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GROWING THE ORGANIC SECTOR IN SOUTH AFRICA

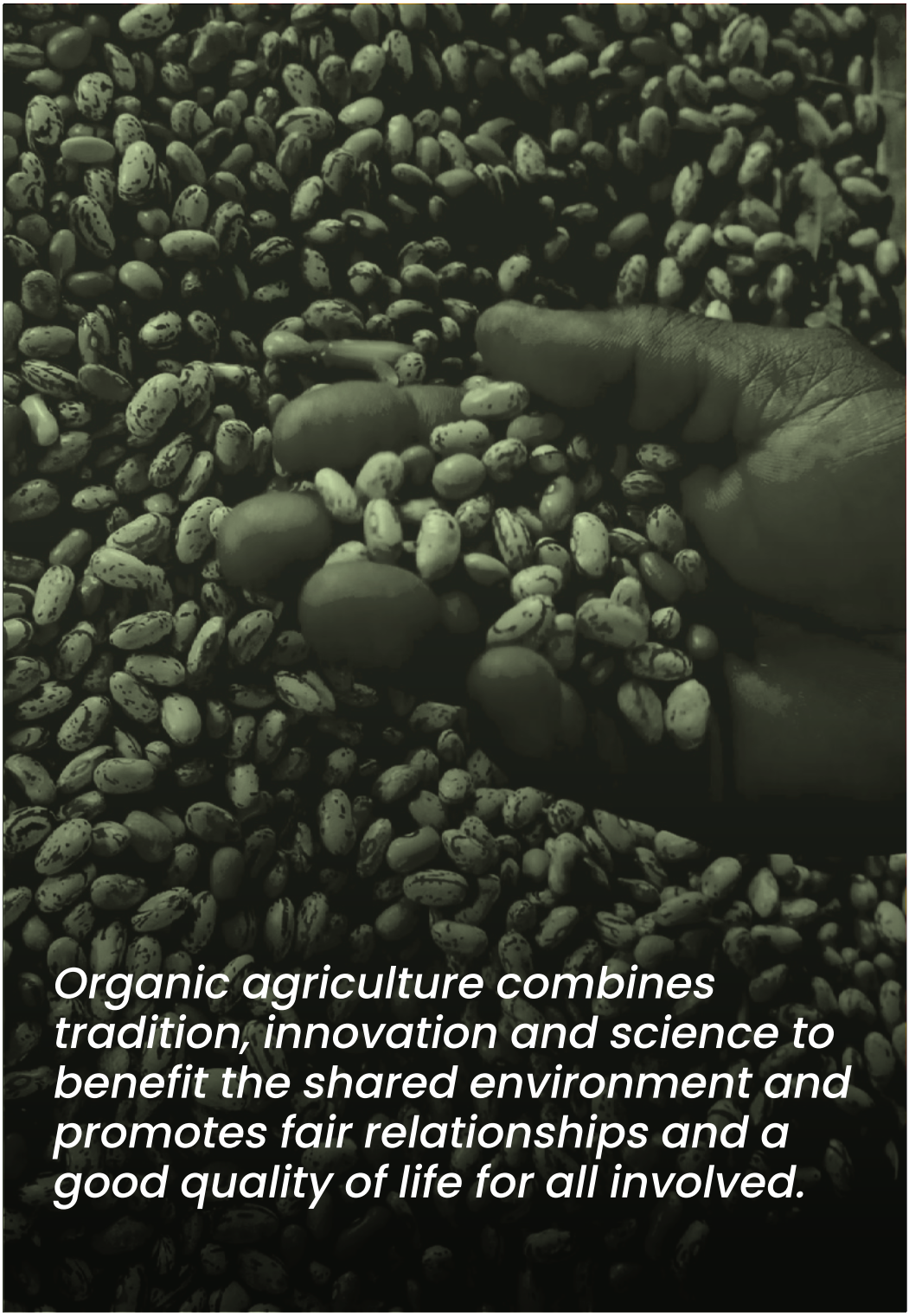



Basic Production Principles






The Principle Of Health. | **The Principle Of Ecology.** | **The Principle Of Fairness.** | **The Principle Of Care.**


Organic agriculture combines tradition, innovation and science to benefit the shared environment and promotes fair relationships and a good quality of life for all involved.

