



Code of Practice for Organic Food Processing



Alexander Beck
with contributions from **Ursula Kretzschmar,**
Angelika Ploeger and Otto Schmid

Published by  **FiBL**



SIXTH FRAMEWORK PROGRAMME

Funded by the European Commission under the Sixth Framework Programme for European Research & Technological Development (2002-2006), Thematic Area Food quality and safety and the Swiss Federal Office for Education and Science (BBW)



Authors and Research Partners

The following authors and research partners have contributed to this report.

Authors

- Dr. Alexander Beck
Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH- 5070 Frick, Switzerland
Internet <http://www.fibl.org>
- Ursula Kretzschmar
Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH- 5070 Frick, Switzerland
Internet <http://www.fibl.org>
- Prof. Dr. Angelika Ploeger
University of Kassel, Department of Organic Food Quality and Food Culture,
Nordbahnhofstr. 1a, D-37213 Witzenhausen, Germany
Internet <http://www.uni-kassel.de/fb11/nue>
- Otto Schmid
Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH- 5070 Frick, Switzerland
Internet <http://www.fibl.org>

Research Partners

- Partner 1 (Coordinator): **Research Institute of Organic Agriculture FiBL**
Contact: Dr. Alexander Beck, Ursula Kretzschmar and Otto Schmid
Postal address: FiBL, Ackerstrasse, CH- 5070 Frick, Switzerland
Internet <http://www.fibl.org>
- Partner 2: **University of Kassel, Department of Organic Food Quality and Food Culture**
Contact: Prof. Dr. Angelika Ploeger and Monika Roeger
Postal address: Nordbahnhofstr. 1a, D-37213 Witzenhausen, Germany
Internet <http://www.uni-kassel.de/fb11/nue>
- Partner 3: **University of Helsinki, Ruralia Institute**
Contact: Marita Leskinen and Marjo Sarkka-Tirkkonen,
Postal address: Lönnenrotinkatu 3-5, F-50100 Mikkeli, Finland
Internet <http://www.mtkk.helsinki.fi/>
- Partner 4: **Danish Research Centre for Organic Farming, Technical University of Denmark, Lyngby, Department of Manufacturing Engineering and Management**
Contact: Associate Prof. Niels Heine Kristensen and Thorkild Nielsen,
Postal address: Building 303, DK-2800 Lyngby, Denmark
Internet <http://www.its.dtu.dk/proj/okopro/index.htm>

Alexander Beck

with contributions from Ursula Kretzschmar, Angelika Ploeger and Otto Schmid

Code of Practice for Organic Food Processing



Funded by the European Commission under the Sixth Framework Programme for European Research & Technological Development (2002-2006), Thematic Area Food Quality and Safety and the Swiss Federal Office for Education and Science (BBW)

The editors gratefully acknowledge financial support from the Commission of the European Communities, under Priority Area 5 (Food Quality and Safety) of the Sixth Framework Programme for Research, Technological Development and Demonstration within the Integrated Project No. 50635 (*Quality of Low Input Food - Improving quality and safety and reduction of cost in the European organic and 'low input' food supply chains*) and co-funding by the Swiss Federal Office for Education and Science (BBW No 03.0384-2). The articles in this volume do not necessarily reflect the Commission's views and in no way anticipate the Commission's future policy in this area.

The contents of the articles in this volume are the sole responsibility of the authors. The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from sources believed by the authors to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her own risk.

This publication represents the report about task 5 in work package 5.1. 'Development of a European framework/code of practice for the evaluation of processing strategies in organic farming systems with respect to food quality & safety' of the Integrated Project No 506358 'Quality of Low Input Food' (Sixth Framework Programme for European Research & Technological Development (2002-2006) of the European Commission). For further info see the project homepage at www.qlif.org.

Alexander Beck (2006): Code of Practice for Organic Food Processing. With contributions from Ursula Kretschmar, Angelika Ploeger and Otto Schmid. Research Institute of Organic Agriculture FiBL, Frick, Switzerland.

ISBN-10 3-906081-85-0

ISBN-13 978-3-906081-85-4

© 2006, Research Institute of Organic Agriculture (FiBL), Ackerstrasse, CH-5070 Frick,
Tel. +41 62 8657 272, Fax +41 62 8657 273, E-mail info.suisse@fibl.org, Website <http://www.fibl.org>

Language Editing: Uebersetzungszentrum Fulda, Germany

Cover: Daniel Gorba, FiBL, Frick, Switzerland

Cover photographs: Thomas Stefan, © BLE, Bonn, Germany

Layout: Ursula Kretschmar and Helga Willer, FiBL, Frick, Switzerland

Printed at Verlag die Werkstatt, Göttingen, Germany

A PDF version can be downloaded free of charge from the project Website at www.qlif.org or from <http://orgprints.org/7031> or from the FiBL Shop at <https://www.fibl.org/english/shop/index.php>, order number 1408.

Table of Contents

Foreword	5
1. Introduction	6
1.1 Regulatory public and private framework	7
2. Organisational requirements and business policy	9
2.1 Business aims	9
2.2 Responsibility of the business management team	9
2.3. Organisational structure	10
2.4 Responsibilities in the various areas of operations	10
2.5 Business management in small/medium-sized enterprises	10
2.6 Continuing education of people in charge and employees	11
2.7 Process description	11
2.8 Bookkeeping - Traceability	12
3. Raw material procurement	13
3.1 Suppliers	13
3.2 Raw materials	13
3.3 Procurement from third countries	14
3.4. Transport	15
4. Storage	16
4.1 Preparation of the storage facilities	16
4.2 Store management must take into account the requirements of organic products	17
4.3 Identification (clear allocation of products to storage facilities)	17
4.4 Minimisation of mixing	17
5. Processing and/or handling	18
5.1 Recipe composition	18
5.2 Preparative cleaning and time management	19
5.3 Production procedures	19
5.4 Minimisation of mixing	20
6. Cleaning and disinfection	21

7. Pest control	22
8. Appearance, packaging, advertising	23
8.1 Identification and communication	23
8.2. Packaging types/labelling	23
8.3. Sale of loose goods to the end user	24
9. Processing operations outside one's own certified operation	25
10. Quality management	26
11. Environmental management	27
Annex: Data sheet and checklist	28

Foreword

Consumers of ‘low input’ and organic foods have specific expectations with respect to the quality parameters of processed food. These may relate to the degree of processing, concern about specific additives, nutritional composition, integrity or whole-food concepts, the degree of convenience, the level of energy use and transportation distances, as well as food safety. For many processors, fulfilling all of these expectations represents a tremendous challenge in understanding and implementing the standards requirements in daily practice. Therefore, it is necessary to have a guidance document for processors as well as standard-setting institutions and certification/inspection bodies.

In the EU project ‘Improving quality and safety and reduction of cost in the European organic and ‘low input’ supply chains’ (QualityLowInputFood/QLIF, No. 50635), which deals with food safety and quality issues related to food from low input and organic food systems, a specific code of practice for food processing was elaborated as part of the QLIF subproject 5 on processing¹.

The starting point for this publication was a literature survey about the underlying principles of organic and low input food processing (Schmid/Beck/Kretzschmar, 2004)² and a broad European-wide consultation in two rounds, which was also undertaken in the QLIF-project. The results of these studies showed that many companies have serious questions related to the implementation practice of the complex requirements for organic food. Some recent scandals in this sector have made clear that in several areas an improvement of the current practices are necessary, e.g. the separation practices between organic and conventional foods.

