

Assessing Compliance of Inputs in Organic Agriculture



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Organic agriculture (OA) is gaining recognition as an option for sustainable agricultural production, and to improve food, nutrition as well as income securities among smallholder farmers in Africa, India and other developing regions. Since the 1990s, the global area under organic and the number of producers have continuously increased.

The availability of good quality organic inputs remains one of the main barriers faced by smallholder producers in Africa and India. Often, producers find inputs on the markets, but their suitability for organic production is uncertain, unless information about them is available

through the respective certification bodies (CBs). Although CBs assist their producers to select appropriate inputs, there remains uncertainty for many other farmers, e. g. those who are considering converting to organic farming, but without certification. Even so, new inputs on the markets need authorisation by the authorities and the CBs before operators can use them.

As one of the activities to improve the capacity and effectiveness of the Green Innovation Centres in recognising and materialising the potentials of Organic Agriculture, GIZ has supported the development of this User Guide as part of a package of training materials and guides.

Purpose of the User Guide and target groups

The present User Guide aims to address some of the challenges related to inputs for organic agriculture in countries where the Green Innovation Centres Programm is implementing organic agriculture. It provides guidance to CBs and other users on organic inputs compliance. The User Guide explains in a step by step procedure how substances and products can be evaluated on their conformity with regulatory frameworks on organic agriculture in the country of production or in the country to which the agricultural produce shall be exported.

This User Guide shall help certification bodies, private label organisations and other key stakeholders to assess whether a specific input can be used in organic agriculture or not.

It is important to keep in mind that while certain inputs for plant nutrition and plant protection can be used in organic production, preventive plant protection and soil conservation measures are vital foundations to ensure plant health and soil fertility and successful organic production in the long-term.

Figure 1: Strategy model of biological plant protection

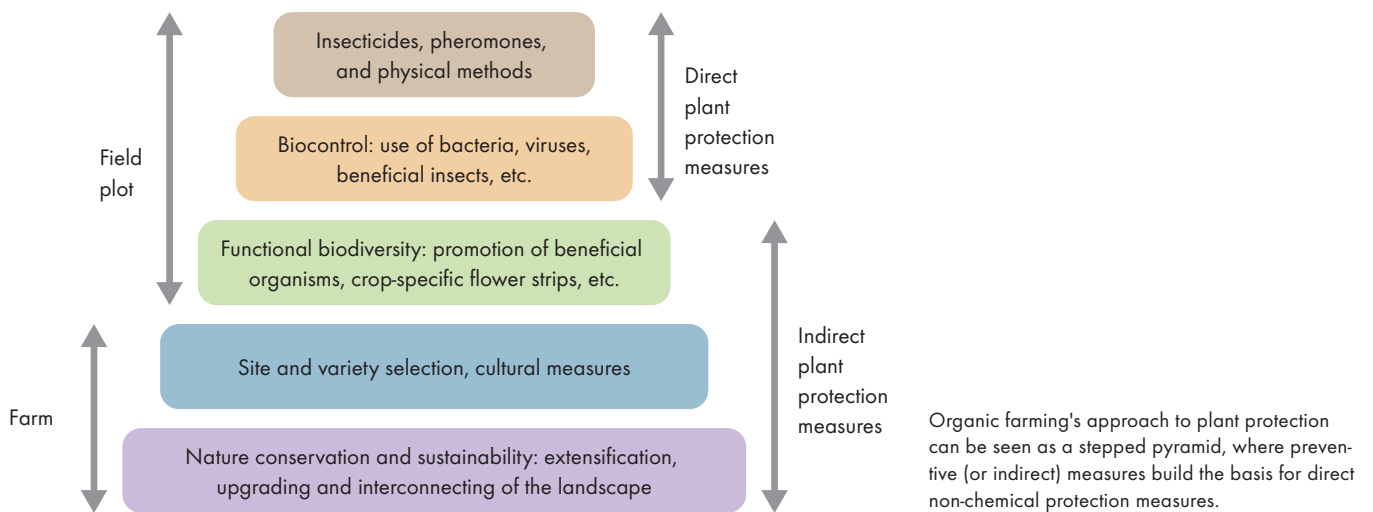


Figure 2: Three steps approach to organic soil fertility management



Organic soil fertility management can be seen as a three-step approach. The application of foreign fertilisers, soil amendments and irrigation water complement the measures of the first and second step.