INTRODUCTION

The terms of reference for these principles[1] are based on the SAOSO Standard for Organic Production and Processing. The SAOSO Standard describes organic agriculture as a whole system approach based upon a set of processes resulting in a sustainable ecosystem, safe food, good nutrition, animal welfare and social justice. Therefore, organic production is more than a system of production that includes or excludes certain inputs. The SAOSO Standard is written in such a way that producers wishing to follow the Standard may use it in the context of third party certification, Participatory Guarantee Systems (PGS), Community Supported Agriculture (CSA), or simply self-commitment.

The Standard describes specifics allowed and restricted inputs, various technical specifications and notifiable exceptions. The principles below are in harmony with these standards, **and should not be seen as a substitute**, but rather as a complimentary framework; written in language that all participants can understand, in the positive spirit of participation and integrity – cornerstones of any PGS.

DEFINITION OF ORGANIC AGRICULTURE

The PGS operates within the principles and guidelines of IFOAM–Organics International and therefore adopts as its definition of organic agriculture:

"Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promotes fair relationships and a good quality of life for all involved."

[1] Based on Bryanston Market PGS Basic Production Principles (July 2018) and updated by PGSSA and SAOSO committee members and sector specialists (August, 2022)

GENERAL PRINCIPLES

1. Ecosystem Management



The organic farm is an element within an environment or ecosystem. The balanced management and maintenance of this system is an important factor in organic production. Management practice should include:

a. Sustainable land management[2] – slash and burn practices to make land available will not be allowed.
b. Wetlands and critical breeding grounds for birds and animals must be protected.
c. Virgin land and forests should be protected.
d. If products are being wild harvested, harvest areas concerned should be clearly recorded and documented and harvesting practice should be in accordance with environmental principles to ensure sustainability as described in the SAOSO Organic Standard. The wild harvest areas should furthermore be safe from any contamination, whether it be agrochemical or industrial pollutants.

2. Soil Management

Organic agriculture starts with the soil. It is a basic principle that plant health is a reflection of soil health. The farm must have a clear long term soil fertility management system in place. This system should include the following:

a. Mechanisms and practices to increase levels of organic matter in the soil such as "green manures", mulch, compost, cover crops and the addition of animal manure (composted)

Note: raw manure is only permitted if applied a minimum 60 days before harvesting a crop that might come into contact with the manure), with the resultant addition of soil organic matter and associated beneficial microbes to assist with the breakdown leading to the absorption of nutrients.

b. These inputs should be sourced as follows (in order of preference):

   i. Manufactured/produced on-farm, using local materials.
   ii. Sourced locally from neighbouring farms or groups. Animal manure must be preferably composted

[2] Sustainable means: meeting the needs of the present without compromising the ability of future generations to meet their own needs; conserving an ecological balance by avoiding depletion or destruction of natural resources.(IFOAM: Organics International 3.0)

prior to application, and must be sourced from farms under organic management, or from extensive farming practice. Manure from industrial/factory farming is NOT permitted.

iii. Purchased from approved suppliers.

Soil pH and minerals: It is understood that soils cannot always be balanced for optimal plant production through the principles described in a. and b above. The addition of minerals will be allowed as long as the inputs are:

i. Naturally sourced in compliance with the Standard.
ii. Preferably applied following a soil analysis asking for SOM (Soil Organic Matter) and CEC (Cation Exchange Capacity) as well

<u>The use of synthetic fertilisers (agro-chemicals) is expressly prohibited.</u>

3. Pollution and contaminant control



Any farm or production facility runs the risk of being contaminated by chemical and industrial pollutants, by spray drift from nearby chemical farms, runoff from roads, etc. If any of these risks are apparent in or around the farm, management strategies to prevent such contamination should be in place. These may include:

a. Buffer zones and buffer plants on farm perimeter as well as buffer zones and hedgerows on-farm to prevent any possible contaminant spread.
b. Separate storage of petrochemicals, such as paints, fuel, oil cleaning agents.
c. Proper cleaning and rinsing of all equipment and tools to prevent contamination of products.

4. Water Management



The principles of sustainable resource management and water safety are the two main guidelines.

a. Water use should be managed to ensure water conservation and recycling/reuse wherever possible.
b. Water must be fit for irrigation purposes and for animal consumption. If a borehole is used, a test is required on the initial visit and thereafter further tests may be requested by the PGS assessment team based on environmental changes in the area.

5. Crop Production



■ Planting:

A planned system of planting, incorporating ecological principles to ensure preventative pest management and to promote the life cycles of beneficial animals/insects. A system should include the following:

i. Continuity
ii. Intercropping
iii. Crop rotation

iv. Biodiversity management
v. Green manure/cover crops.