The aim of this ‘Code of Practice for Organic Food Processing’ (COPOF) is to give requirements of the organic food sector applicable for daily practice. Additionally, the COPOF offers a number of tools that make it possible to:

- a) improve production skills effectively, companies a comprehensive introduction to the most important
- b) improve and maintain the quality of organic foods and
- c) guarantee the safety of organic products.

The basic idea of this publication was that the responsible persons in companies producing and handling the products have the strongest influence on the final product characteristics. Therefore, their knowledge, abilities and the structural conditions for their work are the most important factors for ensuring high quality and safety of the produced food.

For this Code of Practice the perceptions of consumers of organic food were taken into consideration. Therefore, at several points in this publication we have included some reflections by Professor Angelika Ploeger of University of Kassel, a member of the project team. These reflections are placed in separate boxes.

*Alexander Beck
Otto Schmid and Ursula Kretzschmar*

Frick, Switzerland, May 2006

¹ QualityLowInputFood, Subproject 5: Development of a framework for the design of ‘minimum’ and ‘low-input’ processing strategies, which guarantee food quality and safety, <http://www.qlif.org/research/sub5/index.html>

² Schmid, Otto; Beck, Alexander und Kretzschmar, Ursula, (Eds.) (2004) Underlying Principles in Organic and ‘Low-Input Food’ Processing – Literature Survey. Research Institute of Organic Agriculture FiBL, Frick, Switzerland. <http://orgprints.org/3234/>

1. Introduction

If a business wants to produce organic food today it is very important that the best possible conditions for processing these organic products are established right from the beginning. Compliance with norms plays an important role in this. However, the decisive factor is that a business that is getting involved in the production of organic products for the first time starts production as reliably and efficiently as possible. This is what ultimately guarantees that these products can be sold successfully and that the business can operate successfully in this market segment. The production of organic food requires such extensive action that it is necessary, right from the beginning, to budget an appropriately large proportion of the turnover for this part of the business.

The aim of this 'Code of Practice for Organic Food Processing' (COPOF) is to contribute to the further development of the practice of organic food processing in terms of increased safety, quality, transparency and success.³

Furthermore, the COPOF is not only for newcomers but should also help firms that already produce organic food to check and improve current production practices.

The COPOF is structured in such a way that the most relevant tasks or important features which exist in the relevant areas of activity are outlined in separate chapters:

- organisational requirements and business policy;
- raw materials and storage;
- production/processing;
- cleaning and disinfection, pest control;
- appearance, packaging, advertising;
- outside processing;
- quality management;
- environmental management.

In the annex a specific business evaluation form is included, which is designed as a checklist.

The COPOF puts a strong emphasis on the specific features of organic processing practice. However, general quality assurance measures are not explicitly described. Also, only limited attention is given to all the reporting requirements for inspection bodies and competent authorities, as this information is usually already provided by those institutions themselves.

In this document a clear distinction is made between 'compulsory' and 'optional' requirements. The aim of this differentiation is to quickly make it clear to the reader where specific duties lie. However, this should in no way be taken to mean that the 'optional' requirements are unimportant. Quite the contrary, these are often of major importance for the success and the quality assurance of the business and they enable companies to profile their product range. Not every requirement or chapter has the same relevance for every business. Depending on the type of business, products and production set-up, appropriate consideration and appraisal of the actual conditions must be made.

³ The content of this publication is based on thoughts which were presented by A. Beck (2004) in: 'Ökologische Herstellungspraxis' published in: 'Praxishandbuch Bio Lebensmittel' edited by Leitzmann C., Beck A., Hamm U., Hermanowski H., Behrs Verlag, Hamburg

As a result, a relatively broad overview of the specific challenges related to production and processing practices in businesses producing organic food will follow. Particular reference will be made repeatedly to the specific requirements for businesses that process organic and non-organic products in parallel.

1.1 Regulatory public and private framework

The basic regulatory framework and requirements for organic food processing are laid down in public regulations and private standards.

There are three essential sources that are the basis for good practice in organic food production:

- **EU Regulation 2092/91**⁴. However, in some countries additional state regulations or implementation rules/directives also exist.
- **Agreements under private standards** (IFOAM Basic Standards 2002⁵ or other private standards for labelling of organic foods).
- **'Promise' and the commitment of the organic food sector** to give consideration to consumers' demands for organic food.

In particular, the following text will always make reference to EU Regulation 2092/91 and amendments, and if EU regulations are either non-existent or unspecific, to the IFOAM Basic Standards (2002, updated 2005).

The fundamental aims laid down in regulations and standards for organic food production can be summarised as follows:

- the production of high-value organic food that complies with the standards
- ensuring that no mixing of non-organic and organic products takes place
- preventing mistakes in the production of organic foodstuffs
- establishing transparency through traceability and verification of production methods
- protecting market participants from deception

⁴ EU Regulation 2092/91 of 24 June 1991 on organic farming and indications referring thereto on agricultural products and foodstuffs. Amended

⁵ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany)

Consumer perceptions

Literature reviews show that consumer concerns about food quality and safety embrace broad and interconnecting realms. Health, environment, ethics, authenticity, taste and concerns about the relationship between people and nature are examples of broad themes that recur in the literature. Health and environment tend to be interwoven and a strong motive for buying organic food. A typical rationale is that healthy soils, plants and animals are a basis for human health. It is evident that expectations of product quality are as high for organic foods as they are for conventional foods. Indeed, in some cases the expectations are higher for organic foods, and there are additional quality features specific to organic food (such as authenticity as an important quality parameter for processing).

An important issue for this Code of Practice is consumers' distrust of producers' motives: Some have the perception that the practices of processors (e.g. food ingredients, food technologies) reflect an interest in profit rather than in the production of good and healthy food. Concepts such as 'homemade' and 'natural' appear to stand out. They express a preference of the consumer for food that has been produced with little or no use of artificial fertilizers, pesticides, food additives and technologies like genetic modification. The use of food additives is a common concern with consumers, and choosing organic food might be one strategy to limit additives in food, as there are limits on additives in the regulations governing organic food processing. For the organic produce market it is of primary importance that new guidelines for organic food processing take these consumer concerns into account. As most of the consumers do not have up-to-date knowledge about today's processing techniques for conventional food it is difficult for the organic processors to communicate their processing techniques and the resulting 'organic quality' (e.g. authenticity) to consumers. New ways of providing information (media and labelling) have to be identified (e.g. research).

To summarise

A Code of Practice or Organic Food Processing is needed because:

- Expert consultation has shown that there is a lack of clear guidance for operators, how to transfer given regulations on a company level.
- A number of problems that occurred in recent years were caused by insufficient implementation of the rules of EU Regulation 2092/91.
- Guidance is needed on the management level, but also for inspection/certification bodies, if more responsibility is given to the operators.

2. Organisational requirements and business policy

Principle:

A company has to have or to introduce appropriate and efficient organisational tools to guarantee the proper implementation of all requirements necessary for the processing of organic foods.

The prerequisite⁶ for the production of organic food is that the business subjects itself to the inspection system⁷ and registers⁸ this activity with the authority responsible⁹.

2.1 Business aims

If a business or an operator wants to enter the market for organic food then it should¹⁰ be re-organised in a way that is suitable for this special segment¹¹.

