Premium Fodder, based in the UK, specialises in marketing commercial hydroponic products for farms, stables, stud farms and the feeding of all commercial livestock.

**Patented commercial hydroponic fodder growing system**

- Reduced feed costs
- Lower vets bills
- Water saving
- Effective land use
- Pesticide and dust free
- Natural live green fodder
- Improved animal health
- Improved digestion
- Higher energy rate
- Improved weight gain

Premium Fodder has a fully operational demonstration facility situated on a working riding school not far from Heathrow airport, London producing nutritious sprouting fodder for the horses stabled on the farm and in the locality.

We look forward to your contact and invite any horse owner, farmer or livestock owner interested in producing fresh, consistent, nutritious sprouting barley fodder every day of the year, to come and see our installation and discuss how Premium Fodder can really help your animals.

**Contact**

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What is sprouting fodder?

Sprouting fodder is young tender grass grown from a cereal grain. In essence it is the equivalent to fresh spring grass, which is regularly referred to as “Dr Green” and is considered the best livestock feed.

Fresh sprouting fodder improves digestion and absorption and uses less energy in doing so, thus enabling the animal to use the energy for competition, milk production, reproduction or weight gain.

Grains are high in phytates that inhibit mineral absorption and also inhibit important enzymes such as trypsin, which causes the pancreas to work harder. **Sprouting barley** on the other hand is packed with minerals and enzymes that improve absorption. Sprouting barley eliminates enzyme inhibitors which in turn helps digestion of other feed and therefore puts less stress on the whole digestive system.

**Sprouting barley has 23 times more vitamin A than carrots**

Jerry Brunetti, world expert on feeding livestock states:

- Grains contain mostly starch, so when fed to a ruminant these starches begin fermentation, which leads to D-lactic acid in the rumen, which reduces the efficiency of the digestive process.
- Sprouting barley on the other hand contains many sugars: sucrose, fructose, fructans, lactose and maltose and produce more energy more efficiently for the animal.
- Mineral and vitamin levels in sprouting barley are significantly higher than in grain, and they are absorbed more efficiently due to the lack of inhibitors which are present in grain.
Horses – competition horses, brood mares, young stock, riding schools

Horses and ponies of all shapes and sizes benefit from eating the fresh sprouting fodder. Due to the high moisture content and digestibility of the fodder, the down time between exercise/work periods can be reduced significantly.

- Better performance in competition
- Lower feeding costs
- Reduces causes of respiratory problems
- Increase in fertility rate
- Mares come into season more quickly
- Less incidence of colic and gut ulcers
- Lower vets bills
- Improved coat and general appearance

A hydroponic fodder system was installed at a riding school in the UK in March 2010 and they are delighted with the results.

“Since the introduction of our hydroponic system we have completely replaced 2 daily feeds with fresh sprouting barley. On the cost analysis of the first 12 months we have reduced our feed bill by 60%. In addition to this, every one of our horses has taken to the sprouts and looks forward to their meals.” – Jill Harris, Spanish Bit Riding School, UK

“I recommend that all horse owners, especially performance horses, seriously consider giving their horses fresh green fodder every day”

After conducting trials with racehorses it has been shown with a high degree of credibility that after being fed with sprouting fodder as a supplement for 3 months, the win and placing ratio was significantly improved. In addition, the superb digestibility of the fresh sprouting fodder helped reduce colic and ulcers. The lack of dust in the green fodder compared to dry feed helps with the respiration and will reduce vets bills.

“In my opinion the system is the best and safest growing method when it comes to feeding valuable performance horses” – Brian Rowe, Racehorse Trainer, Australia
The Premium Fodder system gives:

**Consistent and reliable**

This unique, patented installation performs all processes under one roof. The highly controlled environment inside the system ensures that it will work anywhere in the world where power and water are available and can produce fresh sprouting fodder every day, all year round, independent of the weather conditions.

**Daily volume of feed**

Our intensive 7 day cycle uses the combination of Nutrient Film Technique (NFT) in a highly controlled environment with specifically developed nutrients to produce fresh, consistently high quality, nutritious feed, which is rich in enzymes and vitamins, summer and winter.

**Low cost of production**

In many countries the cost of producing 1 kg of fresh sprouting fodder is approximately 7 pence. Price may vary according to cost of grain, labour, water and electricity.

**Ultra low water use**

The system uses a fraction of the water used in traditional methods of farming. To grow 1 tonne of barley out in the field takes over 50,000 litres of water. On average our system uses approximately 800 litres of water per tonne of fodder. The water is constantly re-circulated during the growing process.

**Effective land use**

Our system produces up to 9 kg per metre² of fresh sprouts every day, which is over 800 tonnes per year, the equivalent of 600 acres of grass land for a HF2000. This enables your land to be used for other revenue generating purposes, or allowing farmers to increase the size of their herd without needing more land to grow crops for food purposes.
Premium Fodder Products:

**HF Mini Systems**

Our mini systems, perfect for the smaller farm/small-holding or horse owner who wish to feed reliable, consistent, high quality fresh green feed every day, are quick and easy to put together and require less than an hour per day to run.