■ **Seed/seedling Management:**

The principle of seed harvesting and banking should be the guideline. This, in conjunction with setting up seed exchange networks, should be promoted. If seeds/seedlings are purchased, it should be according to the following principles:

i. Purchase organic seeds or seedlings from a verifiable source.
ii. If organic seeds or seedlings are not available, conventionally grown seed/seedlings may be used with the approval of the PGS assessment team (notifiable exemption within a stipulated time frame).

<u>Any GM seeds or seedlings are expressly forbidden in organic agriculture.</u>

6. Pest and Disease Management

It should be understood that all the preceding production principles, if correctly practised, should minimise the necessity of additional pest and disease control. If:

a. soils are fertile, healthy and balanced,
b. plants are planted according to organic practices:

The organic production system shall include biological, cultural and mechanical mechanisms to manage pests, weeds and diseases. These include:

i. Choice of appropriate species and varieties;
ii. Appropriate rotation programs, intercropping and companion planting;
iii. Mechanical cultivation;
iv. Protection of natural enemies of pests through provision of favourable habitat, such as hedges, nesting sites and ecological buffer zones that maintain the original vegetation to house pest predators;
v. Natural enemies including release of beneficial predators and parasites;
vi. Mulching and mowing;
vii. Grazing by animals;
viii. Mechanical controls such as traps, barriers, light and sound.
ix. On-farm preparations from local plants, animals and microorganisms.

c. the water source is clean,
d. and the local ecosystem is correctly managed;

Plants and animals under organic management are likely to be healthier, and therefore pest and disease control should be minimal. It is understood that the farmer does not have complete control over all these factors and that imbalances could result in pest and disease outbreaks. These should be controlled in the following order of preference:

a. The development of soil quality, health and fertility through organic practices.
b. Planting of pest-repellent plants and borders.
c. Using natural products or extracts made on the farm to control or repel pests/diseases in compliance with the Standard.
d. Biodynamic and /or other approved microbial preparations.
e. Products approved for use in organic agriculture.

Synthetic chemical pesticides and herbicides may not be used in organic agriculture.

7. Animal Husbandry



Organic livestock husbandry is based on the harmonious relationship between land, plants and livestock, respect for the physiological and behavioural needs of livestock and the feeding of good-quality organically grown feedstuffs.

a. Landless animal husbandry systems are prohibited;
b. Management, the environment, facilities, stocking density and flock/herd size should provide for the behavioural needs of the animals, i.e.

i. Sufficient free movement and opportunity to express normal patterns of behaviour (enough space to stand, lie down, move around, groom, sleep and nest naturally and comfortably);
ii. Sufficient fresh air, water, feed, thermal comfort and natural daylight;
iii. Access to resting areas, shelter and protection from sunlight, address where possible, heat and cold, rain, mud and wind;
iv. Provision of suitable materials and areas for exploratory and foraging behaviours;
v. Provision should also be made for specific animals groups (e.g. for cattle/sheep/goats: social grooming and grazing; for pigs: rooting, separate lying, activity/dunging- and feeding-areas, free farrowing, group housing; for poultry: nesting, wing stretching/flapping, foraging, dust-bathing, perching and preening;

Note: animals whose management system requires outdoor tethering to make use of grazing can still be managed in compliance with these requirements.

c. Pest and disease management shall be managed according to the following methods, in order of priority:

i. Wholesome nutritious food;
ii. Preventative methods (disruption, elimination of habitat and access to facilities);
iii. Mechanical, physical and biological methods;
iv. Substances (other than synthetic chemical pesticides) used in traps;
v. Substances listed in Appendix 5 of the SAOSO standards Version 1.7 June, 2020.

d. When animals are housed, the farmer shall ensure that adequate natural and organic bedding materials are provided and that the specific housing requirements for each species are complied with.

i. All animals shall have unrestricted and daily access to pasture or a soil-based open-air area;
ii. For laying hens, a minimum daily rest period of eight continuous hours without artificial light shall be respected.

e. **Animal origin and conversion period:** organic animals are born and raised on organic farms. Animal husbandry systems changing from conventional to organic require a conversion period:

i. Offspring may be considered organic only if their mother has been organically managed throughout the pregnancy;
ii. Animals for meat should be raised organically from birth;
iii. Milk may be considered organic only if the dairy animal has been organically managed throughout the pregnancy preceding lactation;
iv. Eggs may be considered organic only if the poultry has been organically managed from 2 days old;
v. Breeding stock may be brought in from conventional farms to a yearly maximum of 10% of the adult animals of the same species on the farm. Non-organic female breeding replacements must be nulliparous (i.e. must not have given birth before).