Definition of key terms

Inputs

In the context of this user guide, inputs are defined as off-farm materials that are used in agricultural production or processing. The guide discusses the following inputs:

- Fertilisers, soil conditioners and related products
- Plant protection products and related products
- Propagation material

Other inputs, such as products for cleaning and disinfection, products for parasite control and products for food processing are also considered inputs, but will not be addressed in this manual.



Examples of organic agriculture inputs from Benin, West Africa. Top: a neem cake based organic fertiliser; bottom: a neem oil based organic pesticide.

Substances and products for organic production

A differentiation must be made between products and substances. A **product** is the input actually utilised, i. e. a specific brand of a plant protection agent or of a fertiliser product. A **substance** is the material used to manufacture the product, i. e. pyrethrum for a plant protection agent, or bone-meal for a fertiliser product. Regulatory frameworks only list substances, not products. Inputs in the context of this manual are products containing substances permitted in organic agriculture.

Input lists

Organic regulatory frameworks such as the European Regulation 889/2008, or the USDA National Organic Program (NOP), include provisions and lists of substances that can be used in organic agricultural production and processing. Products allowed in organic agriculture are listed in private input lists, such as the FiBL European Input List or the OMRI Product list in the USA. The listed products contain only substances¹ permitted by the relative regulatory framework, e. g. those found in the Annexes of the EC Regulation No 889/2008 or the paragraph 205.601-605 of the USDA NOP.

¹ In addition to the authorised substances, a product may also contain inert materials (e.g. formulation aids or preservatives) which are not regulated by the relevant regulatory framework. The inert materials should nevertheless be assessed on their compatibility with organic principles.

Inputs assessment methods

Target markets

In order to know if a certain input can be used, it must be clarified whether the organically produced product shall be sold on the national market, or on the export market.

- a. if the product is to be sold on the national market, the national regulatory framework must be complied with.
- b. if the product is to be sold on the export market, the regulatory framework of the target country must be complied with.

In many cases, an agricultural product that is exported must comply with both the regulatory framework of the target country, as well as the regulatory framework of the country of origin.

Inputs used in production of organic agricultural products to be sold on the national market

Products that are to be sold on the national market must be produced under the provisions of the national regulatory framework on organic agriculture or, alternatively, under the provisions of a private standard or other guideline (such as the IFOAM Norms). Inputs must consequently consist of substances allowed in the relative national or private regulatory framework.

Inputs used in production of organic agricultural products to be sold on the export market

Regulatory framework of the target country

In a first step, it must be clarified, with which regulatory framework or private standard the organic product, and hence the inputs used to produce that product, shall comply.

If the concerned product shall be exported to a EU country, the input must be assessed against the provisions of the EU Regulations on Organic Agriculture 834/2007 and 899/2008. For export to the USA, the input must be assessed against the provisions of the USDA National Organic Program². For export to other countries with a proper regulatory

framework on organic agriculture, the input must be assessed against the provisions of that regulatory framework. For example, for export to Japan, the provisions of the Japanese Organic Agriculture Standards (JAS) must be met.

If the product shall be labelled with the brand of a private label organisation with a proper standard, such as Naturland, Bio Suisse or Demeter, the provisions of the respective private standards must be complied with in addition to the legal requirements.

Equivalent regulatory frameworks

Compliance with the regulatory framework of the target country is inspected and certified by an accredited Certification Body (CB). CBs can be accredited when they use a standard that is equivalent to the regulatory framework of the target country. Consequently, the CB has some leeway in the decision whether certain inputs, even those not explicitly included in the legal framework for which they are accredited, can be used. Any decision by an operator or producer whether or not an input can be used, must therefore be concurred with the accredited CB.

Whereas the currently enacted regulatory framework of the European Union allows CBs to use an equivalent standard for inspection and certification purposes, e. g. the IFOAM Norms for Organic Production and Processing, the new EU Regulation 848/2018 that will replace the EC Regulation 834/2007 and comes into effect in 2022, requires full compliance. The latitude that CBs currently have in permitting substances and inputs will, henceforward, be restricted.