In this market segment it is especially important to communicate a high level of credibility to the customers. In addition, the necessary level of expenditure is so high that only an adequate re-organisation can bring success in the medium term. However, to achieve this, the business has to be set-up and prepared for the organic product range to the necessary level. Ideally this takes place through an orientation towards organic products and production methods that is laid down in the business policy.

It is easier to implement good practice in organic production in businesses that only handle organic foodstuffs. The entire business is oriented towards the organic food market and this allows it to achieve the best level of penetration. However, even in these businesses the overall organisation should be consistently monitored and optimised.

2.2 Responsibility of the business management team

One factor for success is that at least one person from the business management team is well-informed about and responsible for the development of this segment. In small businesses it is crucial that the business management team fully supports the production of organic food. The responsibility within the business management team for the organic food segment should be clearly and precisely defined.

⁶ Terms such as 'must', 'requirement/prerequisite' or 'necessary' refer to a compulsory requirement. However, this does not mean that these are always fixed by law.

⁷ EU Regulation 2092/91 Article 9

⁸ EU Regulation 2092/91 Article 8

⁹ Preamble of EU Regulation 2092/91:

'Whereas all operators producing, preparing, importing or marketing products bearing indications referring to organic production methods must be subject to a regular inspection system.'

¹⁰ Should' and similar terms indicate that this is not a compulsory requirement

¹¹ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany)Principal Aims p. 13

2.3. Organisational structure

In order to successfully establish ‘good practice in organic production’ in a business first of all there has to be a business structure put in place that makes a successful implementation actually possible. It is essential that organisational structures and controlling mechanisms have been established within the business and are suitable to fulfil the complex requirements in purchasing, storage, processing etc. which exist in the organic food industry¹².

2.4 Responsibilities in the various areas of operations

A further essential requirement for the successful establishment of organic production practice in a business is that there are clear responsibilities in all departments and fields of activity.

Clear responsibilities are a vital requirement for handling organic products properly and successfully, in particular within parallel-producing businesses¹³. This can be organised practically when one person or department bears the entire responsibility for all work that is connected to the production of organic foodstuffs. This person then has the duty of giving exact instructions to the employees in the individual fields of activity. These must be set out in the form of working directives.

The employees who are involved in the different production steps such as goods acceptance, storage, production, packaging, labelling and administration must know exactly how to handle organic products. Exact instructions for these activities must be in place.

In a business that only produces organic food there is no danger of, for example, the wrong products being mixed together due to a lack of knowledge. The risks related to the organic status of the products are overall considerably lower than in parallel-producing businesses. However, even here clear responsibilities should be defined as these are a vital part of successful working methods!¹⁴

2.5 Business management in small/medium-sized enterprises

In small or medium-sized businesses the responsibility rests primarily within the business management team. However, even in these businesses the practical responsibility for organic products should be assigned to people in the individual areas of operation, e.g. production, storage, distribution.

¹² EU Regulation 2092/91 Annex III 3. Initial inspection, second bullet point:

‘all the practical measures to be taken at the level of the unit and/or premises and/or activity to ensure compliance with this Regulation, and in particular with the requirements in this Annex, must be drawn up’

¹³ EU Regulation 2902/91 Annex III B 3.

¹⁴ EU Regulation 2092/91 Annex III 3. Initial inspection, second paragraph :

‘The description and practical measures concerned must be contained in a declaration, signed by the responsible operator.’

2.6 Continuing education of people in charge and employees

In addition, it goes without saying that a decisive factor is that the people who are responsible for the organic foodstuff operations within a business must possess the necessary knowledge and refresh this regularly.

However, it is important not to neglect the fact that even people in production, warehousing etc. whose work is predominantly regulated by fixed instructions must have a basic understanding of the way the organic business works as a whole so that mistakes caused by carelessness or lack of knowledge are avoided as far as possible. The people in charge must ensure that there is a sufficient level of knowledge to meet this requirement and that this knowledge is regularly updated. Measures that need to be introduced to achieve this include providing a suitable range of educational opportunities and making a commitment to appropriate continuing education and documentation of the results. Training and continuing education of people whose work is regulated by fixed instructions should be systematically planned.

2.7 Process description

The business must possess a description of the entire operational process¹⁵. The production processes for organic products must be described in a suitable way (e.g. flow chart).

Within the business the special considerations that have to be made for the production of organic products must be distinctly clear. This refers to, for example, storage conditions, labelling, treatment agents (e.g. for protecting the storage facilities), cleaning, recipe specifications, rinsing out and cleaning steps carried out before the start of organic foodstuff production. Here the overriding principle is to avoid as meticulously as possible the mixing of organic and non-organic products, as expected by the customer and as required by law. It is also important to eliminate or reduce as much as possible any contamination of organic products with substances not permitted in organic products (e.g. processing aids or pesticides).

In keeping with the legal requirements and the expectations to be fulfilled, process descriptions must illustrate exactly how the separation of production flows in goods acceptance, storage, production and packaging can be guaranteed.

These requirements and duties should be systematically incorporated into the organisational handbook and/or the quality assurance handbook. This provides an overview and allocates responsibility for organic products to all employees in the business. This integration is particularly important for parallel-producing companies. Such documentation is also required for inspection purposes.

¹⁵ Annex III B EU Regulation 2092/91:

Initial inspection

‘The full description of the unit referred to under point 3 of the “general provisions” of this Annex must show the facilities used for the reception, the processing, packaging, labelling and storage of agricultural products before and after the operations concerning them, as well as the procedures for the transport of the products’

2.8 Bookkeeping - Traceability

To ensure traceability throughout the whole supply chain there are some bookkeeping and documentary requirements to be fulfilled¹⁶.

The business must create lists of all suppliers and customers of organic products. The supporting documentation must allow the fast and simple tracing of which products were purchased from the organic farming industry.

Similarly, the supporting documentation for outgoing goods must be designed in such a way that all outgoing movements of organic foodstuffs are easily distinguished.

In addition, it is necessary that, where not included in the documents above, tracing outside processing facilities can be carried out quickly and easily.

A full description of all production and storage premises must be drawn up, including temporarily leased premises.

Traceability of the product flows is a decisive factor¹⁷. This includes the necessity of establishing internal traceability between the batches of finished products and the batches to be delivered. This can be achieved with a paper documentation system but also with suitable, modern ERP systems that incorporate traceability and product documentation. Businesses that have been certified on the basis of, for example, the ISO 9000 quality system, will find it easier to fulfil these requirements than small enterprises.

¹⁶ EU Regulation 2092/91 Annex III B2

‘Stock and financial records must be kept in the unit or premises, to enable the operator and the inspection body or authority to trace:

- the supplier and, where different, the seller or the exporter of the products;
- the nature and the quantities of agricultural products as referred to in Article 1 delivered to the unit and, where relevant, of all materials bought and the use of such materials;
- the nature, the quantities and the consignees and, where different, the buyers of any products as referred to in Article I, which have left the unit or the first consignee's premises or storage facilities,
- any other information required by the inspection body or authority for the purpose of proper inspection.

The data in the accounts must be documented with appropriate justification documents. The accounts must demonstrate the balance between the input and the output.’

¹⁷ EU Regulation 2092/91 Annex III B2:

‘The accounts must demonstrate the balance between the input and the output.’

Annex I 6.3.1 ‘Livestock and livestock products are to be identified at all stages of their production, preparation, transport and marketing.’

3. Raw material procurement

Principle:

A trustful cooperation with the suppliers should be established in order to guarantee the organic status of the product. Transportation and handling must be organised to protect the integrity of the organic food to a large extent.

