fenchlorphos (sum of fenchlorphos and fenchlorphos oxon expressed as fenchlorphos)	0.01*
99	Fenhexamid (F)	0.01*
100	Fenitrothion	0.01*
298	Fenoxaprop-P	0.1
299	Fenoxycarb	0.01*
2513	Fenpicoxamid (R),(F)	0.01*
777	Fenpropathrin	0.01*
300	Fenpropidin (sum of fenpropidin and its salts, expressed as fenpropidin) (R),(A)	0.01*
101	Fenpropimorph (sum of isomers) (R),(F)	0.01*
2281	Fenpyrazamine (F)	0.01*
301	Fenpyroximate (R),(F),(A)	0.01*
102	Fenthion (fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as parent) (F)	0.01*
103	Fentin (fentin including its salts, expressed as triphenyltin cation) (F)	0.02*
105	Fenvalerate (any ratio of constituent isomers (RR, SS, RS & SR) including esfenvalerate) (R),(F)	0.02*
302	Fipronil (sum fipronil + sulfone metabolite (MB46136) expressed as fipronil) (F)	0.005*
107	Flazasulfuron	0.01*
778	Flonicamid (sum of flonicamid, TFNA and TFNG expressed as flonicamid) (R)	0.4
108	Florasulam	0.01*
2545	Florpyrauxifen-benzyl	0.01*
304	Fluazifop-P (sum of all the constituent isomers of fluazifop, its esters and its conjugates, expressed as fluazifop)	0.01*
305	Fluazinam (F)	0.01*
779	Flubendiamide (F)	0.2
306	Flucycloxuron (F)	0.01*
109	Flucythrinate (flucythrinate including other mixtures of constituent isomers (sum of isomers)) (F)	0.01*
307	Fludioxonil (R),(F)	0.3
110	Flufenacet (sum of all compounds containing the N fluorophenyl-N-isopropyl moiety expressed as flufenacet)	0.05*
308	Flufenoxuron (F)	0.01*
309	Flufenzin	0.02*
2466	Flumequine	
2380	Flumetralin (F)	0.01*
111	Flumioxazine	0.02*
780	Fluometuron	0.01*
781	Fluopicolide	0.5
2276	Fluopyram (R)	0.4
2276	Fluopyram (R)	0.4
782	Fluoride ion	0.2
782	Fluoride ion	0.2
783	Fluoroglycofene	0.01*
310	Fluoxastrobin (sum of fluoxastrobin and its Z-isomer) (R)	0.01*
2381	Flupyradifurone	0.15

