



Growing Greener Generations

Introducing Reliance

Location and operation: Since 1998 Reliance Compost (Pty) Ltd. produced compost on a small - scale for its own farming operations. In April 2008 Reliance Compost formed a joint venture with Soil & More International under the name Soil & More Reliance. From December 2010 Reliance again took 100 % controlling shares in the company.

Input Material (nature and quantity): Mainly municipal garden and park waste as well as organic agricultural waste, 150 tons of such "wastes" are processed each day.

Product Capacity: Production reaches 100 000 tons per year.

Green House Gas (GHG) Reduction: Currently the composting site reduces GHG emissions by about 60 000 tons a year.

Social Impact: Since Reliance's composting site has started operating, 55 full-time jobs have been created as well as 60 indirect jobs were created up and down stream.

Future Plans: Reliance aims to increase the compost production of the existing site and also set up new sites, thus further reducing greenhouse gas emissions. Long-term target is to introduce our formula throughout other African countries.

Local and Global impact

Some of the biggest environmental problems South Africa has to face are the lack fertile land, soil degradation and pollution of its rivers and groundwater. One of the main factors causing these problems is the excessive use of chemical fertilizers pest and disease control agents.

The main input material for producing Reliance's compost is municipal green waste, as well as alien vegetation that presents an environmental threat in the Western Cape area. By removing the alien vegetation from the water, Reliance helps fight river pollution while producing high quality compost that is designed to replace chemical fertilizers. Reliance's efforts to address this problem are in line with the World Bank initiative "working for water".

The application of high quality compost leads to fertile s soil, good yields and stable income. This is an important first step to job security and helps to prevent mass migration from rural areas to the cities.



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Globally Reliance's composting site reduces GHG emissions, thus mitigating the impacts caused by climate change.

Reliance Consultation

Reliance provides a consultation service to municipalities, industry and individuals on the following:

- Designing compost facilities and processes
- Right-sizing facilities and equipment
- Choice of equipment
- Bio-waste treatment solutions
- Project costing
- Assessment of existing projects

Our consultations are based on experience we accumulated over the years in real conditions and solutions are proven. We have a vast base of contracts and suppliers with whom we share information. Our information is augmented by attending conferences abroad and visiting working facilities to experience equipment in action first hand.

Agents for Equipment

We act as import agents to various equipment suppliers from Europe. We have seen all the equipment in action, evaluated them against competition and is in a position to advise on the best equipment for the task at hand. In some instances we have even used the equipment ourselves and have a working relationship with suppliers.

We can advise clients on compost turners, PTO-driven and self propelled, testing equipment to assist compost producers in production and quality processes, the use and evaluation of different equipment for chipping/ grinding green waste and the correct machine for the task.



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We are also importing and selling Toptex fleese a long fiber, geo-textile cloth for use on compost windrows. This product allows gasses to escape but protect the windrow against rain, which allows compost production to continue in adverse weather conditions.

Compost Extract Systems.

In 1998 with the help of microbiologist and European users Reliance has designed a compost extract system that is robust and efficient, supplying the correct ratio of oxygen, temperature, moisture and food to enhance the microbial population in the product.

These systems were designed with South African conditions in mind and has been sold to numerous agricultural users all over South Africa and Africa to be used in different growing conditions, climate conditions and applied to different fruits and vegetables and sugarcane with success.

The systems are simple to assemble, easy to use and can be cleaned and maintained without a problem. They are lightweight and could be transported to where ever an electricity supply is available, not bound to one farm unit being totally movable.

One of our systems are being used for years by the Western Province Rugby Union in preparation of the playing surfaces at Newlands in Cape Town, assisting in keeping the playing surface healthy and well maintained.

Systems are available in 1000 L, 2000 L, 3000 L and 4000L units and users with bigger volume requirements can also be accommodated as we have done for a sugar cane producer who required a 8000 L capacity system.

Reliance Composting Technology

Based on the Technology of Ehrenfried Pfeiffer (1899-1961) Reliance developed a unique composting technology that helps the to address the worlds' biggest environmental and agricultural problems, such as soil degradation, climate change through increased carbon dioxide emissions, the excessive use of water and the increasing amount of waste. Our compost is made using unwanted and superfluous waste plant characteristics for the country where the product is being produced. Our unique composting technology is UNFCCC (United Nations Framework Convention on Climate Change) approved and not only transforms this "waste" into high quality compost ready for use within 8-10 weeks, but also helps to avoid methane emissions.