It is particularly important in this sensitive market segment that the partnership between customer and supplier is based on a solid level of trust as well as clear agreements. This applies in particular to the acquisition of products from third countries, since the structures in place in these countries are, from our point of view, often difficult to understand. Furthermore consumers may have special social and ethical expectations in this area, e.g. that 'fair trade' standards or other social standards are followed.

3.1 Suppliers

As soon as the selection and communication process with suppliers of organic raw materials begins, checks must be made to establish whether the suppliers comply with the inspection procedures as requested by the EU Regulation 2092/91.

Furthermore, an idea of the efficiency and organisation of the supplier should be obtained, which may quite well be supported by a visit to the company. If the business handles organic and non-organic products in parallel then more in-depth inquiries about the separation measures must already be conducted during the initial communication and, if possible, even through third parties familiar with the situation in this country and firm.

If critical problems (e.g. storage practices) arise, these must be investigated further and resolved. Certain critical points (e.g. plant protection agents used within the storage facilities) should be specifically agreed upon in the delivery stipulations as required.

Attention should be made to the supply agreements so that the 'quality' aspects are agreed upon in a suitable manner.

Modern supplier management systems provide the possibility of improving co-operation with suppliers. Increasing safety and reliability through better transparency and also the further development of the efficiency of business partners play an important role in this.

3.2 Raw materials

When accepting delivery of organically produced raw materials the organic labelling must be checked in addition to the normal checks on product type, quantity, best-before date, visual checking etc. It must be clear (from the labelling or accompanying documents) that the goods are certified organic¹⁸. The product must match the delivery documents and this checking process must be documented. Random samples of

¹⁸ EU Regulation 2092/91 Annex III B 5.

the goods should be checked to see if the specifications and agreements are being observed. For example, the product of new suppliers should be checked extra carefully to see if there are residues and contaminants which might cause contractual infringements or infringements against the EU Regulation 2092/91¹⁹.

Furthermore, all additives, processing aids and commercial products that are to be used must be checked to see if they satisfy the requirements of Annex VI in the EU regulation 2092/91. If non-organic ingredients and technical processing aids are used as per Annex VI, it must be ensured that these may not contain any GMOs or GMO derivatives²⁰. The suppliers must supply appropriate reassurances regarding GMOs. Suitable wording, forms and other conditions should be discussed with the relevant inspection body.²¹

The business should continue to work on replacing non-organic ingredients and processing aids with organic equivalents²².

3.3 Procurement from third countries

The import of products is dealt with precisely by the EU through its 'third-country regulation'²³. If a business wants to import products directly from a country that is not an EU member, the necessary steps to do this should be discussed with the relevant inspection and certification body. This will not be dealt with in any further detail here.

On the other hand, a number of businesses are involved in importing organic products into the European market. These products, when properly imported, may then be treated within the EU the same as organic products which were produced and processed in the EU.

Even so, there are a few points to note, problems repeatedly occur with products from third countries regarding their 'authenticity' as organic products. This is often caused by the simple fact that the structures in place in third countries are often difficult to understand or not transparent. Even when buying properly imported products from a certified operator, a business that regularly purchases this product for sale or further processing should try to find out more about the precise origins and manufacturing/production conditions. This simply prevents any unpleasant surprises!

Another point that makes it advisable to pay attention to the topic of procurement from third countries is that the consumer associates the 'organic' concept very closely with the concept of 'fair trade'. Not only the consumer does this, IFOAM also makes this association in its principle aims in the Basic Standards²⁴.

¹⁹ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 6.1.Recommendation: 'Handlers and processors should identify and avoid pollution and potential contamination sources'.

²⁰ EU Regulation 2092/91 Article 5 (3) h "the product has been produced without the use of genetically modified organisms and/or any products derived from such organisms."

²¹ www.infoxgen.com

²² Preamble of EU Regulation 207/93 :

"Annex VI to the Regulation should take account of consumers' expectations that processed products from organic production will be composed essentially of ingredients as they occur in nature"

²³ EU Regulation 2092/91 Article 11

²⁴International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany): Principal aims:

The origins and production conditions should be as transparent as possible, because here in particular the consumer may also require certain social and ethical standards to be upheld. If procurement from third countries is a major part of the business, internal criteria should be developed and arrangements made directly with the producers where possible.²⁵

Consumer perception!

Comparative studies reveal variations in the aspects of food quality that consumers care about. Furthermore, reviews indicate that consumer attitudes about the quality of organic food vary between countries and different contexts. What is missing is a thorough understanding of this. In particular, consumer conceptions of food quality and the perceived relationship between food quality and health need further investigation. Not surprisingly, the issues to which the studies refer often relate to the main differences between conventional and organic farming practices, associated with the use of industrial technologies, artificial fertilizers and pesticides as opposed to less industrialised methods based on a balance between plant and animal production. Pesticide use is of concern to many consumers. The worries here may relate to the environment as well as to possible health effects – i.e. either personal short-term health or the health of future generations. The shift of consumers' perception of organic food quality from the more altruistic view (support of an alternative farming system) to the health-related view force the market as well as the scientists to put more emphases on clarifying the role of organic products in human (or animal) health. Up to now reviews of scientific studies have indicated differences in some nutrients (e.g. secondary plant compounds) but long-term human health studies with organic products are not available.

3.4. Transport

During transportation of the products it is necessary to ensure that batches are not mixed, and in particular that organic products can not be mixed with non-organic products. Organic products should not be contaminated with prohibited substances. If transportation is carried out by certified businesses themselves, then it can be assumed that inappropriate handling will not occur.

However, transportation is frequently carried out by outside carrier companies. In this case it is necessary that these carrier companies and the people carrying out their work are informed about the specific requirements for organic products and take on the responsibility for conforming to the requirements. These requirements should be agreed in writing. Set cleaning procedures for the means of transport used should be standard! In addition, particular attention must be paid to all loading, unloading and transfer processes so that mixing does not occur, prohibited substances are not used and contamination is avoided. There must be proof that the cleaning measures are effective and documentation that they are carried out. For this transport the law requires that the means of transport be sealed²⁶.

⁴ 'To support the establishment of an entire production, processing and distribution chain which is both socially just and ecologically responsible.'

²⁵ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 8. Social Justice

²⁶ EU Regulation 2092/91 Annex III No. 7

4. Storage

Principle:

The integrity of the organic raw materials must be protected by storage activities. The quality should be maintained and the organic raw materials must be identifiable.

There are no special conditions linked to the type of storage facility that can be used. In principle organic foodstuffs can be stored in any facility under the following three conditions:

1. The storerooms and facilities must be prepared in such a way that contamination by substances that are not permitted for the production of organic food does not occur.
2. The storerooms and facilities and the loading/unloading procedures must be designed in such a way that the location of organic products can be clearly traced at all times.
3. The storerooms and facilities must be designed and prepared in such a way that the mixing of non-organic and organic products cannot occur²⁷.

It is simpler to implement the requirements and design a safe and reliable production system if storage facilities or locations are reserved or designed especially for the production of organic products.

4.1 Preparation of the storage facilities

First of all, the storage facilities in the business must be suitable for organic products. The facility must be constructed in such a way that pest infestation from, for example, pests simply crawling inside, is minimised, that hiding places for pests are not available and that the storage area can be cleaned quickly and effectively. This means that the storage area must be designed in such a way that there is no danger that the organic products in storage can be contaminated with substances that are not permitted for organic foodstuffs²⁸.