Equivalency agreements

In an equivalency agreement, two countries (or country unions) formally agree that their respective regulatory frameworks on organic agriculture are equivalent, i. e. products that are certified organic against the national framework in country A, can be sold as organic in country B without additional certification procedures. Examples are the current equivalency agreements between the EU

² Note: The European Input List contains input products which are complying with EU Regulations on Organic Agriculture (www.inputs.eu). The OMRI Product List contains input products which are complying with the USDA National Organic Program (www.omri.org).

and the USA, by which products produced in the EU against the EU regulatory framework can be sold in the USA as organic and labelled with the USDA NOP logo and vice versa. In consequence, inputs allowed by the regulatory framework in country A can be used for organic production in that country, even if this input is not listed in the regulatory framework of country B.

Countries that do not have an equivalency agreement with the target country of export must comply with the national regulatory framework of that country. Certification bodies accredited for inspection and certification of the national framework of the target country carry out inspection and certification. For export to the European Union, the regulatory framework of the EU must be equivalently complied with i.e. some deviancies to the EU framework can be accepted.

Evaluation of substances and products

Inclusion of a substance in the national regulatory framework on organic agriculture

The inclusion of a substance in the regulatory framework on organic agriculture of a specific country is decided on by the political authorities. In most countries, a pre-condition for inclusion is the formal registration of the substance as a plant protection agent or a fertiliser in the national regulatory framework on plant protection agents and fertilisers that may be used in agricultural production (conventional and organic). In the absence of such a registration, the substance cannot be included in the list of substances allowed in organic agriculture for that particular country.

Inclusion of a new substance in the national list of plant protection agents or fertilisers is in principle possible. The requirements vary from one country to another. Usually, to request for registration, a comprehensive dossier has to be submitted with solid scientific data on the possible impact of the substance e. g. on human health and the natural environment. Typically, the addition of previously not registered substances to the national list of pesticides and fertilisers can only be made if the relevant authorities are decidedly cooperative.

Once the substance is formally registered, a comprehensive dossier on the substance to be included in the list of allowed substances in OA must usually be submitted to the owner of the standard (e. g. authority or label owner). The procedures and the criteria used to evaluate the substance differ from country to country and commonly include, a) the impact on the environment and human health, and b) the consistency with the regulatory framework on organic agriculture.

The IFOAM Norms list the criteria to evaluate a substance in Appendix 1, the EU criteria are given in Art. 16 of Reg. 834/2007. The criteria of the USDA NOP for amending the National List of Allowed and Prohibited Substances are specified in paragraph 205.600.



Examples of Organic Inputs Lists from Europe.

Input lists of permitted products

Input lists are lists of commercial products that can be used in organic agriculture under a specific regulatory framework. Input lists not only help operators to understand whether they can use a certain product, but also allow CBs to streamline their certification procedures, i. e. they do not have to carry out an assessment if the product complies with the regulatory framework if such a product is already listed in the Input List.

CBs deal with input lists in different ways. They may consider them as a useful tool, which can be used by those farmers who wish to do so. Alternatively, they may declare an input list as mandatory. That is, only products that appear on this list can be used, while all other products are prohibited. Input lists prevent that operators use, either intentionally or erroneously, inputs that do not comply with the regulatory framework.

For third countries, e.g. non-EU countries, with a proper regulatory framework on OA, it is highly recommended to compile an Input List with internationally recognised experts. Input providers would confidentially disclose the composition of the product to the expert team without risking that the composition becomes known to competitors. Knowing the exact composition of the product, i. e. all its ingredients as well as the method of production, allows the experts to verify if the product complies with a specific regulatory framework.

Box 1: What are mandatory input lists?

In order for an input list to be mandatory, all CBs active in the country would have to sign an agreement that products that are not listed are basically banned. In countries with a proper regulatory framework on OA, also the authorities would have to sign this agreement. Mandatory lists allow more certitude to operators and CBs. Even when the input list contains recommended inputs only, it allows the CBs to streamline the certification procedure and gives the operators certainty that the product that they use conforms to the Standard against which they wish to be certified.



A liquid organic soil amendment from Benin, West Africa.

The evaluation of inputs can be carried out by a proper inputs team using the FiBL Admission Criteria for Products. The admission criteria are subdivided into two main- and sub-categories as follows:

- **Basic admission criteria for fertilisers, soil conditioners and crop management tools.**

Admission criteria include:

- a. Fertilisers and soil conditioners may only contain materials and substances listed in the national regulatory framework or, in case of export, in the regulatory framework of the country of export.
- b. Co-formulants (i. e. co-adjuvants and inert materials) must be natural substances, but other materials may be accepted, provided that the applicant can demonstrate their need and that they are not harmful to the user, the consumer or the environment.