We offer an optional installation and training service with these systems to ensure they are performing at optimal levels as quickly as possible to maximise return on investment.

**HF70**  Dimensions: 4m long x 1.2m wide x 2m tall

Producing 70kg per day, this mini system has been proven to feed 7 large horses or cows or 70 sheep or goats.

**HF120**  Dimensions: 4m long x 1.2m wide x 3 m tall

Producing 120kg per day this mini system has been proven to feed 10 large horses or cows or 100 sheep or goats.
HF1000  
Dimensions: 16m long x 14m wide x 3m tall

The HF1000 has been proven to appropriately feed approximately 100 horses, beef or dairy cattle, over 1000 sheep or 1000 pigs (dependent on breed on a pro-rata basis).

Measuring 130 m², this highly efficient system can produce approximately 9kg of fresh sprouting fodder per metre² per day using approximately 2 hours per day of labour.

The HF1000 can produce over 1 tonne of fresh sprouting fodder every day of the year whether it is -20⁰ or +50⁰ outside. Using only 700 litres of water per tonne of fodder this system is particularly appropriate for those farmers using field based crops for animal feed.

The annual production of fresh sprouting fodder in the HF1000 can be the equivalent to the output from 298 acres of grassland, all in a space measuring 130 m².

HF2000  
Dimensions: 26m long x 14m wide x 3.5m tall

The HF2000 can feed approximately 200-200 cattle or horses, over 3000 sheep or 2000 pigs (dependent on breed on a pro-rata basis).

Measuring 230 m², the HF2000 can produce approximately 9kg of fresh sprouting fodder per metre² per day using approximately 4 hours per day of labour in its highly controlled environment.

The HF2000 can produce over 2 tonnes of fresh sprouting fodder every day of the year, using only 1600 litres of water. This larger system is particularly appropriate for those farmers with larger herds to feed.

The annual production in fresh sprouting fodder of the HF2000 can be the equivalent to the output from 600 acres of grassland, all in a space measuring 230 m².
Why sprouting fodder?

Fresh sprouting barley fodder enables the digestive system to process food in a much more efficient manner than with grain.

- Sprouting fodder increases rumen pH to 6.2, the optimum level for efficient digestion and thus improves rumen management
- Sprouting fodder eliminates phytates which improves mineral absorption
- Sprouting fodder eliminates enzyme inhibitors which improves the digestive process
- Sprouting fodder improves enzyme activity making the whole process less stressful on the pancreas

Feeding fresh sprouting fodder means less energy is needed by the animal for digestion, so it channels this unused energy into production. Of the 100% energy an animal (for example the milking cow) takes on board:

- 20% is used to generate heat
- 20% is used in ‘system’ maintenance
- 20% is used in production energy (milk, reproduction, growth)
- 40% is used in waste (30% faecal, 5% gas, 5% urinary)

Feeding sprouting fodder will reduce the amount of time the animal spends searching for food in the field and will improve the digestive process, so the animal absorbs more energy, spends less energy on the process and less energy in producing waste. These improvements give more energy available for production, whether this is milk, reproduction, weight gain or, for horses, for competition.

Ruminants and grazing animals were not designed to process dry hard feed. Much of the energy available in dry food is wasted by the animal in the digestion and processing of feed.

Premium Fodder does not advocate a complete replacement of dry matter with fodder. In fact it is suggested that, on a daily basis, to give fattening livestock approximately 2% of sprouting fodder based on the animals live body weight with access to dry feed in the form of pasture or hay.

For example: an average horse weighing approximately 500kg needs about 10kg of sprouting fodder per day + grass or hay + access to water.
An average cow weighing approximately 500-600kg needs about 10-12kg of sprouting fodder per day + grass or hay + access to water.
Our environment

Carbon footprint

There are many immediate environmental benefits to be gained from growing sprouting barley fodder on a daily basis on your own premises. There is a huge reduction in the need for farm machinery such as tractors, harvesters and balers. In addition the transportation of hay and hard feed across the country is drastically reduced.

Environmental benefits

Water saving
The savings to be made in the use of water are very important. The use of Nutrient Film Technique (NFT) is at the core of this saving, with water constantly being re-circulated. Farming is coming under increased pressure from Governments to reduce water usage, especially crop growing farms. The use of our system ensures that your fresh daily fodder does not come at the expense of the water supply.

Effective land use
The use of a vertical growing system is key to the high volume production of fresh fodder in such a small land footprint. For example, our HF2000 system will regularly produce over 3000 kg per metre² per year. This makes huge savings in the land needed for crop/feed production.