112	Flupyrsulfuron-methyl	0.02*
311	Fluquinconazole (F)	0.01*
312	Flurochloridone (sum of cis- and trans- isomers) (F)	0.01*
113	Fluroxypyr (sum of fluroxypyr, its salts, its esters, and its conjugates, expressed as fluroxypyr) (R),(A)	0.01*
784	Flurprimidole	0.01*
114	Flurtamone	0.01*
313	Flusilazole (R),(F)	0.01*
2539	Flutianil	0.01*
314	Flutolanil (R)	0.01*
315	Flutriafol	0.3
2655	Fluvalinate (sum of isomers) resulting from the use of tau-fluvalinate (F)	0.09
2268	Fluxapyroxad (F)	0.15
115	Folpet (sum of folpet and phtalimide, expressed as folpet) (R)	0.03*
785	Fomesafen	0.01*
116	Foramsulfuron	0.01*
303	Forchlorfenuron	0.01*
316	Formetanate: Sum of formetanate and its salts expressed as formetanate (hydrochloride)	0.3
117	Formothion	0.01*
317	Fosetyl-Al (sum of fosetyl, phosphonic acid and their salts, expressed as fosetyl)	75.0
118	Fosthiazate	0.02*
318	Fuberidazole	0.01*
786	Furfural	1.0
320	Glufosinate (sum of glufosinate isomers, its salts and its metabolites 3-[hydroxy(methyl)phosphinoyl]propionic acid (MPP) and N-acetyl-glufosinate (NAG), expressed as glufosinate)	0.03*
120	Glyphosate	0.1*
321	Guazatine (guazatine acetate, sum of components)	0.05*
2371	Halauxifen-methyl (sum of halauxifen-methyl and X11393729 (halauxifen), expressed as halauxifen-methyl)	0.02*
787	Halosulfuron methyl	0.01*
322	Haloxyfop (Sum of haloxyfop, its esters, salts and conjugates expressed as haloxyfop (sum of the R- and S- isomers at any ratio)) (R),(F)	0.01*
121	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor) (F)	0.01*
122	Hexachlorobenzene (F)	0.01*
123	Hexachlorocyclohexane (HCH), alpha-isomer (F)	0.01*
124	Hexachlorocyclohexane (HCH), beta-isomer (F)	0.01*
126	Hexaconazole	0.01*
2712	Hexythiazox (any ratio of constituent isomers) (F)	0.07
127	Hydrogen cyanide (cyanides expressed as hydrogen cyanide)	
324	Hymexazol	0.02*
129	Imazalil (any ratio of constituent isomers) (R)	0.01*
130	Imazamox (Sum of imazamox and its salts, expressed as imazamox)	0.05*
2277	Imazapic	0.01*
2349	Imazapyr	
325	Imazaquin	0.01*
131	Imazosulfuron	0.01*
326	Imidacloprid	0.15
2352	Indolylacetic acid	0.1*
2353	Indolylbutyric acid	0.1*
132	Indoxacarb (sum of indoxacarb and its R enantiomer) (F)	0.5
133	Iodosulfuron-methyl (sum of iodosulfuron-methyl and its salts, expressed as iodosulfuron-methyl)	0.01*
134	Ioxynil (sum of ioxynil and its salts, expressed as ioxynil)	0.01*
788	Ipconazole (F)	0.01*
135	Iprodione (R)	0.01*
136	Iprovalicarb	0.2
2463	Isofetamid	0.01*
2285	Isoprothiolane	0.01*
137	Isoproturon	0.01*
2168	Isopyrazam (sum of isomers) (F)	0.3
327	Isoxaben	0.01*
138	Isoxaflutole (sum of isoxaflutole and its diketonitrile-metabolite, expressed as isoxaflutole)	0.02*
139	Kresoxim-methyl (R)	0.5
789	Lactofen	0.01*
140	Lambda-cyhalothrin (includes gamma-cyhalothrin) (sum of R,S and S,R isomers) (F)	0.06
328	Lenacil	0.1*
141	Lindane (Gamma-isomer of hexachlorocyclohexane (HCH)) (F)	0.01*

142	Linuron	0.01*
329	Lufenuron (any ratio of constituent isomers) (F)	0.4
145	MCPA and MCPB (MCPA, MCPB including their salts, esters and conjugates expressed as MCPA) (R),(F)	0.05*
143	Malathion (sum of malathion and malaoxon expressed as malathion)	0.02*
144	Maleic hydrazide	0.2*
2382	Mandestrobin	0.01*
790	Mandipropamid (any ratio of constituent isomers)	0.3
146	Mecarbam	0.01*
147	Mecoprop (sum of mecoprop-p and mecoprop expressed as mecoprop)	0.05*
2542	Mefentrifluconazole	0.01*
148	Mepanipyrim	0.01*
330	Mepiquat (sum of mepiquat and its salts, expressed as mepiquat chloride)	0.02*
791	Mepronil	0.01*
792	Meptyldinocap (sum of 2,4 DNOPC and 2,4 DNOP expressed as meptyldinocap)	0.5
149	Mercury compounds (sum of mercury compounds expressed as mercury)	0.01*
150	Mesosulfuron-methyl	0.01*
151	Mesotrione	0.01*
793	Metaflumizone (sum of E- and Z- isomers)	0.02*
152	Metalaxyl and metalaxyl-M (metalaxyl including other mixtures of constituent isomers including metalaxyl-M (sum of isomers)) (R)	0.2
331	Metaldehyde	0.05*
333	Metamitron	0.01*
334	Metazachlor (Sum of metabolites 479M04, 479M08 and 479M16, expressed as metazachlor) (R)	0.02*
335	Metconazole (sum of isomers) (F)	0.02*
336	Methabenzthiazuron	0.01*
153	Methacrifos	0.01*
154	Methamidophos	0.01*
155	Methidathion	0.02*
337	Methiocarb (sum of methiocarb and methiocarb sulfoxide and sulfone, expressed as methiocarb)	0.03*
157	Methomyl	0.015
338	Methoprene	0.02*
158	Methoxychlor (F)	0.01*
159	Methoxyfenozide (F)	0.01*
2711	Methylisothiocyanate (resulting from the use of dazomet or metam)	0.1
156	Metolachlor and S-metolachlor (metolachlor including other mixtures of constituent isomers including S-metolachlor (sum of isomers))	0.05*
339	Metosulam	0.01*
340	Metrafenone (F)	0.5
341	Metribuzin	0.1*
160	Metsulfuron-methyl	0.01*
161	Mevinphos (sum of E- and Z-isomers)	0.01*
162	Milbemectin (sum of milbemycin A4 and milbemycin A3, expressed as milbemectin)	0.02*
163	Molinate	0.01*
164	Monocrotophos	0.01*
165	Monolinuron	0.01*
342	Monuron	0.01*
166	Myclobutanil (sum of constituent isomers) (R)	0.3
343	Napropamide (sum of isomers)	0.01*
344	Nicosulfuron	0.01*
2099	Nicotine	0.01*
167	Nitrofen (F)	0.01*
3130	Novaluron (sum of constituent isomers) (F)	0.01*
2470	Omethoate	0.01*
794	Orthosulfamuron	0.01*
795	Oryzalin (F)	0.01*
168	Oxadiargyl	0.01*
346	Oxadiazon	0.01*
796	Oxadixyl	0.01*
169	Oxamyl	0.01
170	Oxasulfuron	0.01*
2476	Oxathiapiprolin	0.2
347	Oxycarboxin	0.01*
171	Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)	0.01*
2870	Oxyfluorfen (F)	0.01*
349	Paclobutrazol (sum of constituent isomers)	0.01*
2347	Paraffin oil (CAS 64742-54-7)	0.01*
172	Paraquat	0.02*

