



**Limagrain**  
United Kingdom



# HEADSTART<sup>®</sup>

**YOUR KEY TO THE SUCCESSFUL  
ESTABLISHMENT OF ALL  
GRASS AREAS**

the natural revolutionary grass seed coating  
that ensures rapid germination



# TIME IS MONEY

Time is an increasingly important factor in the creation and renovation of grass fields and lawns. Grasses are required to become established or renovated in ever shorter periods of time. Economic interests prevail; to meet the demands of sportsmen and women and users of recreational areas, groundsmen must ensure that their grass reaches optimum condition as quickly as possible and remains in that condition. Sports pitches, golf courses, private lawns, campsites and public green areas, roadside management and the turf-producing industry all demand grass that emerges and forms a green cover as quickly as possible. Moreover grass that will establish equally well under less favourable conditions, such as low temperatures, drought, shade or simply a poorly prepared seed bed. The solution is Headstart, a revolutionary grass seed coating that ensures spectacular top-speed germination. Headstart, which was developed exclusively for our use, is one of the most important innovations in the international grass seed industry. We subject the great majority of our grass seed mixtures to this growth-stimulating, natural treatment.

The Headstart formula meets all today's grass management requirements and offers you extra security to boot. It is your starting guarantee in sowing and renovating all types of grass areas in the most diverse situations!

## **The effect: better and faster germination**

Headstart is a wafer-thin film with which each grass seed is coated. It includes a seaweed extract containing the natural plant growth hormone cytoquinine that promotes cell division. The coating also contains trace elements and organic compounds that attract moisture, thus ensuring an adequate supply of nutrients (energy) during the seedling's initial growth phase.

The effects of Headstart can be observed in several ways. Firstly a distinct increase in the number of germinated plants, in the very important initial growth phase. In an ideal situation you will observe on average 20% more grass plants and under less favourable conditions that

figure may be as high as 70% more germinated plants. Another major advantage of the Headstart coating is faster emergence. Headstart grass will emerge on average four days earlier than untreated grass seed.

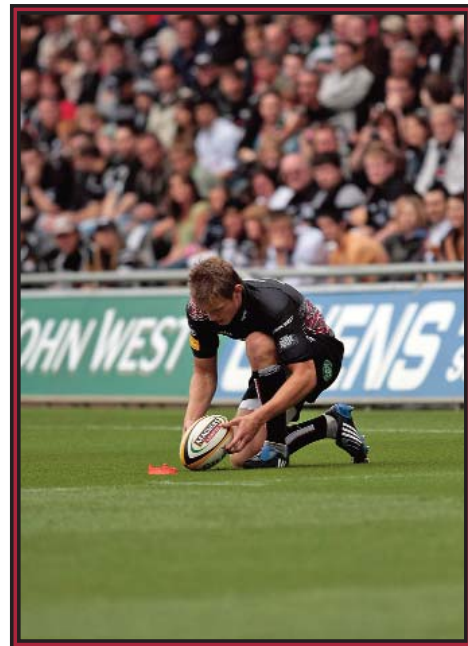
The effective parts of the coating greatly promote germination and the formation of roots and shoots, resulting in faster and better development of the young grass. So using Headstart treated grass seed to create or renovate swards, provides a major advantage in development: the field will show fast, uniform emergence and will within a short period of time become well established, preventing the growth of weeds and undesired grass species. Underground, better root growth will ensure a more productive root system, resulting in greater tolerance to intensive use of the grass, diseases, drought, shade, etc. This explains why the practical advantages of the Headstart formula will be all the more evident under less favourable conditions.

Headstart is extremely environmentally benign; the coating is based on an entirely organic effect, the more desirable grasses are capable of exploiting nitrogen more efficiently and may reduce the need for fungus control.



## Headstart gives slow-germinating grass species a better chance

Smooth-stalked meadow grass, red and tall fescue, but also bent are species that can provide considerable added value in grass plots. Their great drawback, however, is that they are slow to germinate. This makes it difficult for them to compete with the rapidly growing perennial ryegrass and means that they usually need longer rest periods. Headstart can largely cancel out these disadvantages, making the species concerned more suitable for use in sports fields, golf courses, lawns and verges. Smooth-stalked meadow grass, for example, is an indispensable component in sports-field mixtures. Perennial ryegrass sends its roots deep down into the soil, whereas the underground shoots of smooth-stalked meadow grass extend laterally. So this species holds the sward together, resulting in maximum sturdiness. The effect is rather like that realised by steel reinforcement in concrete. Red and tall fescue in turn makes grass plots more tolerant to drought and shade. Bent, finally, is the ideal grass species for golf greens on account of its excellent tolerance to short mowing. Headstart enables these slower germinating grass species to develop faster and better. They will benefit from a growth stimulus that will help make them more competitive relative to perennial ryegrass.