- **Basic admission criteria for products for crop and animal health**

Admission criteria include:

- a. Active substances in Plant Protection Products are restricted to those listed in the national regulatory framework on organic agriculture or, in case of export, in the regulatory framework of the country of export.
- b. Co-formulants must be natural substances, but other materials may be accepted, provided that the applicant can demonstrate their need and that they are not harmful to the user or the environment.

For detailed admission criteria, visit the FiBL website 'European input list'. Another option is to use the criteria of the Organic Materials Review Institute (OMRI).

Box 2: The challenge of unregistered substances

Almost all countries in the world have a regulatory framework on the use of plant protection agents in agricultural production. This regulatory framework includes lists of substances that are registered for use in national agricultural production. Substances that are not listed may not be used, neither in conventional nor in organic agriculture.

This means, that if a substance is allowed in organic agriculture, e.g. in the EU or the in the USA, this substance can only be used in the national context if it is listed as a plant protection agent in the relative national regulatory framework. If, e.g. pyrethrum, a substance allowed in most regulatory frameworks on organic agriculture, is not registered as a plant protection agent in a specific country, its application in production in that country in both organic and conventional agriculture is prohibited, even if the product is to be exported.

National stakeholders in organic agriculture should, therefore, pressure their governments to include substances widely used in organic agriculture in the list of registered substances for use in agriculture.

The creation of a proper inputs evaluation team and a proper national input-list, rather than cooperating with FiBL (or OMRI), can be an option for countries with scarce financial resources e.g. if they cannot afford external expert services. However, a potential challenge to such an approach is that the manufacturers of the inputs may not be willing to be fully transparent on the composition and the ingredients of the inputs, which is a requirement for an objective conformity assessment. Even with a non-disclosure agreement, especially large international companies may not be willing to provide all the necessary information to inputs evaluation teams. In this case, even intrinsically conforming products might fail to be placed on the mandatory input list if full information about them is not disclosed by the manufacturers. On the other hand, if these inputs already appear on the FiBL European Input-List or on the OMRI Input List, the Evaluation Team could decide to list these inputs on their own input list without further assessment. However, regular verification would be required to ensure that such inputs are still listed on the FiBL European Input-List or on the OMRI Input List, otherwise they would need to be delisted.



Mature compost from a commercial compost plant in Benin.

Box 3: Farm-made inputs and their use in organic agriculture

Although most regulatory frameworks do not specifically address the use and legal status of farm-made inputs, such as plant extracts for pest and disease control and plant nutrition or potting soils, in most cases these inputs can be used without restrictions. However, whether a specific farm-made input can be used is decided by the CB. Therefore, it is recommended, prior to application, to always verify with the CB whether the product (farm-made or commercially sourced) can be used in organic production.

An example of the ambiguous situation is the use of commercially produced plant extracts that contain substances that have been banned by the EU from usage in organic agriculture, such as rotenone or nicotine. Such products may not be used for organic production. However, farm made plant-extracts containing these substances may nevertheless be authorised by the CB.

Inputs evaluation team

Manufacturers of inputs have to submit a request to the Input List Managers if they want their product listed on the input list. In the submission, they will have to fully disclose the ingredients and compounds of the product. A team of experts then evaluates the request and decides if the product can be listed.

The Evaluation Team should be comprised of:

- technical experts on substances and products to be used in organic agriculture and processing,
- legal experts with know-how of the relative regulatory frameworks,
- representatives of the authorities, and
- representatives of the major CBs in the country

Seeds and vegetative propagation material

The EU regulatory framework on organic agriculture obliges operators to use organically produced propagation material. Only in cases where it can be demonstrated to the CB that the propagation material is not available in organic quality, the operator may use non-organic material. However, non-organic material may only be used if it has not been treated with substances that are prohibited in organic agriculture.

In countries in which organic propagation material is available, it is recommended to compile a list of available seeds and vegetative propagation materials, indicating the species, the variety and the contact data of the provider. This list should be readily available to operators, e. g. on a website.