f. Mutilations are prohibited. Debeaking; castrations; tail docking of lambs; dehorning; ringing (except for pigs) may be used only if animal suffering is minimised and anaesthetics are used where appropriate.



g. **Nutrition:** Organic animals receive their nutritional needs from organic forage and organic feed of good quality.
i. More than 50% of the feed shall come from the farm unit itself,

surrounding natural grazing areas, or be produced in cooperation with other organic farms in the region;

ii. Ruminants shall have daily access to roughage. Ruminants must be grazed throughout the entire grazing season(s);

iii. Young stock from mammals shall be provided maternal milk or organic milk from their own species and shall be weaned only after a minimum period of 3 months for calves and foals; 6 weeks for piglets, 7 weeks for lambs and kids.

h. **Veterinary Medicine:** all practical measures shall be taken to ensure the health and wellbeing of the animals through preventative animal husbandry practices.

   i. If an animal becomes sick or injured despite preventative measures, that animal shall be treated promptly and adequately, if necessary in isolation and in suitable housing. Farmers shall give preference to natural medicines and treatments, including homoeopathy, Ayurvedic medicine and acupuncture;

   ii. Use of synthetic allopathic veterinary drugs or antibiotics will cause the animal to lose its organic status. Producers shall not withhold such medication where doing so will result in unnecessary suffering of animals;

   iii. When allopathic veterinary products are used, the withdrawal period shall be at least double the legal period, or at least 48 hours when no withdrawal period is specified;

   iv. Preventive use of any synthetic allopathic veterinary drug is prohibited;

   v. Substances of synthetic origin used to stimulate production or suppress natural growth are prohibited;

   vi. Vaccinations are allowed only when a disease is known or expected to be a problem in the region of the farm and where this disease cannot be controlled by other management techniques or when a vaccination is legally required.

i. **Transport and Slaughter:** Organic animals are subjected to minimum stress during transport and slaughter.

   i. The use of electric prods and other such instruments is prohibited;

   ii. Animals shall not be treated with synthetic tranquillisers or stimulants prior to or during transport;

   iii. Each animal or group of animals shall be identifiable at each step in the transport and slaughter process;

   iv. Slaughterhouse journey times shall not exceed eight hours;

   v. Contact (sight, sound or smell) of each live animal with dead

animals or animals in the killing process shall be avoided;
vi. Each animal shall be effectively stunned before being bled.

8. Harvesting & packaging



a. All equipment, vehicles and re-usable containers shall be properly cleaned and free from residues before being used for organically produced products;
b. Material used for packaging shall not contaminate the products and the use thereof shall take into consideration the effect it may have on the environment. The use of recycled and recyclable packaging should be promoted, and packaging should be limited to the absolute minimum;
c. Packaging materials, storage containers, or bins that contain a synthetic fungicide, preservative, or fumigant are prohibited.

9. Cleaning, disinfecting and sanitation



a. Only cleaning and disinfecting agents approved for use in organic production may be used;
b. Procedures in line with standard food handling practice and compliant with local municipal legislation should be in place to ensure food safety.

10. Social equity & justice



a. Employment practice should be in accordance with the South African Labour legislation and the Constitution;
b. The rights of children should be in accordance with the essence of the Universal Declaration of Human Rights to ensure that their rights to a happy, safe and rewarding childhood are respected.

11. Documentation & records



The individual farmer or the PGS office should have an accessible and appropriate set of records including the following:

a. Maps and or sketches of the farm, production and/or harvest areas;
b. Records of all purchases/donations of inputs into the farming system;
c. Planting, harvesting and sales records.

These records must be available during routine assessments. The records may be in any format appropriate to the size and administrative capacity of the farmer/group, provided that it can be understood by the assessors, and provides clear evidence of purchasing, production and sales integrity. The PGS will be sensitive to and supportive of emerging farmers who might have difficulty with maintaining such records.



CONCLUSION

It should be clearly understood, that these production principles are a summary based on the SAOSO Standard Version 1.7 June, 2020 for Organic Production and Processing and that all practices and inputs should be assessed according to the Standard. This set of principles is published as a simplified and accessible document, in effect translating the standard into a format suitable for the PGS stakeholders. Non-compliance and decisions for acceptance will be based on the Standard.

Refer to the SAOSO Standard for guidance on permitted notifiable exceptions.

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