The prerequisite for this is that the storage bins or storage facilities are cleaned thoroughly. This is particularly important when organic products are brought into an existing storage area for the first time. The effectiveness of the cleaning measures undertaken must be shown, e.g. in terms of the minimisation or removal of pest nests and residues from previous pest control measures. The performance of these measures must be documented.²⁹

²⁷ EU Regulation 2092/91 Annex III No. 8 'Storage of products':

'For the storage of products, areas must be managed in order to ensure identification of lots and to avoid any mixing with or contamination by products and/or substances not in compliance with this regulation.'

²⁸ EU Regulation 2092/91 Annex III No. 8 'Storage of products':

'For the storage of products, areas must be managed in order to ensure identification of lots and to avoid any mixing with or contamination by products and/or substances not in compliance with this regulation.'

²⁹ EU Regulation 2092/91 Annex III B No. 3 last bullet point:

'- operations on products in accordance with the rules laid down in this Regulation must be carried out only after cleaning of the production equipment. The effectiveness of the cleaning measures must be checked and recorded.'

The measures to be undertaken before storing organic foodstuffs in storage rooms or containers that have until then been used for non-organic foodstuffs or other materials must be agreed with the responsible inspection body.

4.2 Storage-area management must take into account the requirements of organic products

The company must make sure that prohibited pesticides are not used on organic foodstuffs. In addition, effective measures must be put in place to prevent or minimise contamination of organic products by prohibited protection agents that were, for example, used on non-organic batches or for pest control when the storage area was empty. These measures must be appropriately defined and documented. Their effectiveness must be proven. Businesses that only produce organic products should have an organic pest control system.

4.3 Identification (clear allocation of products to storage facilities)

The internal organisation of the storage must include very clear markings, showing which storage areas are used for organic products³⁰. This is a particularly important requirement when organic products and non-organic products are handled in parallel. Where practical, clear labelling of the storage location or container is essential. In particular, it should be clearly indicated on the control units which storage facilities contain organic products. If organic products are mixed with non-organic products, then this product can no longer be labelled as organic. The storage area's inventory management organisation must keep explicit records on the organic products. Suitable safety measures and warning systems must be set up so that accidental mixing of organic and non-organic products cannot occur.

4.4 Minimisation of mixing

Mixing of organic and non-organic products by the conveyor and handling equipment must be eliminated as far as possible. If this is not fully possible for technical reasons, then measures must be taken to minimise occurrences of mixing. It is therefore necessary that individual business have precise knowledge of the operations (critical points) whereby mixing cannot be completely eliminated. The level of mixing that occurs during these process steps must be investigated and described. Within the business, a strategy must be defined to prevent mixing or if mixing cannot be completely eliminated, to minimise it. The resulting effective measures and, where relevant, the maximum level of mixing must be documented and agreed and defined with the inspection body.

The measures must be implemented by means of working directives.

³⁰ EU Regulation 2092/91 Annex III B No. 3 first and fourth bullet point:

‘ - the unit must have areas separated by place or time within the premises for the storage of products as referred to in Article 1, before and after the operations;...

- every measure must be taken to ensure identification of lots/batches and to avoid mixtures or exchanges with products not obtained in accordance with the rules laid down in this Regulation.’

5. Processing and/or handling

Principle:

The integrity of the organic raw materials must be protected during processing. The quality should be maintained or further developed.

In EU Regulation 2092/91 there are no special requirements with regard to the production facility and the type of production technology that can be used. In principle organic foodstuffs can be produced in any facility under the following three conditions:

1. The production technology must be designed in such a way that products must be able to be produced in compliance with Annex VI of EU Reg. 2092/91 (permitted ingredients and processing aids of non-agricultural origin), and
2. The operating procedures and technology used in the parallel production of non-organic and organic products must in principle be capable of guaranteeing separation of the product batches and
3. Contamination by substances that are not permitted for organic foodstuffs has to be avoided as much as possible.

It is always simpler to implement the requirements and design a safe production system if a manufacturing facility or a production line are reserved or designed especially for the production of organic products.

5.1 Recipe composition

There are a series of requirements in EU Regulation 2092/91 for organic production that precisely describe the possible composition of products and permitted production aids³¹.

These requirements concerning the ingredients, additives and processing aids used and their exact names must be transferred onto the recipe sheets and production instructions. Attention must be paid to the following: Exact details regarding the organic quality and how to identify, for example, additives in the recipes must be clearly described for all ingredients³².

Once again, this is particularly important in businesses which handle organic and non-organic products in parallel in order to, for example, clarify which additive may be used in organic foodstuffs when additives from various commercial sources (different additive products) are available. If non-organic ingredients and processing aids are used as per Annex VI, it must be noted that these may not be GMOs or GMO derivatives. The suppliers must supply appropriate reassurances regarding GMOs. Suitable wording, forms and other conditions should be discussed with the relevant inspection body.

³¹ EU Regulation 2092/91 Article 5 and Appendix VI

³² EU Regulation 2092/91 Annex III B 3 fourth bullet point:

‘every measure must be taken to ensure identification of lots/batches and to avoid mixture or exchanges with products not obtained in accordance with the rules laid down in this Regulation;’

5.2 Preparative cleaning and time management

If, in a parallel-producing business³³, organic products have to be produced after non-organic products using the same equipment, the production must be separated by time and by place. Appropriate cleaning must be carried out in between³⁴.

The cleaning must be carried out using industry standard procedures. The effectiveness of the cleaning measures carried out must be verified. The performance of these measures must be documented.

Another aim of this process is to minimise mixing of non-organic and organic products. Depending on operational procedures, the usual cleaning intervals (e.g. cleaning at the end of the day) may provide the opportunity of beginning with organic production and then producing the non-organic products afterwards. This can minimise costs and risks.

5.3 Production procedures

It is of great practical importance that all equipment and in particular transfer containers or production equipment be accurately distinguishable or labelled when organic foodstuffs are being produced³⁵. Suitable systems for each individual business must be set up and agreed with the inspection points. One possibility would be, for example, to use a particular colour within a business so that all transport containers and processing equipment that has this colour or is labelled with this colour is only used for organic products.

The measures must be implemented by means of working directives. All ingredients and in particular minor ingredients should be uniformly labelled (e.g. with a sticker, a uniform colour or uniform packaging and where possible stored together as a group). This makes the safe allocation of ingredients during production considerably easier.

Suitable warning and information systems should be established.

The production of individual batches must be appropriately documented. Traceability of the product flows is of decisive importance³⁶.

³³ EU Regulation 2092/91 Annex III B 3:

‘Preparation units also handling products not from organic production.’

³⁴ EU Regulation 2092/91 Annex III B 3 first, second and last bullet point:

‘- the unit must have areas separated by place or time within the premises for the storage of products as referred to in Article 1, before and after the operations;...

- operations must be carried out continuously until the complete run has been dealt with, separated by place or time from similar operations performed on products not covered by Article 1;...

- operations on products in accordance with the rules laid down in this Regulation must be carried out only after cleaning of the production equipment. The effectiveness of the cleaning measures must be checked and recorded.’

³⁵ EU Regulation 2092/91 Annex III B 3 fourth bullet point:

‘- every measure must be taken to ensure identification of lots/batches and to avoid mixtures or exchanges with products not obtained in accordance with the rules laid down in this Regulation;’

³⁶ EU Regulation 2092/91 Annex III B2:

‘The accounts must demonstrate the balance between the input and the output.’