Photograph courtesy of Dragon Tales Rugby

## Headstart prevents many problems

Headstart fields are enjoying increasing popularity in many countries. Headstart treated grass seed has boomed to such an extent that the great majority of our grass seed mixtures are now sold ready-coated with Headstart. Many of the famous English Premier League grounds, local sport complexes, green keepers, turf producers and have all discovered the advantages of Headstart. Headstart solves problems and help managers create a high-quality, long-lasting sward even under time pressure of poor weather conditions. This means less risk for managers in fulfilling their obligations towards clubs and other grass users.

### THE HEADSTART-FORMULA

TOP-QUALITY  
GRASS SEED



HEADSTART  
COATING



ESTABLISHMENT  
GUARANTEE FOR FUNCTIONAL  
GRASS WITH A LONGER LIFE

#### Performance-enhancing seed technology:

- 20% more germinated plants
- A Headstart of up to 4 days in germination and establishment
- Increased competitiveness of naturally slow-germinating grass species (smooth-stalked meadow grass, red fescue, tall fescue, bent)
- More intensive root formation
- Less risk and greater security in sowing new grass areas and renovating existing ones when under time pressure and less favourable conditions
- Faster formation of a dense cover, so fewer weeds
- Can be used for sports sooner
- Larger number of grass plants per unit of area makes for a stronger cover requiring less maintenance
- Satisfied users



## HEADSTART TRIAL PROVES THE ADVANTAGE

Before Headstart was introduced on the market, our seed technologists did extensive research into the effects and added value of the grass seed coating. Tests and trials were conducted in laboratories, greenhouses and experimental and practical plots. Time and time again trials show that the osmotic effect of the coating enables a treated grass seed to absorb water more quickly. In combination with other constituents in the coating (cytokinin, cellulase, amylase and micronutrients), this strongly promotes root and shoot formation.



- Up to 4 days quicker emergence
- 20% more plants
- Even establishment

After 1 week



UNTREATED



TREATED

After 2 weeks



UNTREATED



TREATED

After 3 weeks



UNTREATED



TREATED

## HOW DOES HEADSTART WORK?

Grass seed

### Seaweed extract with a high cytokinin content

1. Promotes cell division during germination.
2. Breaks dormancy and stimulates the metabolic process.
3. Leads to faster germination and better competitive ability.

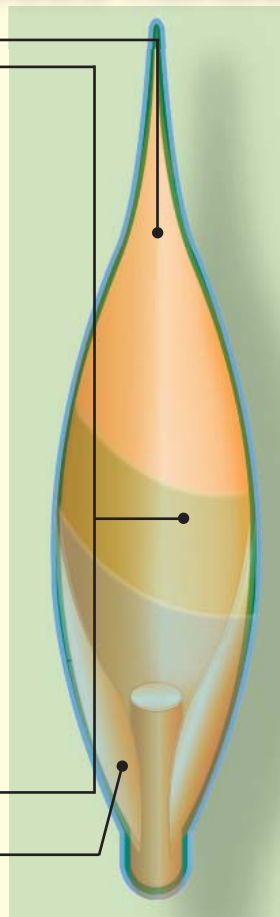
### Enzyme activity

1. Cellulase stimulates the formation of roots and shoots by ensuring a softer cell-wall structure.
2. Amylase constitutes an important source of energy initiating photosynthesis in the germination phase.

### Biostimulants in the form of trace elements and organic compounds

1. Protect the seed in its initial growth phase and help it draw in moisture, ensuring an adequate supply of nutrients for the seedling.
2. Guarantee efficient use of the available nutrients.
3. Prevent deficiencies of essential trace elements such as iron, magnesium and manganese.

### Transparent coating



### HEADSTART IMPROVES PERFORMANCE IN ALL GRASS SITUATIONS

#### Sports Fields

The Headstart formula is ideal for intensively used pitches with short maintenance and rest periods; the product enhances the range of applications of the naturally slower germinating grass species such as smooth-stalked grass and tall fescue that provide the sturdiness that is so essential in the case of sports fields; the result is a sward that is ready for use sooner and will usually also be stronger and more stable; that will ultimately lead to less damage/bare patches, so less maintenance and fewer cancelled matches!

#### Lawns and public grass areas

Headstart ensures that lawns, grass areas, parks, campsites and recreational areas become covered with a well-established sward in less time; a dense cover resembling a thick green carpet will develop early in the season; the Headstart formula is of course also ideal for effectively renovating existing grass plots suffering the effects of intensive use (or exclusion from light by tents/caravans), bare patches formed by scarifying or damage caused by machines.

#### Golf Courses

The Headstart concept is also of great value for golf courses, which are often used throughout the year with virtually no rest periods; ideal for must be ready for use as quickly as possible.

#### Turf production

In the turf-production business the time that can be saved by using Headstart provides direct financial benefits; the rapid, uniform emergence leads to finer, more even coverage (a more quickly established sward); a factor of essential importance in this respect is the reduced growth of weeds (*Poa annua*) in the denser cover ('like hairs on a dog's back').