Before ordering any propagation material, the operator can verify with the help of the list if the desired material is available. If the material is not available, then the operator can demonstrate non-availability to the CB by referring to the list. A written confirmation by the provider that the material is not available any more, allows the operator to demonstrate to the CB that organic material could not be used. Advanced systems, such as the OrganicXseeds website, automatically print out a non-availability confirmation if the desired material is not available or has run out of stock.

The Evaluation Team decides if an input can be listed on the national / cross-country Input List. The Input list can be drafted as mandatory (only listed products may be used) or as non-binding (not listed products can be used with permission of the CB).

For countries without a proper legal framework on organic agriculture, the FiBL and OMRI Input Lists can be used by operators and CBs to assess whether a certain input can be used on products that are to be exported to the EU or the USA.



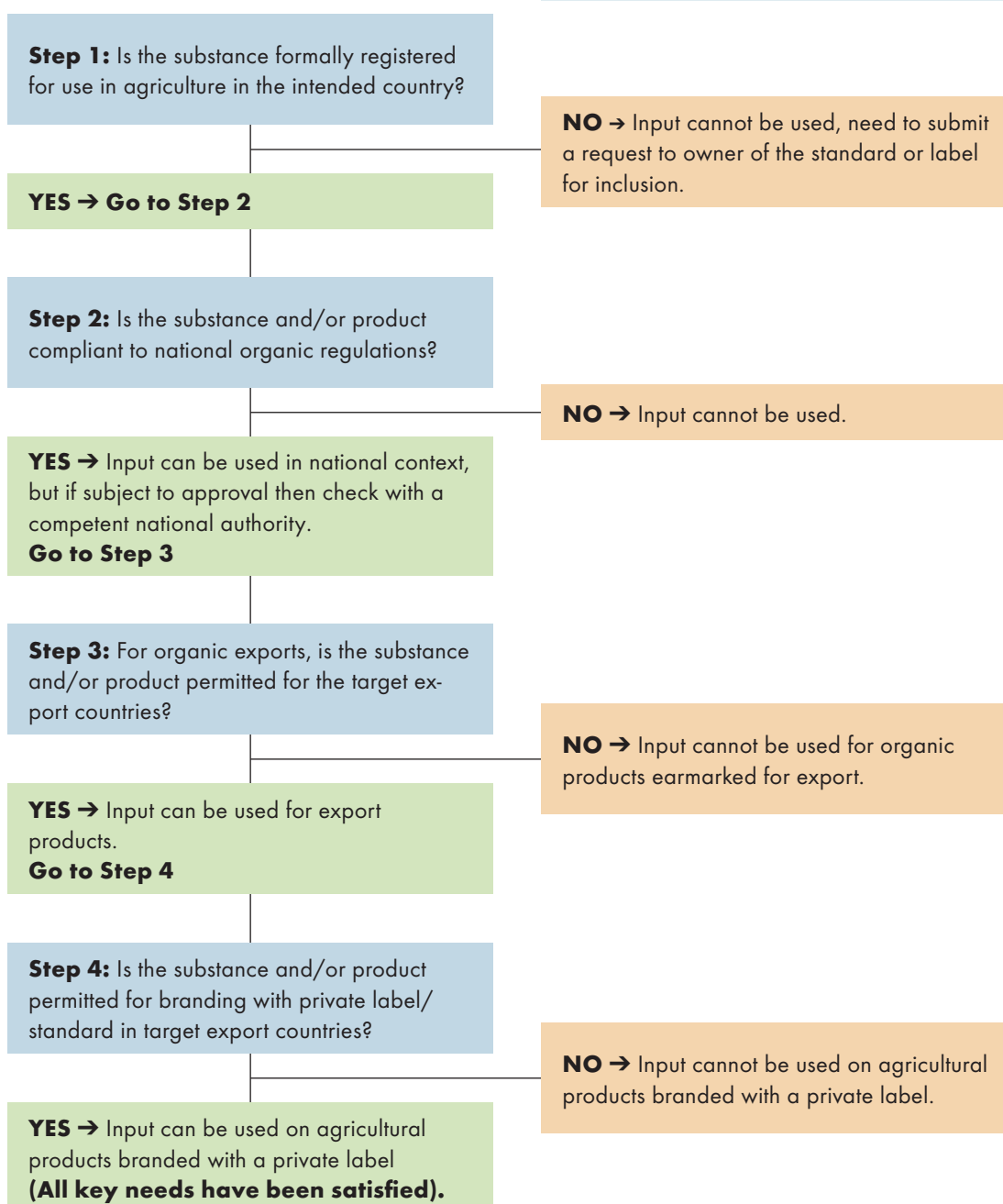
Organically multiplied seeds of indigenous vegetables from Benin.

