

The Concept of the European Quality Assurance Scheme



The European Quality Assurance Scheme – ECN-QAS

The concept of ECN-QAS is laid down in the **ECN-QAS Quality Manual**

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Targets (Part A)

- **Harmonisation of the compost quality and requirements across Europe**
- **Harmonisation of quality assurance schemes across Europe**
- **Assistance to build up national quality assurance schemes**
- **Assurance and monitoring of high quality compost products in Europe**

Targets (Part A)

- Specification of **marketable products** with a **standardised** and **guaranteed homogenous quality**
- Enhancement of **product quality** and **operation quality**
- Guarantee for a **successful use** of the products
- **Deregulation** and **recognition of certified products** by legal authorities, in agricultural systems and by food processing industry
- **Promotion of recycling** of waste «**from waste to product**»

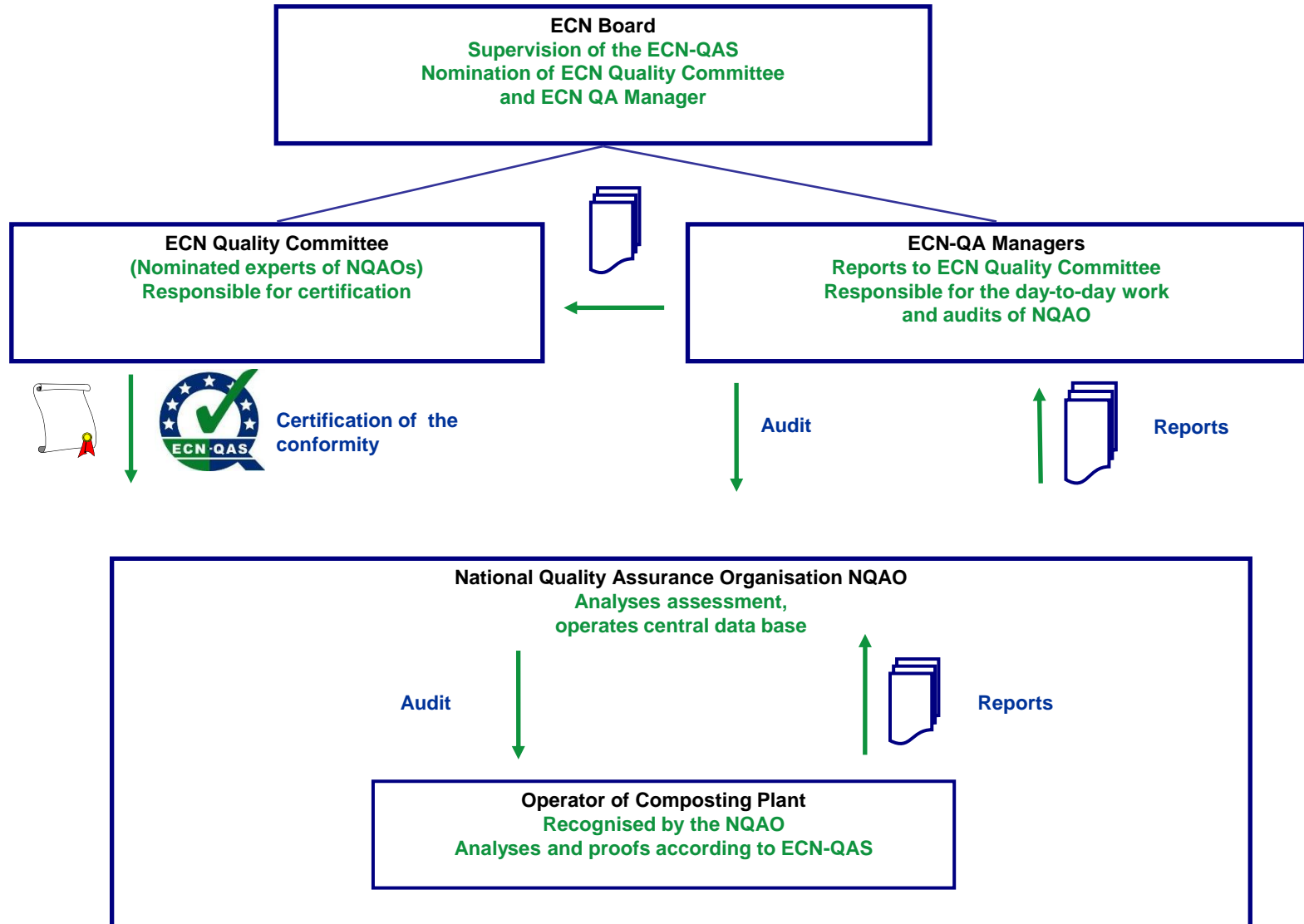
The European Quality Assurance Scheme includes the following elements:

- The requirements for **conformity assessment of national quality assurance organisations** (NQAQO) to the ECN-QAS.
- **Regular assessment of the production in the plants** by the national quality assurance organisation (NQAQO) by means of process requirements (**external control**).
- **Regular sample taking and analysis of the final product from independent, acknowledged labs** and additionally the evaluation of the results by the national quality assurance organisation (NQAQO).
- **Documentation** by the national quality assurance organisation (NQAQO) with information about the quality properties of the product, legal requirements, the necessary compost declaration and information about use and application rates according to good practice.

The European Quality Assurance Scheme includes:

- **Awarding the ECN-QAS Conformity Label** to national quality assurance organisations (NQAO).
- **Awarding a quality label for composting plants and compost products** by a conformity assessed national quality assurance organisation (NQAO) in respect to ECN-QAS.

Course of ECN-QAS



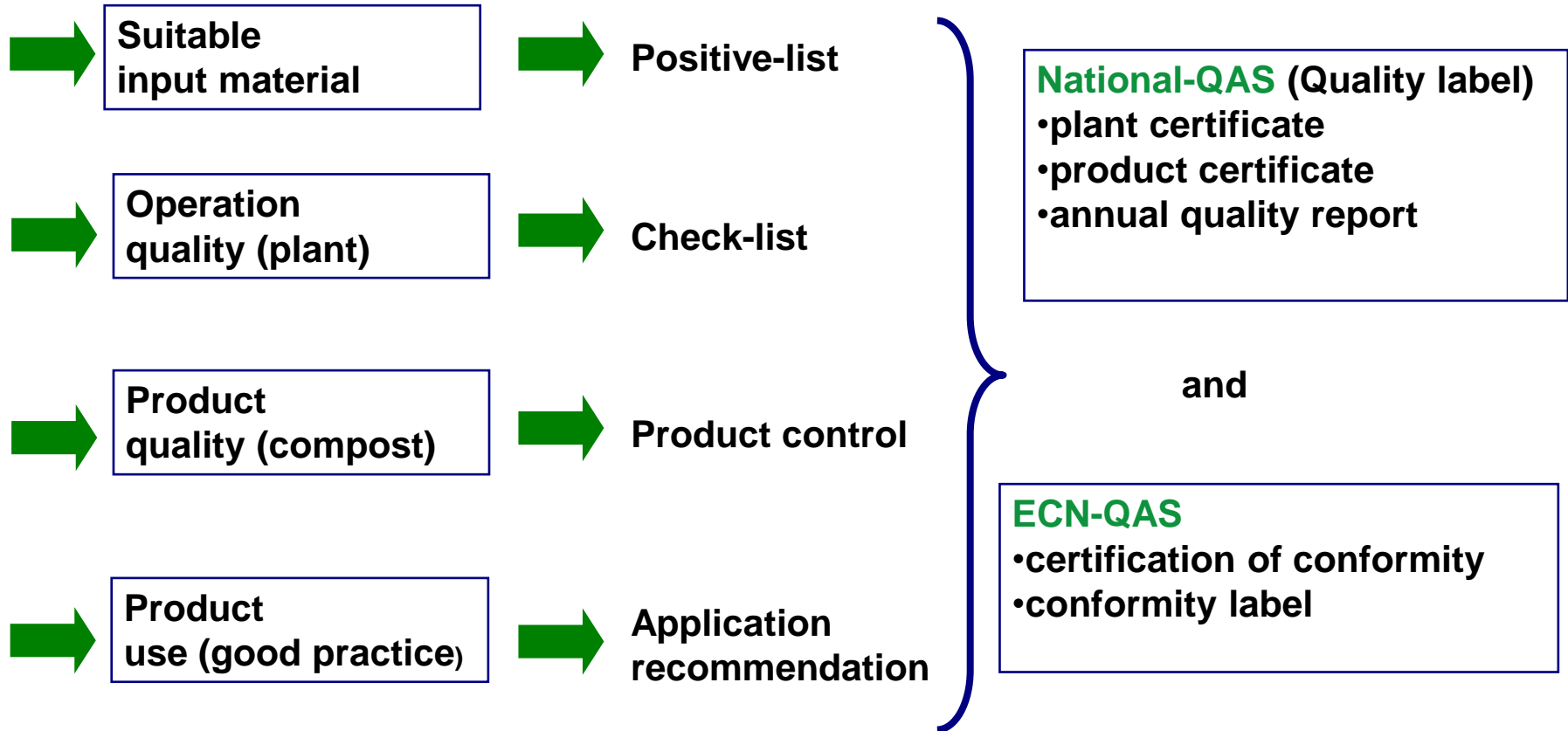


Requirements for Certification bodies (Part B)



- The NQAO should be an **independent** organisation and recognised by legal authorities.
- The NQAO has to meet the requirements for certification bodies as laid down in the ECN-QAS Quality Manual which is based on the European Standard **EN 45011**
- The NQAO shall perform a **regular audit of all processes.**
- The NQAO has to **document all records** in a central data base.
- The NQAO has to implement a **Quality Committee.**

ECN-QAS for Compost (Part C)



The product quality of compost is determined by the quality of the input materials.

Precondition for quality compost:

- Suitable input materials
- From separate collection of biowaste

Process recommendations for composting plants

- 55 °C for 14 days in open windrow systems or
- 65 °C / 60 °C for three days in open windrow / in-vessel systems

Check-list for operation quality

- general criteria for good operation practice
- used for internal and external inspection

Quality criteria of the European Quality Assurance Scheme for the characterising of quality compost