173	Parathion (F)	0.05*
174	Parathion-methyl (sum of Parathion-methyl and paraoxon-methyl expressed as Parathion-methyl)	0.01*
175	Penconazole (sum of constituent isomers) (F)	0.15
2653	Pencycuron (sum of pencycuron and pencycuron-PB-amine, expressed as pencycuron) (R),(F),(A)	0.02*
176	Pendimethalin (F)	0.05*
2594	Penflufen (sum of isomers) (F)	0.01*
797	Penoxsulam	0.01*
3111	Penthiopyrad (F)	0.6
467	Permethrin (sum of isomers) (F)	0.05*
177	Pethoxamid	0.01*
2348	Petroleum oils (CAS 92062-35-6)	0.01*
178	Phenmedipham	0.01*
351	Phenothrin (phenothrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.02*
798	Phenthoate	
179	Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)	0.01*
352	Phosalone	0.01*
3190	Phosmet	0.005*
180	Phosphamidon	0.01*
354	Phosphane and phosphide salts (sum of phosphane and phosphane generators (relevant phosphide salts), determined and expressed as phosphane)	0.01*
355	Phoxim (F)	0.01*
356	Picloram	0.01*
181	Picolinafen	0.01*
182	Picoxystrobin (F)	0.01*
357	Pirimicarb (R)	0.5
183	Pirimiphos-methyl (F)	0.01*
184	Prochloraz (sum of prochloraz, BTS 44595 (M201-04) and BTS 44596 (M201-03), expressed as prochloraz) (F)	0.03*
185	Procymidone (R)	0.01*
186	Profenofos (F)	0.01*
800	Profoxydim	0.01*
187	Prohexadione (prohexadione (acid) and its salts expressed as prohexadione-calcium)	0.01*
358	Propachlor: oxalinic derivate of propachlor, expressed as propachlor	0.02*
359	Propamocarb (Sum of propamocarb and its salts, expressed as propamocarb) (R)	5.0
360	Propanil	0.01*
362	Propargite (F)	0.01*
468	Propham	0.01*
188	Propiconazole (sum of isomers) (F)	0.01*
189	Propineb (expressed as propilendiamine)	0.05*
363	Propisochlor	0.01*
190	Propoxur	0.005*
191	Propoxycarbazone (propoxycarbazone, its salts and 2-hydroxypropoxycarbazone expressed as propoxycarbazone) (A)	0.02*
192	Propyzamide (R),(F)	0.01*
801	Proquinazid (R),(F)	0.01*
364	Prosulfocarb	0.01*
193	Prosulfuron	0.01*
365	Prothioconazole: prothioconazole-desthio (sum of isomers) (F)	0.01*
194	Pymetrozine (R)	0.02*
195	Pyraclostrobin (F)	0.5
196	Pyraflufen-ethyl (Sum of pyraflufen-ethyl and pyraflufen, expressed as pyraflufen-ethyl)	0.02*
802	Pyrasulfotole	0.01*
197	Pyrazophos (F)	0.01*
366	Pyrethrins	1.0
367	Pyridaben (F)	0.01*
2036	Pyridalyl	0.01*
198	Pyridate (sum of pyridate, its hydrolysis product CL 9673 (6-chloro-4-hydroxy-3-phenylpyridazin) and hydrolysable conjugates of CL 9673 expressed as pyridate)	0.05*
199	Pyrimethanil (R)	0.01*
2321	Pyriofenone	0.2
368	Pyriproxyfen (F)	0.05*
803	Pyroxsulam	0.01*
200	Quinalphos (F)	0.01*
804	Quinclorac	0.01*