Annex I 6.3.1:

‘Livestock and livestock products are to be identified at all stages of their production, preparation, transport and marketing.’

In businesses that produce organic and non-organic products in parallel these different product groups must be precisely separated and identifiable in the documentation.

5.4 Minimisation of mixing

When organic and non-organic foodstuffs are processed with the same production equipment it is not always possible to completely eliminate mixing of organic and non-organic products. It is therefore necessary that individual businesses have precise knowledge of the operations (critical points) whereby mixing cannot be completely eliminated.

The level of mixing that occurs during these process steps must be investigated and described. Within the business a strategy for the production facility must be defined to prevent mixing or, if mixing cannot be completely eliminated, to minimise it. The resulting measures and, where relevant, the maximum level of mixing must be documented in every case and agreed and defined with the inspection body. The measures must be implemented through practical working directives and their implementation must be documented.

These could be, for example, cleaning in between production steps, or 'rinsing out' batches, where a quantity of organic products is fed into the equipment and added to the non-organic products afterwards. In particular, the previous procedure should be applied for continuous and semi-continuous production. Similar products should not be produced after each other as far as possible. The ideal situation is when consecutive production batches can be clearly distinguished from each other by optical or other easily recognisable features.

Attention must be paid to the fact that equipment for administering small doses, of additives for example, may be an important source of substances that are not permitted for organic food production. As a result, these systems and equipment must always be included in cleaning and monitoring measures.

6. Cleaning and disinfection

Principle:

Organic food is safe, of high quality, and free of substances used to clean, disinfect, sanitise food processing facilities.

Cleaning and disinfection are always specified in connection with avoiding contamination by prohibited substances and the prevention of potential mixing^{37,38}.

Furthermore, during the initial investigations into a business exact records are made of the cleaning processes and cleaning substances that are used in the company. EU Reg. 2092/91 does not regulate any details regarding cleaning procedure and cleaning/disinfection agents.

However, when choosing cleaning/disinfection agents and designing the cleaning process, businesses that produce organic foodstuffs should always pay attention to the ecological effects of the cleaning process and the agents used³⁹. The use of cleaning agents where negative information about their ecological or health effects is present should be avoided. Additionally, an attempt should be made to minimise the burden on the environment caused by the production and use of cleaning and disinfection agents.

Ideally, the entire cleaning process and cleaning programme within a business would be optimised and established with respect to ecological points of view. A range of 'ecological cleaning agents' are available today. If the usage of such substances is practical for the respective cleaning tasks, then this contributes to the 'ecological profile' of the business.

Lists of cleaning and disinfection substances must be available. The effectiveness of the cleaning measures in terms of the prevention of contamination and mixing must be documented. The carrying out of measures for this purpose must be stipulated in the cleaning programmes and/or working directives. Ecologically relevant factors should be recorded and described in the documentation of the cleaning measures.

³⁷ EU Regulation 2092/921 Annex III B last bullet point:

'- operations on products in accordance with the rules laid down in this Regulation must be carried out only after cleaning of the production equipment. The effectiveness of the cleaning measures must be checked and recorded.'

³⁸ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 6.1.3:

'The handler and processor shall take all necessary measures to prevent organic products from being contaminated by pollutants and contaminants, including the cleaning, decontamination, or, if necessary, the disinfection of facilities and equipment.'

³⁹ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany), Draft Standard 11. Cleaning and disinfection

7. Pest control

Principle:

Organic food is protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical treatment and irradiation. Pest management concepts in line with organic principles should be in place.

A business must make sure that prohibited pest control measures and substances are not used on organic foodstuffs^{40,41}. In addition, effective measures must be taken to prevent contamination of organic products by prohibited pest control substances, i.e. in businesses which produce organic and non-organic products in parallel; contamination of organic produce by preservatives which are used for non-organic products must be prevented. In particular, the transport mechanisms (e.g. screw conveyors, conveyor belts) must be considered to be sources of contamination. These measures must be appropriately defined and documented. Businesses that only produce organic products must have an organic pest control system. Parallel-producing businesses are strongly recommended to introduce a pest control system suitable for organic food within the entire business⁴². Otherwise, repeated difficulties concerning contamination with substances that are not permitted for organic foodstuffs can be expected.

Preventative pest control measures play a prominent role.

The pest control system of the business should be described as a complete concept. The measures undertaken to combat the problem must be documented. In addition, when substances are used in a company that do not conform to EU Reg. 2092/91, proof and documentation of the measures for eliminating contamination of the organic goods is required.

⁴⁰ EU Regulation 2092/91 Annex III No. 8 'Storage of products':

'For the storage of products, areas must be managed in order to ensure identification of lots and to avoid any mixing with or contamination by products and/or substances not in compliance with this regulation.'

⁴¹ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 6.4.2:

'Prohibited pest control practices include, but are not limited to, the following substances and methods:

* pesticides not contained in Appendix 2:

* fumigation with ethylene oxide, methyl bromide, aluminium phosphide or other substance not contained in Appendix 4:

* ionizing radiation:

and 6.4.3. The direct use or application of a prohibited method or material renders that product no longer organic.'

⁴² International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 6.4 Pest and disease control:

'*General principle* –

Organic food is protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical treatment or irradiation.

Also see 6.4.1'

8. Appearance, packaging, advertising

Principle:

Organic product packaging should have minimal adverse impacts on the product or the environment. Organic products are clearly and accurately labelled as organic.

8.1 Identification and communication

Organic foodstuffs are subject to special standards. They are products whose quality is defined by their production and manufacturing processes. The particular value of these foodstuffs and their complex nature should be communicated through the manner in which the product is presented. In the interests of the industry this communication should be made as realistically and credibly as possible.

When selling organic products it is necessary to ensure that the customer can clearly see from offers, advertising material, delivery documents and invoices whether the foodstuffs delivered are organic products or not. The code of the inspection and certification body must also be stated⁴³. It is always important to bear in mind that communication must not infringe against other relevant regulations. The statutory labelling requirements for foodstuffs must of course be observed.

The presentation and appearance of organic products must be different from the presentation of non-organic products in such a way that consumers cannot get the two mixed up. The organic product must be clearly recognisable.

8.2. Packaging types/labelling

There are no detailed regulations for packaging types and packaging materials in EU Regulation 2092/91. However, when selecting packaging types and materials consideration should be given to consumer expectations regarding environmentally friendly production and handling of organic foodstuffs⁴⁴.

In addition, it is essential that organic foodstuffs not be contaminated by packaging materials. The packaging should emphasise the special value of organic foodstuffs.

The packaging systems and materials chosen can serve to underline the credibility and value of organic products. Businesses that pack organic and non-organic products in parallel must take meticulous care that no mix-ups occur during packaging of the product. Suitable safety measures and documentation must be introduced in the business to achieve this.

⁴³ EU Regulation 2092/91 Article 5

⁴⁴ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) Principal aims:

‘To utilize biodegradable, recyclable and recycled packaging materials.’

‘6.5. *General Principle*

Organic product packaging has minimal adverse impacts on the product or on the environment.

Recommendations

Processors of organic food should avoid unnecessary packaging materials.

8.3. Sale of loose goods to the end user

If loose products are delivered to the end user it is necessary to ensure that the organic products are clearly identifiable as such to the consumer^{45,46}. The expertise of the retailer in terms of clear organisation and arrangement of the products plays a vital role here.