Keeping the list updated requires quite a lot of work and resources. For objectivity, the list should be carried out by an independent body such as a governmental organisation, an NGO, or a NOAM. Providers of propagation material must inform the independent body of their offer together with proof that the material is certified organic.

Summary of steps to check if a substance or product can be used in organic agriculture

The decision-making tree in Figure 3 summarises how to establish if a substance or input can be used in organic agriculture.

Figure 3: Steps to evaluate whether an input can be used for organic production or not



Box 4: Decision-making tree

Before using an input, the operator should always verify with the CB, or by consulting the national input list / the input list of the target country, that the input can be used for a specific context. In case the CB denies authorisation, or in case the product is not listed in the input list, the operator or his organisation can appeal the decision to the CB or urge the provider of the input to apply for inclusion in the input list.

Step 1: Verification if the substance is formally registered as a plant protection agent or fertiliser

Verify if a given substance (e. g. pyrethrum or rock phosphate) is registered as a plant protection agent or fertilizer in the country where it shall be applied. If the substance is not registered, the substance, or the product containing such a substance, cannot be used, neither in organic, nor in conventional agriculture.

Step 2: Verification if (a) a substance or (b) a product can be used in national organic agriculture

a) Can the substance be used in national organic agriculture?

If registered for use in the country, the next step is to verify if the substance can be used according to the national framework on organic agriculture. If not, the substance cannot be used on organic produce for the national market.

If the substance is allowed by the country's regulatory framework on organic agriculture to which the agricultural product shall be exported, the substance can be used, but only if the exporting country does not require certification against its own regulatory framework on organic agriculture as a condition for export from that country.

For example, Serbia requires organic certification of agricultural products against its own national regulatory framework as a condition for export to the EU. The produce must consequently comply with two regulations: the Serbian and the EU regulatory frameworks on organic agriculture.

b) Can a product containing the allowed substance be used in organic agriculture?

If a substance is allowed for use in the national organic agriculture framework, it is important to then verify if a product containing that particular substance (i. e. all the materials present in the product – the active substance(s), co-adjuvants and inert materials - can be used according to the national framework on organic agriculture or the framework of the country of organic export.

Examples of products that contain a permitted substance but are not allowed for use in organic agriculture:

- i) Pyrethrum as a substance is permitted for use in the EU. However, the EU regulation does not allow pyrethrum products containing the co-adjuvant piperonyl butoxide (PBO). Regulatory frameworks of other countries, however, do not have this restriction. Organic produce treated with a product containing pyrethrum and PBO can, therefore, not be exported as organic to the EU.
- ii) The product Mankocide contains both an allowed substance, copper hydroxide, and a banned substance, Mancozeb. The product can, therefore not be used in organic agriculture.

Step 3. Verification if the substance is allowed in the country of export

Verify if the substance in the product that is used is allowed in the regulatory framework on organic agriculture of the country of export.

If the substance is not allowed, the substance, or the product containing the substance, cannot be used for produce that is to be exported.

For instance, some national regulatory frameworks on organic agriculture allow the use of the insecticide matrine (an extract from *Sophora* species). However, the EU Regulation on organic agriculture does not allow the use of matrine and organic produce treated with matrine cannot be sold as organic on the European market.

Step 4: Evaluation if the substance is allowed by the standard of a private label-owner

If the produce shall be exported and branded with the label of a private standard-owner (e. g. Naturland, Bio Suisse, Demeter), it is necessary to verify if the private label standard allows or limits the use of substances that are applied (see chapter 4.3.) even though the legal regulatory framework might permit the use of such substances. For example, Bio Suisse (Switzerland) allows metal copper to be used in organic, but limits its use to only 4 kg per ha per year. On the other hand, the EU Regulation allows up to 6 kg per ha per year of metal copper in organic agriculture. In this case, products to be exported to Switzerland and branded with the Bio Suisse label can only be from farms on which a maximum of 4 kg per ha per year metal copper was used.



Local marketing of organic produce in Kenya.

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