

## Regular applications of organic substances

<b>Goal</b>	Increase the edaphic fauna and microbial functional diversity
<b>Target group</b>	All farmers
<b>Description of the measure</b>	<p>Organic fertilizers are all kind of substances such as manures, compost and other organic waste that are usually recycled from other farm or processing activities. Organic manures contain N-rich materials which are slow releasing under the action of soil microorganisms and which can significantly raise soil fertility in the medium and long term.</p>  <p><b>Pic 1.: Extensive livestock in an agro-forestry system, this measure increases the quality of soil properties, both biological and chemical-physical.</b></p>
<b>Suitable sites</b>	All farms and crops
<b>How a good implementation looks like</b>	<p>The application of organic matter must be done:</p> <ul style="list-style-type: none"> <li>▪ during dry weather to avoid leaching,</li> <li>▪ 10 meter distant to any water source (pond, stream, river, etc.).</li> <li>▪ Organic matter must be treated or compost to be incorporated to the soil.</li> </ul>
<b>Effects on bio-diversity</b> (ecosystems, species, soil bio-diversity)	 <p><b>Edaphic fauna and microbiodiversity:</b>          Increasing soil organic matter levels leads to less compaction and salinization; soil faunal activity increases leading to structural improvement in the soil. This will ultimately avoid economic losses and related social consequences (Nawaz, 2013).</p>
<b>Other positive effects/benefit for the farmer</b>	<p>The addition of animal wastes has beneficial effects on soil pH, soil structure, resistance to erosion, soil temperature, organic matter content of soil, water infiltration and soil water retention and increase microbial biomass and soil enzyme. Organic matter in soils is a major source of nitrogen. It is the result of a long-term process in which the soil biota, under appropriate conditions, breaks down organic materials for converting them into a stable material called humus. Humus shall not be considered only a nitrogen source; it helps to retain nutrients in the long-term, to store water, to better structure and oxygenate the soil, to buffer it from temperature changes and to prevent soil-borne diseases.</p>

<b>Indicator/key data</b>	<ul style="list-style-type: none"> <li>▪ Units per hectare/ tonne of N from organic fertilizer.</li> <li>▪ % of organic fertilizer / Total fertilizers application.</li> <li>▪ Frequency of organic applications.</li> </ul>
<b>Risk and further recommendations</b>	<p>In some areas, the availability of organic fertilizers (such as manures) is very low, due to the fact that livestock production does not occur. Exporting such materials from medium or long distances maybe is not reasonable from an economic point of view and therefore this practice may be difficult to implement. Anyway, It is possible to buy processed organic fertilizers if manure is not available.</p> <p>The pollution potential of organic fertilizer is similar to any nutrient containing fertilizer and must be controlled through proper management techniques, such as restrained application rates and times.</p>
<b>Timeframe</b> (When to start a measure and anticipated time for implementation)	<p>Permanent Action: the application of organic matter is desirable every year taking into account the recommendations included in “<b>How a good implementation looks like</b>”.</p>
<b>Additional special resources/ equipment/ skills needed</b>	<p>Depending on the type of organic matter, specific machinery may be needed.</p>
<b>Reference</b>	<ul style="list-style-type: none"> <li>▪ The impact of agricultural practices on biodiversity Alison McLaughlin a, Pierre Mineau b,* 'Sagittaria Ecological Services, /-/43 Rue Laurier, Hull, Que. JBX 3W4, Canada"National Wildlife Research Centre, Canadian Wildlife Service, JOO Blvd. Gamelin, Hull, Que. KIA 0H3, Canad ELSEVIER Agri-culture. Ecosystems and Environment 55 ( 1995) 201-212</li> <li>▪ The importance of soil organic matter. Key to drought-resistant soil and sustained food production (2005) FAO.</li> </ul>

## Further information: [Knowledge Pool](#)

This Action Fact Sheet belongs to the training package for advisors of standard organisations and companies and was developed within the project LIFE Food & Biodiversity (Biodiversity in Standards and Labels of for the Food Industry). The main objective of the project is to improve the biodiversity performance of standards and sourcing requirements in the food industry by helping standard organisations to integrate efficient biodiversity criteria into their schemes and motivating food processing companies and retailers to include comprehensive biodiversity criteria into their sourcing guidelines.

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