If similar products, organic and non-organic, are delivered in parallel to the end user, particular attention must be paid to proper labelling, where possible on the product itself. One alternative would be to keep the different ranges separated, e.g. at the counter.

When designing the product range, it is ideal, when this is a consideration, if the same types of products are not offered at the same time in organic and non-organic form/quality.

Consumer perception!

Consumers are in favour of environmental aspects linked with the production of organic food. In addition to issues like health or social aspects joined in the expectations for organic food, many consumers favour limited transportation of food (keeping 'food miles' low); limited food packaging; the use of environmentally friendly packaging. Concerns exist about energy expenditure in the food system in general as well as the use of natural resources (environmental criteria). Therefore, efforts of producers/traders are welcome to track the food chain via (producer) codes on the Internet for interested consumers or labelling which includes the region as well as the organic production. Research is needed on ecologically sound packaging materials for different product groups (e.g. milk products, fruit juice), and better communication of the research results is needed for processors, as well as for the media and consumers (e.g. glass vs. polycarbonate).

Ethical issues related to organic food include fair trade, workers' social rights, environmental impacts in third world producer countries, equity among people involved in the food chain or who are affected by the use of natural resources. This moral dimension of consumerism is described as a new wave', characterised by the connections between production and consumption, both at local and global levels. The labelling of fair trade products as being non-organic or being organic (distinguishable) should be improved and fair trade should also include in consumers' perception a socially fair agreement with organic farmers in Europe. Actions like paying a voluntary 5 cents more per litre of milk and indicating this by actively placing a sticker on the bottle are examples that indicate an intensive relationship of organic buyers with organic producers.

⁴⁵ EU Regulation 2092/91 Article 5

⁴⁶ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 7. Labelling:

'General principle

Organic products are clearly and accurately labelled as organic.'

9. Processing operations outside one's own certified operation

If other outside processing or storage companies are used, these must also be subject to inspection procedures. If very small or very few transactions are made, some inspection and certification bodies in some regions/countries accept that the external production or storage facilities are only temporarily leased for organic production and the business which, for example, leases out premises does not have to undergo independent inspection. However, these businesses are then fully subject to the supervision and stewardship of the leasing company and the inspection point in charge, i.e. in this case the marketer of the organic product, must take on responsibility for outside, temporarily leased premises and staff. This is a possibility, but it holds particular risks. The partnership must be regulated by clear contractual agreements between the marketer and the external processor. It is always safer and simpler to work with a business that is also affiliated with the inspection process and possibly certified for handling organic food.

10. Quality management

Every business should have quality management plans. The measures that need to be taken for the production of organic foodstuffs must be integrated into existing working plans. This leads to safer, more reliable production, less cost and more transparency.

Requirements for process descriptions as well as inspection sheets, checklists etc. must be checked to see if specific organic foodstuff requirements must be added. If this is the case, the documents must be amended appropriately⁴⁷.

This is particularly important when dealing with products where there is a doubt that it was produced in accordance with EU Reg. 2092/91. The required internal action, such as provisional suspension of the product and checking of the facts and the information and registration duties towards the inspection body, must be integrated into the quality assurance processes.

As far as possible, some measures should be established that apply to the entire business, especially where avoiding contamination is concerned. These include hygiene management, cleaning instructions and pest control. Other areas such as raw material specification or recipe composition must be customised specifically for organic products.

⁴⁷ EU Regulation 2092/91 Annex III 3. Initial inspection, second paragraph

‘The description and practical measures concerned must be contained in a declaration, signed by the responsible operator.’

11. Environmental management

Principle:

Organic foods should be processed and traded in a way that avoids pollution and waste. All operations aim to be compatible with natural cycles and living systems.

EU Reg. 2092/91 defines no requirements for environmental management within a business. However, the requirements of the regulation are nevertheless related to the environment because the type of raw material prescribed and the type of manufacturing required include environmental factors. Even so, in the consumers' opinion the purchase of organic foodstuffs is associated with the idea that the businesses involved set higher environmental standards. The IFOAM Basic Standards give high priority to environmental protection^{48, 49}.

As a result, all businesses that produce organic foodstuffs should, where possible, have an environmental management system that enables regular recording of environmentally relevant factors within the business and the continual introduction of improvement processes.

The eco-audit of EMAS (EU eco-management and audit scheme) and/or the DIN EN ISO 14000 *ff* certification provide suitable procedures for the certification and positive presentation of these activities.

Sustainability reports are a good way of presenting the basic approach and efforts of the business for the environment.

⁴⁸ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany). Principle aims:

*To use, as far as possible, renewable resources in production and processing systems and avoid pollution and waste.

*To work compatibly with natural cycles and living systems through the soil, plants and animals in the entire production system.'

⁴⁹ International Federation of Organic Agriculture Movements (2002): Norms of Organic Production and Processing. Tholey-Theley (Germany) 2. Organic Ecosystems

Annex: Data sheet and checklist

This checklist is designed to present the individual criteria of 'good practice in organic production' again in the form of a table. Under status, points are classified as 'compulsory' and 'optional'.

In addition, the checklist is designed so that it can easily be developed further as an internal tool. For this purpose columns 4 and 5 contain fields to describe the actual situation and the measures to be taken. This means that the list can in fact be used to give a quick overall evaluation of a business.

	Status	Requirement	Actual	Measure
2.1		Business aims		
	Optional	Re-organise business with regard to organic foodstuffs.		
2.2		Responsibility of the business management team		
	Optional	Clarify responsibilities within business management team.		
	Optional	Regularly check the orientation of business towards organic foods.		
2.3		Organisational structure		
	Compulsory	Design the organisational structure in such a way that organic foodstuffs can be produced in compliance with the regulations.		
		Integrate requirements particular to parallel production.		
2.4		Responsibilities in the various areas of operations		
	Compulsory	The responsibilities for organic production must be precisely assigned within the various areas of operations.		
2.5		Business management in small/medium-sized enterprises		
	Compulsory	The responsibility for organic food in small/medium-sized businesses must primarily be taken by the general manager.		
	Optional	The responsibilities for special quality assurance measures should be delegated.		
2.6		Continuing education of people in charge and employees		
	Compulsory	Employees must be trained properly to complete the tasks they are entrusted with.		
	Optional	Employees' knowledge is regularly refreshed.		
2.7		Process description		
	Compulsory	The production processes of organic products must be described in detail.		
	Compulsory	The particular aspects that have to be considered for organic production must be clearly described.		
	Compulsory	The product flow separation measures must be precisely described for the entire operation.		
	Optional	All relevant information should be included in the organisational handbook.		

2.8		Bookkeeping - Traceability		
	Compulsory	Description of premises including all outside storage facilities and areas of operation.		
	Compulsory	Lists of suppliers and customers for organic food have to be regularly updated.		
	Compulsory	List of outside processors in charge of organic food has to be regularly updated.		
	Compulsory	All incoming and outgoing movements of organic products must be recorded.		
	Optional	Easily accessible overview of all organic product movements has to be kept up-to-date.		
	Compulsory	Traceability and documentation of product flows must be established.		
	Compulsory	Proper separation of non-organic and organic product flows in all production related documentation.		
3.1		Suppliers		
	Compulsory	Clarification of whether the suppliers are subject to the inspection procedures.		
	Optional	On-site audit of suppliers must be undertaken.		
	Optional	Contractual agreement with detailed guidelines on possible vulnerabilities shall be established.		
	Optional	The development of a supplier evaluation method is desirable (quality of delivered goods etc.).		
3.2		Raw materials		
	Compulsory	Always check the origin of organic product when delivered (proper identification).		
	Optional	Carry out checks and investigations on delivered batches.		
	Compulsory	Check non-organic ingredients and production aids for compatibility with the regulation.		
	Compulsory	Check that the non-organic ingredients are not genetically modified.		
	Optional	Work to replace non-organic ingredients with organic alternatives.		
3.3		Procurement from third countries		
	Compulsory	Consider third-country regulations when importing.		
	Optional	Conclude agreements with producers in third countries. Ascertain the production conditions.		
	Optional	Pay attention to the topic of 'fair trade'.		
3.4		Transport		
	Compulsory	Make sure that outside transport companies are aware of the requirements for organic food.		
	Optional	Stipulate requirements in writing, e.g. for cleaning.		
	Compulsory	Eliminate mixing or contamination by non-organic product during loading, unloading and transfer procedures.		
	Compulsory	Ensure that the transport units are sealed, especially when using outside transport companies.		