2790	Quinmerac (sum of quinmerac and its metabolites BH 518-2 and BH 518-4 expressed as quinmerac) (R)	0.1*
2320	Quinoclamine	0.01*
201	Quinoxyfen (F)	0.05
202	Quintozene (sum of quintozene and pentachloro-aniline expressed as quintozene) (F)	0.02*
370	Quizalofop (sum of quizalofop, its salts, its esters (including propaquizafop) and its conjugates, expressed as quizalofop (any ratio of constituent isomers))	0.01*
2586	Repellants: tall oil	0.01*
203	Resmethrin (resmethrin including other mixtures of consituent isomers (sum of isomers)) (F)	0.01*
204	Rimsulfuron	0.01*
371	Rotenone	0.01*
2296	Saflufenacil (sum of saflufenacil, M800H11 and M800H35, expressed as saflufenacil) (R)	0.03*
2654	Sedaxane (sum of isomers)	0.01*
205	Silthiofam	0.01*
372	Simazine	0.01*
2551	Sintofen	0.01*
2417	Sodium 5-nitroguaiacolate, sodium o-nitrophenolate and sodium p-nitrophenolate (Sum of sodium 5-nitroguaiacolate, sodium o-nitrophenolate and sodium p-nitrophenolate, expressed as sodium 5-nitroguaiacolate)	0.03*
3051	Sodium aluminium silicate	0.01*
2691	Spinetoram (sum of spinetoram-J and spinetoram-L) (F),(A)	0.03
373	Spinosad (spinosad, sum of spinosyn A and spinosyn D) (F)	1.0
374	Spirodiclofen (F)	0.02*
375	Spiromesifen	0.3
2750	Spirotetramat and spirotetramat-enol (sum of), expressed as spirotetramat (R)	0.2
206	Spiroxamine (sum of isomers) (R),(A)	0.01*
2467	Streptomycin	
376	Sulcotrione (R)	0.01*
207	Sulfosulfuron	0.01*
2370	Sulfoxaflor (sum of isomers)	0.5
807	Sulfuryl fluoride	0.01*
2890	Sum of M4 and M6 (both free and conjugated), expressed as pinoxaden (R),(A)	0.03*
273	Sum of diclofop-methyl, diclofop acid and its salts, expressed as diclofop-methyl (sum of isomers)	0.02*
2970	Sum of metobromuron and 4-bromophenylurea, expressed as metobromuron	0.02*
209	TEPP	0.01*
379	Tebuconazole (R)	0.15
380	Tebufenozide (F)	0.01*
381	Tebufenpyrad (F)	0.3
208	Tecnazene (F)	0.01*
382	Teflubenzuron (F)	0.01*
2690	Tefluthrin (tefluthrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.01*
808	Tembotrione (Sum of parent tembotrione (AE 0172747) and its metabolite M5 (4,6-dihydroxy tembotrione), expressed as tembotrione) (R)	0.02*
809	Tepraloxydim (sum of tepraloxydim and its metabolites that can be hydrolysed either to the moiety 3-(tetrahydro-pyran-4-yl)-glutaric acid or to the moiety 3-hydroxy-(tetrahydro-pyran-4-yl)-glutaric acid, expressed as tepraloxydim)	0.1*
384	Terbufos	0.01*
385	Terbuthylazine (R),(F)	0.01*
3131	Tetraconazole (sum of constituent isomers) (F)	0.08
3131	Tetraconazole (sum of constituent isomers) (F)	0.08
3131	Tetraconazole (sum of constituent isomers) (F)	0.08
387	Tetradifon	0.01*
210	Thiabendazole (R)	0.01*
211	Thiacloprid	0.2
388	Thiamethoxam	0.15
2598	Thiencarbazone-methyl	0.01*
212	Thifensulfuron-methyl	0.01*
389	Thiobencarb (4-chlorobenzyl methyl sulfone) (A)	0.01*
2419	Thiodicarb	0.01*
213	Thiophanate-methyl (R)	0.3
214	Thiram (expressed as thiram)	0.05*
390	Tolclofos-methyl (F)	0.01*
215	Tolylfluanid (Sum of tolylfluanid and dimethylaminosulfotoluidide expressed as tolylfluanid) (R),(F)	0.02*
810	Topramezone (BAS 670H)	0.005*

