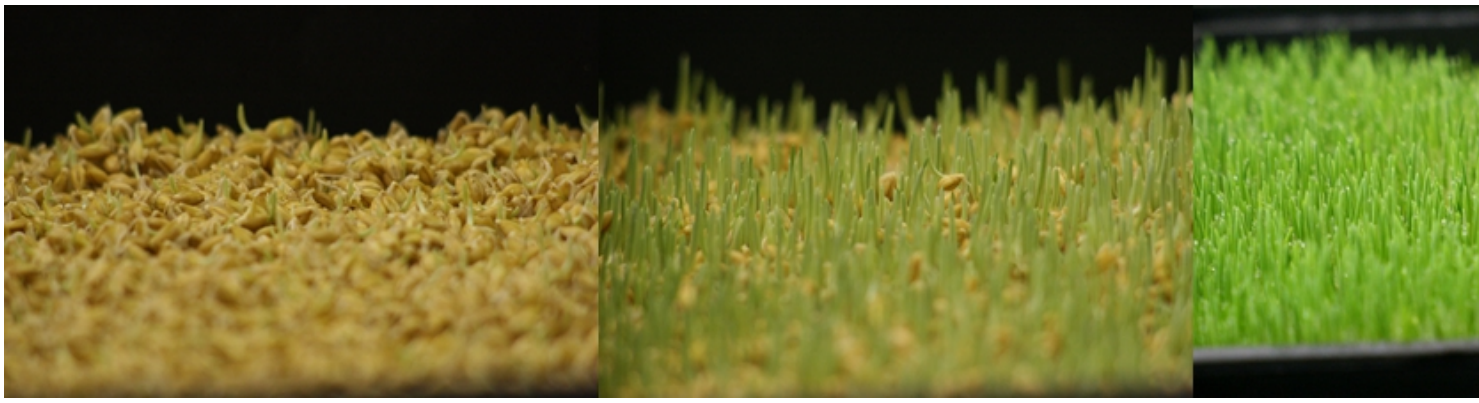

What is hydroponic and aeroponic green feed?

Hydroponics is the science of growing plants in water. This practice has proven to be financially, as well as environmentally, profitable and advantageous for the farmer.

A hydroponically produced crop is a crop that is grown in a medium other than natural soil. In essence, hydroponic fodder (hydroponically grown cereal plants) is produced by the germination and sprouting of grain seeds (e.g. malt barley or oats) into superior quality, highly nutritious and disease free fodder. First and foremost, a controlled environment is required. The higher the degree of control, the more successful the production will be. In this growing unit, water is used to produce the green fodder. The crude protein and metabolisable energy content of the green fodder is highly digestible.

GreenFeed® Growing System uses **aeroponics** in the process of growing Barley. Aeroponics is the process of growing plants in an air or mist environment without the use of soil or an aggregate medium. Aeroponic culture differs from both conventional hydroponics and in-vitro (plant tissue culture) growing. Unlike hydroponics, which uses water as a growing medium and essential minerals to sustain plant growth, aeroponics is conducted without a growing medium. Because water is sometimes used in aeroponics to transmit nutrients, it is sometimes considered a type of hydroponics.

To get the best results with hydroponic fodder, it needs to be fed in conjunction with roughage, or else scouring may occur.

History

By no stretch of the imagination is hydroponic crop production something new. Even as far back as 80 years ago, Great Britain's agriculturalists practiced the 'crop-a-day' culture. The highly nutritious, vitamin and mineral rich sprouted forage was fed to various livestock and birds. (Harris: 1992)

What is a GreenFeed® Growing System?

All grow room units supplied by **GreenFeed® Growing Systems** are weatherproof and include product characteristics such as hygienic finishes, strength and durability and quick assembly. **GreenFeed® Growing Systems**
are available as a standard model or can be an individually designed aeroponic green feedbarkey/oat growing rooms in various sizes.

GreenFeed™ Growing Systems product range

MODEL SIZE	Number of Beef/Diary Cattle fed per day Factor:14 Kg per head per day	Number of Sheep fed per day Factor:2.2Kg per head per day	
A			
MICRO UNIT	**250 kg – 1 ton**	production volume per day	71 (new building) 45
B	**SEMI-AUTOMATED UNIT**	**4–14**	metric tons production vol 1
C	**FULLY AUTOMATED UNIT**	**14–200**	metric tons production vol 1

In our **MICRO and MANUAL TURNKEY UNITS** a selection of grain seeds is spread onto the growing trays and are watered at predetermined intervals with overhead sprays. In our manual

turnkey system you simply remove the feed from the trays after eight days, rinse the tray and reseed. All operational aspects including watering, cleaning, hygiene, lighting, reseeding, removing of produce, air flow, humidity and air temperature are controlled manually.

In our **SEMI-AUTOMATED UNITS** all you need to do is to wash the trays and remove the feed manually

All other aspects of growing barley/oats green feed are addressed in this semi-automated computer-controlled environment, including water filtration, purification, sterilisation and recycling; seed misting; grow-room hygiene; grow-light control; air-flow control; air purification; humidity and temperature control; and seed storage, cleaning and sterilisation controls.

In our **FULLY AUTOMATED UNITS** all aspects of growing barley/oats green feed are addressed. The following processes are fully automated: water filtration, purification, sterilisation and recycling; seed misting; grow-room hygiene; grow-light control; reseeding and produce removal; grow-tray washing and sterilisation; air-flow control; air purification; humidity and temperature control; CO_2 injection control; and seed storage, cleaning and sterilisation controls.