	Parameter	Assessment
Soil improvement	Organic matter	≥ 15 %, declaration
	Alcaline effective materials (CaO)	Declaration
Fertilisation	Nutrients (N; P, K,)	Declaration
Material propertties	Plant compatibility	Benchmark accord. to the test on germinable plants, declaration
	Water content	Benchmark for peak content, declaration
	Bulk density/volume weight	Declaration
	Grain size	Declaration
	pH-value	Declaration
	Electric conductivity	Declaration

Precautionary requirements on the protection of environment and consumers

	Parameter	Assessment
Hygienic aspects	Salmonellae	0 in 25 g DM
Undesired ingredients	Impurities (glass, metals, plastics)	≤ 0.5 % DM
	Germinable seeds and sprouting plant parts	≤ 2 per litre
Harmful matter	Heavy metals	mg / kg DM
Precautional limit values¹⁾	Lead (Pb)	130
	Cadmium (Cd)	1.3
	Chromium (Cr)	60
	Copper (Cu) ²⁾	200 ³⁾
	Nickel (Ni)	40
	Mercury (Hg)	0.45
	Zinc (Zn) ²⁾	600 ³⁾

¹⁾ Amlinger, F. et al. 2004: Heavy metals and organic compounds in waste used as organic fertilisers.

²⁾ Copper and zinc are classified as essential nutrients. Values over 110 mg Cu kg⁻¹ DM and over 400 mg Zn kg⁻¹ DM must be declared.

³⁾ These values are classified as benchmarks.

Operation quality (External audit)

- suitable input materials in accordance with the **positive list**
- operation control by **plant visits of independent quality managers**
- control by **independent sample takers** and by declaration in analysis report

Independent analysis and declaration of the product quality

- 1- 4 times in the recognition year depending on the amount of input material
- For monitoring the sampling frequency is calculated according to the formula:
$$\text{Amount of input material} / 10.000 \text{ [t]} + 1$$
- control and sanctions by an independent quality committee of the NQAO.
- certification with product declaration according to regulations

Application recommendations

- application recommendations based on national and European legal requirements.
- application recommendations due to good fertilisation practice.

ECN-QAS labels and guidelines



ECN-QAS
Quality label
for Compost



ECN-QAS
Conformity label
for Quality
Assurance
Organisation



ECN-QAS
Quality Manual