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Reliance compost guarantees fruit and vegetable production of high quality whilst:

- Recycling Waste Products
- Improving Soil Structure
- Suppressing diseases, providing plants and soil with important nutrients
- Increase pest tolerance
- Gradually bringing back the natural balance of the eco-system Reducing water usage through improvement of water holding capacity by 50 %.
- Creating employment and economic development
- Reducing (ground) water pollution
- Reducing carbon dioxide emissions, thus making a significant contribution to the protection of the environment and more precisely to the threat of climate change we all have to face.

The composting technology Reliance developed thus tackling various challenges. Upon adding the unique compost inoculants to an aerated, controlled microbial composting process, the different input materials (mainly farmyard waste such as greens, wood) are decomposed and gradually transformed into a stable humus complex. The high quality compost product provides the plants with all required nutrients and micro-elements. Due to the special humus structure the water holding capacity of the soils increases up to 70 % which is an important added value for growers in arid and semi-arid areas. Initiated through the inoculants, the final compost contains several millions of micro organisms, a tightly knitted soil-food-web, creating a natural immune system for the plant, thus acting as a natural predator against most known soil born diseases and other pathogens. This disease suppression is one of the outstanding unique selling points of Reliance compost.

The secret behind our high quality compost lies in the methods used to develop it: controlled microbiological composting technology regularly monitoring and - if required- corrects the temperature, humidity and carbon dioxide of the product. The composting process the furthermore stimulated by the application of carefully selected inoculants. ECOCERT AFRICO is the certifying body which certified our compost for use in organic food production.



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At a glance: benefits of using Reliance's composting Technology.

1.) **Shorter Turnover Time:** the green fresh, woody input materials are decomposed into a stable humus complex within only 6-8 weeks. The fast transformation process remarkably increases the capacity of a compost site.

2.) **Less turning:** the advanced windrow monitoring and management system using other composting methodologies. This saves time and fuel, and almost doubles the capacity of the compost turners and tractors.

3.) **Replacing Inorganic Fertilizers:** the final compost contains all nutrients and micro- elements required for agricultural purposes.

4.) **Saving water:** due to the texture of the stable humus complex, the Reliance compost has a water holding capacity of up to 70 %, thus saving a considerable amount of clean irrigation water- an increasingly expensive input.

5.) **Disease Suppression:** the millions of micro organisms present in the final compost create a natural immune system for the plants, acting as a natural guard against most known soil-borne diseases and pathogens. This reduces or even eliminates the need for chemical pesticides, thus saving you money whilst protecting the environment.

6.) **Emission Reduction:** Reliance composting technology was approved by TÜV- Nord as a greenhouse gas emission reduction method according to the guidelines of the UNFCCC (United Nations Framework Convention of Climate Change). Applicability to projects depend of various regional and environmental circumstances.

7.) Three Commercial Benefits.

- Reliance compost is a high quality product, which can be sold at premium prices.

- Reliance advanced technology and management systems save time and costs involved in the compost making process and remarkably increase the capacity of the site and equipment.

- If the site qualifies as an emission reduction project, Reliance offers a commercially interesting second income stream through the generation and sale of carbon credits.



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8.) **R&D:** Reliance is connected to leading compost, soil science experts and emission reduction organizations world wide, providing innovative and state of the art solutions.

9.) **Technical assistance and training:** Reliance experts offer on site and remote professional service on demand and regularly organize seminars and workshops for the company's partners world wide.

Emission Reduction Activities

Thanks to our innovative composting technology, our composting process qualifies as an emission deduction project according to the UNFCCC (United Nations Framework Convention of Climate Change)

Currently we generate our carbon credits though methane avoidance. Our compost is produced using plant waste , if not used for composting- would have been dumped and left to rot, thus emitting methane.

Our Carbon Credits are:

Generated according to the latest UNFCCC guidelines Third Party verified (this verification takes place through a designed operational entity, an independent party accredited by the UNFCCC.)

Our Carbon Credits help to:

- Generate income that can be used to subsidize compost sales and support organic farming
- Reduces farmer dependence on increasingly expensive chemical fertilizers and international fertilizer suppliers
- Bring back the balance in the ecosystem
- Improve the soil structure, providing better soil fertility
- Reduces green house gas emissions (Methane, N2O, CO2)
- Recycle waste products (as the compost is made of a waste material)
- Create year round employment
- Reduce ground water pollution



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- Increase the water holding capacity of the soil, thus saving irrigation water
- Support social and cultural development/ activities
- Contribute to truly sustainable agriculture.

Emission Reduction Potential

We continuously attempt to explore new opportunities to protect our climate and avoid green house gas emissions. Currently, our focus lies on development of new methodologies for emission reduction.

In cooperation with our global partners and scientists, we aim to develop methodologies to prove that nitrous oxide emissions can be reduced through avoidance of chemical fertilizers and that carbon emissions can be reduced through land use change (carbon sequestration).