811	Tralkoxydim (sum of the constituent isomers of tralkoxydim)	0.01*
391	Tri-allate	0.1*
2416	Triadimefon (F)	0.01*
216	Triadimenol (any ratio of constituent isomers)	0.01*
217	Triasulfuron	0.01*
218	Triazophos (F)	0.01*
2550	Triazoxide	0.001*
219	Tribenuron-methyl	0.01*
392	Trichlorfon	0.01*
393	Triclopyr	0.01*
394	Tricyclazole	0.01*
220	Tridemorph (F)	0.01*
221	Trifloxystrobin (R),(F)	0.3
2537	Triflumezopyrim	
395	Triflumizole: Triflumizole and metabolite FM-6-1(N-(4-chloro-2-trifluoromethylphenyl)-n-propoxyacetamidine), expressed as Triflumizole (R),(F)	0.02*
396	Triflumuron (F)	0.01*
397	Trifluralin	0.01*
812	Triflusulfuron (6-(2,2,2-trifluoroethoxy)-1,3,5-triazine-2,4-diamine (IN-M7222)) (A)	0.01*
222	Triforine	0.01*
223	Trimethyl-sulfonium cation, resulting from the use of glyphosate (F)	0.05*
398	Trinexapac (sum of trinexapac (acid) and its salts, expressed as trinexapac)	0.01*
224	Triticonazole	0.01*
813	Tritosulfuron	0.01*
2850	Valifenalate (R),(A)	0.01*
225	Vinclozolin	0.01*
2319	Warfarin	0.01*
226	Ziram	0.1*
227	Zoxamide	2.0

Appendix 2: Size Codes

Size Code	Diameter (mm)
0	≤ 20
1	$20 \leq 25$
2	$25 \leq 30$
3	$30 \leq 35$
4	$35 \leq 40$
5	$40 \leq 47$
6	$47 \leq 57$
7	$57 \leq 67$
8	$67 \leq 82$
9	$82 \leq 102$
10	>102

Appendix 3: Marketing channels

Advertising and sponsorships	Trade press (national, regional and global)
	Trade associations
	Industry Directories (listing)
	Industry Directories (advertising)
	Sponsorship of events such as award ceremonies
	Advertising in trade fair brochures
	Advertising in newsletters/websites of professional bodies)
	Sponsorship of training events
	Advertising in training events
Optimised Website in the target market	Key word lists for industry (eg detergents versus surfactants in US market)
	Website hosting in target market
	Website and search optimisation in market
	Pay per click options
	Translation services by native speakers and/or industry marketers
Networking and face to face	Trade Fairs (both national and international attended by target market buyers)
	Conferences (both national and international
	Industry networking events (eg award ceremonies)
	Membership of professional bodies and associations
	Training courses and seminars
Social Media within targeted sector	General Professional in market (eg LinkedIn)
	Industry/sector or professional blogs
	National Fora and information exchange networks
Editorials	Trade Press
	Trade Association news
	Trade Fair case study and magazines
On-line buyer and seller platforms	National e-market platforms (open platforms for B2C and B2B)
	International B2B trading platforms (matchmaking offers and sourcing sites based on specific offers rather than product advertising)
	National B2B trading platforms (industry specific sourcing sites)