Labour saving
Only one person working 2-3 hours per day is needed to harvest, sow and perform other parts of the growing process in our systems (varies dependent on the system).

Pesticide free
The nutrient mix contains no pesticides and the production of fodder inside our controlled environment removes any need for spraying of the crop.

Dust free environment
The absence of dust during our production process means less respiratory problems for both animals and human workers alike.

Reduction of methane production in cows and sheep
Cows are responsible for approximately 18% of the world’s greenhouse gas. One reason is the constant chewing of the cud. By eating our fodder they are able to digest more of the food, reducing the volume that is regurgitated and therefore the associated methane production.
Reduce feed costs

Significant savings can be made in the cost of feeding livestock using the hydroponic fodder due to the extremely low cost of production per kg and the reduced amount of dry feed required.

A case study using beef cattle proved a 27% reduction in feeding costs per kg of weight gain. This was using only a supplementary volume of sprouting fodder. Recent trials at a UK equestrian centre indicated a 60% saving on feed costs can be made over the course of a year.

Lower vets bills

In testimonies from several farmers feeding horses, sheep or cattle the evidence shows that vets bills can be reduced drastically with the improved health of the animals and especially with horses, with evidence of lower incidence of colic and gut ulcers.

Land costs

There are both savings and increased revenue to be made from installing a fodder system. Firstly, land allocated for growing crops for feeding livestock can now be used for other revenue generating crops and secondly, there is no need to buy extra land when looking to increase the size of the herd.

Other costs

Some of our farmers comment on other cost savings since the installation of their fodder system as follows:

“We used to grow on approximately 30 hectares. Our costs per hectare were in excess of $500 due to weed killer, ploughing, scarifying, fertiliser, seed and labour. This has been removed by using the HF1200.” – Glenda, Tasmania

“From a land footprint perspective, this system is unbeatable...no spraying of weeds on the property, no fencing, no extra council rates, no road maintenance and the product is extremely water wise” – Ross, NSW Australia
Dairy cattle benefits

Cows will only use approximately 20% of the energy produced through digestion of a grain based diet such as alfalfa and maize to produce milk.

Our sprouting barley fodder is high in protein, high in NDF and low in active fibre. It is full of trace elements, nutrients and promotes action of bacteria and enzymes in the rumen. The effective and efficient digestion of our fodder in the rumen also enables energy normally used in this process to be diverted to increase lactation and fertility.

**Trial in Argentina with 500kg Holstein cows**

Two groups of cows were fed normally for the first week, then in week 2 group one was fed with growing amounts of fresh green hydroponic sprouting barley.

Starting at 2kg per cow for the first 2 days, the amount was increased by 2kg every 2 days until a maximum of 12kg per day was reached at the end of week 3. This 12kg was continued until the end of the test in week 8. The cows also had access to all the fibre they wanted.

Average difference in milk volume over the 5 week full test period was 11% in favour of the fodder fed group. Average milk fat difference was 23%.
**Beef cattle benefits**

The Premium Fodder hydroponic system benefits beef cattle in the following ways:

- Improved weight gain
- Improved fat and marbling
- Improved general well being in the herd
- Improved coat condition
- Improved fertility

Farmers using the fodder system tell us that when feeding their heifers with sprouting fodder they achieved 100% conception rate. In turn the benefits for the health of animals turn into benefits for the farmers, with better profits at markets and more meat per animal at the abattoir.

**Case study in New Zealand**

Trials were carried out in 2009 in Timaru, New Zealand with beef cattle to test weight gain. A fodder supplement diet versus a control group fed on a normal diet in the autumn/winter period.

The trial was conducted over 84 days on 100 young bulls aged approximately 10 months.

**Group One:** 50 bulls fed 28 days on normal pasture/hay then brought indoors for 56 days and fed on diet of rape/hay

**Group Two:** 50 bulls fed 28 days on pasture/hay + 3.75kg fodder per day supplement then indoors for 56 days on rape/hay + 3.75kg fodder per day

**Conclusions were that the bulls in Group Two had a total live weight gain over the 84 days that was 41% higher than those in Group One**

In addition the cost of feeding Group Two was 27% lower than Group One due to the lower cost of fodder production versus buying hay/rape.
Goat farms benefit from:
• Improved birth rate
• Less teeth wear
• Better milk yield
• Improved well being of herd

Sheep farms benefit from:
• Improved wool quality
• Higher body weight
• Less teeth wear
• Lower infant mortality

Pig farms benefit from:
• Quicker growth rate
• Sows in heat faster
• Longer milking period
• Fatter piglets
• Lower vets bills

Rabbit farms benefit from:
• Increased body weight over shorter period
• Reduced feed bills
• Increased birth rates per litter and number of litters

Horse sanctuaries, zoos, venison farms and all types of livestock establishments feeding grass or hay are all strongly advised to consider the benefits of feeding fresh, green sprouting fodder to all their animals.