4.1		Preparation of the storage facilities		
	Compulsory	Check if new storage facilities are suitable for organic foodstuffs.		
	Compulsory	Minimise contamination risks and ensure that organic pest control measures are applied.		
	Compulsory	Carry out effective cleaning before storing organic products.		
	Compulsory	Regularly document the effectiveness of the cleaning.		
	Compulsory	Ensure with the inspection body that measures that need to be carried out when organic produce is put into storage for the first time are compatible with organic food regulations.		
4.2		Storage-area management must take into account the requirements of organic products		
	Compulsory	Avoid using prohibited materials for pest management (Annex II).		
	Compulsory	Eliminate or minimise the contamination risk from preservatives from previous usage of the facility.		
	Compulsory	When batches are changed effective cleaning measures must be carried out and documented.		
4.3		Identification (clear allocation of products to storage facilities)		
	Compulsory	Clearly identify the storage facilities where organic product will be or is stored.		
	Optional	Control units should be clearly labelled.		
	Compulsory	Document the storage-area management for organic produce in a written and clearly visible form.		
	Compulsory	Set safety measures and warning systems in such a way as to prevent mixing of organic and non-organic produce.		
4.4		Minimisation of mixing		
	Compulsory	Analyse the processes where mixing could occur and/or cannot be completely eliminated.		
	Compulsory	A minimisation strategy must be developed. That defined procedure should be agreed with the inspection body.		
	Compulsory	Implement the measures to minimise mixing by means of work instructions.		
5.1		Recipe composition		
	Compulsory	Make exact descriptions of recipes, their ingredients and processing aids.		
	Compulsory	Check whether 'GMO free' declarations exist for non-organic ingredients and processing aids.		
5.2		Preparative cleaning and time management		
	Compulsory	Ensure for parallel production that a proper cleaning in between organic and non-organic batches is conducted.		
	Compulsory	Check and document regularly the effectiveness of the cleaning steps.		
	Optional	Ensure a uniform identification of all organic production ingredients.		
5.3		Production procedures		
	Compulsory	Indicate the production ('organic products being produced').		
	Compulsory	Correctly indicate the ingredients and semi-finished products.		
	Compulsory	Ensure that production records for traceability are made.		
	Compulsory	Indicate non-organic and organic product in the documentation.		

5.4		Minimisation of mixing		
	Compulsory	Gain precise knowledge of processes where mixing could occur and/or cannot be completely eliminated is required.		
	Compulsory	Document that a minimisation strategy of mixing organic/non-organic is being followed and defined for these processes. This should be agreed with the inspection body.		
	Compulsory	Ensure measures to minimise mixing by means of work instructions.		
6.		Cleaning and disinfection		
	Optional	When selecting cleaning and disinfection substances, attention should be paid to ecological considerations.		
	Optional	Cleaning procedures should be established that can be carried out using as few cleaning and disinfection substances as possible.		
	Compulsory	A list of the cleaning and disinfection substances must be kept by the business.		
	Compulsory	Document the effectiveness of the cleaning measures in terms of the prevention of mixing and contamination.		
	Compulsory	Carry the measures out as defined in the cleaning programmes.		
	Optional	Ecologically relevant factors should be recorded in the documentation of the cleaning measures.		
7.		Pest control		
	Compulsory	No use of prohibited protection agents.		
	Compulsory	Prevent and/or minimise contamination from prohibited protection agents.		
	Compulsory	Define measures to eliminate or minimise contamination (in agreement with the inspection body).		
	Optional	Introduce an ecological pest control system.		
	Optional	Design a business-wide pest control system.		
	Compulsory	Document the pest control measures carried out.		
8.1		Identification and communication		
	Optional	Emphasise the particular value of the foodstuffs with the packaging and appearance.		
	Optional	Ensure realistic and credible communication regarding contents.		
	Compulsory	Clearly identify organic products as such at all stages and for all materials (advertising messages, range types).		
	Compulsory	Use the code/number of the inspection body on packaging and product information used on a day-to-day basis.		
	Compulsory	Ensure adherence to statutory food-labelling requirements.		
	Compulsory	Differentiate in the presentation of non-organic and organic products within a business.		
8.2		Packaging types/labelling		
	Compulsory	Ensure that no mixing of non-organic and organic product can occur during the packaging process.		
	Optional	Select packaging that complies with environmental requirements.		
	Optional	Ensure that the packaging material and system emphasises the value of the organic product.		

8.3		Sale of loose goods to the end user		
	Compulsory	Ensure that organic product is always be clearly recognisable and addressed as such. Qualified staff play an important role in this.		
	Optional	Ensure that when designing product ranges care is taken to avoid the same product types being offered of non-organic and organic origin.		
9.		Processing operations outside one's own certified operation		
	Compulsory	Ensure that all outside processors that carry out work are subject to inspection.		
	Compulsory	A business can temporarily lease premises for production purposes. This should be arranged on a contractual basis.		
	Optional	Ensure that outside processing will be carried out by companies that have an organic certification.		
10.		Quality management		
	Compulsory	Integrate requirements for organic food into existing QA system.		
	Compulsory	Define the working directives necessary to fulfil the organic requirements.		
	Compulsory	Integrate the process for handling organic product of doubtful origin into the QA system.		
	Optional	Ensure that ecologically sound measures are followed throughout the entire business, e.g. pest control.		
11.		Environmental management		
	Optional	Environmental management systems should be introduced.		

Code of Practice for Organic Food Processing

Diverse legal requirements and consumer expectations need to be met when producing “low input” or organic processed food. These may relate to the authenticity and integrity of the foods, the level of energy use, or issues of food safety. Most processing companies have to handle parallel processing of conventional and organic foods.

For many processors, fulfilling all these requirements and expectations presents a tremendous challenge in understanding and implementing in daily practice the demands of the various standards. It is therefore important to have in this field a guidance document that can serve processors and standard-setting institutions as well as certification and inspection bodies.

The Code of Practice for Organic Food Processing has been developed to meet this need. The aim of this Code of Practice is to contribute to the further development of organic food processing in terms of increased safety, quality, transparency and success.

The Code of Practice was developed by integrating the stipulations of the European Regulation 2092/91, the requirements of the International Federation of Organic Agriculture Movements (IFOAM) and the perceptions of consumers.

The Code describes the duties of a company at management level to establish and run organic production. It helps companies develop efficient and reliable organic production processes and defines an interface between the certification bodies and companies. The Code provides a comprehensive introduction to the key requirements of the organic food sector as they apply to daily practice.