

Maximise the Financial Return

Modern husbandry techniques mean that plant populations can be manipulated more easily and inputs such as growth regulators and fertilisers timed accurately.

Because of the importance of plant development in the timing of inputs, crop establishment must be even across the field. Utilising modern seed drill technology and Nickerson Original Seed will mean the grower has the opportunity to not only maximise yield, but also maximise the margin over input cost.

Benefits

- Even crop establishment means a higher proportion of plants at the same crop development stage.
- Agronomic inputs applied at the optimum growth stage to a larger proportion of the crop.
- Accurate timing of inputs means maximising yield & maximising margin over inputs costs.



Rothwell
Market Rasen
Lincolnshire
LN7 6DT
Freephone: 0800 581847
Fax: 01472 371602
Email: direct@nickerson.co.uk
www.nickersondirect.co.uk

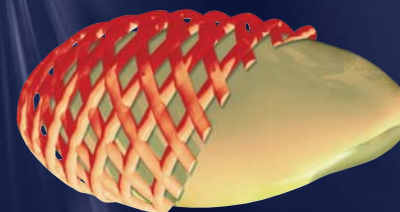
Seed Specialist

Limagrain UK are one of the few major breeders to have direct day-to-day contact with farmers.

Our national team of Nickerson Direct Seed Specialists form an invaluable link in the vital chain between breeder and farmer, providing the latest information to help the grower maximise the genetic potential of Nickerson Original Seed.

ORIGINAL

ADVANCED SEED TECHNOLOGY



Welcome

Nickerson Direct, based at Rothwell in Lincolnshire, have been dedicated to the supply of the very best in agricultural seeds for over 50 years.

As part of Group Limagrain, the E U's largest agricultural and horticultural seeds group, Nickerson Direct is uniquely positioned to offer growers the full advantages resulting from huge resources in Plant Breeding and investment in Research and Development.

Because Nickerson are uniquely Seedsmen, not general merchants, we are your partners in all aspects of arable production, from advice on variety choice through to seedbed preparation and agronomic inputs.

Our direct contact with the Cereal and Oilseed Rape breeders within Limagrain puts us in an unrivalled position. Nickerson are dedicated to supplying the best seed available with informed expert advice, which is only possible due to the commitment to Research and Development.

Nickerson Seed Specialists can assist with husbandry decisions such as

- Variety selection
- Sowing rate and TGW specifications
- Choice of seed treatments and inputs

In-depth knowledge of the arable sector enables Nickerson to respond to the demands of farmers in terms of new varieties to meet market requirements.



The largest Agricultural and Horticultural Seeds Group in the E.U.



Quality and Vigour

Nickerson are in full control of seed quality ensuring unsurpassed levels of reliability. Having an in-house contracts department and production facility means seed crops are grown by selected growers then processed to our own demanding standards.



Purity & Germination

Nickerson constantly monitor seed production to ensure that the quality of seed produced is significantly better than the official standard.

| | Nickerson Original | | Minimum Official Standards | |
|--------------------|--------------------|---------------|----------------------------|----------|
| | Harvest 2008 | Harvest 2009 | HVS | EEC Min. |
| Purity | 99.94% | 99.91% | 99% | 98% |
| Germination | 96.28% | 98.20% | 85% | 85% |

Quality Control

Having a dedicated seed production department at Nickerson means quality control is foremost throughout the seed production process.

- High quality stock seed to selected growers
- Frequent field inspections by qualified inspectors throughout the growing season
- Thorough inspections by our own Government registered laboratory at our production plant on intake
- Regular sampling during cleaning to ensure purity and germination standards are met
- Post-treatment sampling and testing for germination and treatment loading

Vigour

Nickerson pioneered the development of vigour testing in the 1970's. Vigorous seed is better equipped to cope with poor, cold and wet seedbed conditions. This is important for:

- quick, even crop establishment
- allowing the crop to grow away from soil-borne pests and diseases
- stronger plants and more of them
- higher yield



| Nickerson Original Vigour Scores | | |
|----------------------------------|------------------|-------------------------------|
| | Minimum Standard | Average Achieved (Harvest 09) |
| Winter Barley | 262 | 291 |
| Winter Wheat | 266 | 296 |



Laboratory tests showing the effects of G.P.A. on root biomass and development

Benefits

- High germination → More plants
- High purity → Bigger plants
- High vigour → Higher Yielding Crops



Seed film coating and G.P.A

Seed technology is important in the supply of quality seed to the grower. Seed stocks are selected for their high germination and vigour. It is important these attributes are maintained to maximise the genetic potential of the seed.

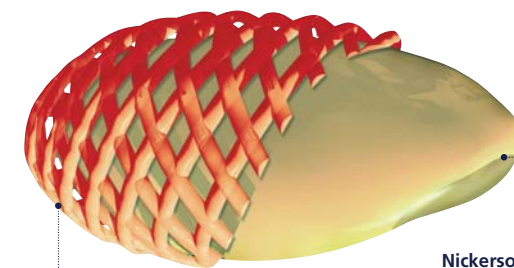
Seed Film Coating was developed by Nickerson as a technique to carry seed treatments on the seed accurately, reducing the phytotoxic effect of pesticides on germination and vigour. By improving drill flow it allows the grower to accurately drill a manageable plant population with even establishment. The incorporation of Growth Promoting Agent enhances the benefits of Seed Film Coating, resulting in higher yields.

Seed Film Coating

Seed Film Coating is a technique that forms a polymer film around the seed in which a range of conventional and innovative seed treatments can be carried.

Benefits include:

- Precise and even application of chemical to seed
- Accurate drilling and even establishment
- Controlled release of chemical prevents phytotoxic effects on plant growth
- Higher yields



Seed Film Coating with Growth Promotion Agent improves drill flow, quicker established seed and higher yields

Nickerson ORIGINAL seed is produced to be better than official standards ensuring a stronger plant



Sowing Nickerson ORIGINAL gives quick, even crop establishment

This part of the trial field was sown with home-saved seed and clearly shows the difference in establishment

Benefits

- Graded Seed
- Improved Drill Flow
- Managed Plant Populations
- Even Establishment
- Higher Yields

Growth Promoting Agent

Growth Promoting Agent aids rapid germination and good establishment. This perfectly complements the high vigour and germination of Nickerson Original.

The G.P.A. consists primarily of Phosphite and Potash. Phosphite is important in early plant growth influencing emergence and establishment through improving root development and tillering. Most cereal seed has enough phosphate to support early plant development for up to 14 days and the G.P.A. supplements this giving increased root and shoot biomass. This enables the young plant to source nutrients from the soil more effectively, especially in the first few weeks of growth when up to 15% of total phosphate uptake occurs.

Actual on farm benefits:

| 2009 Scout Spring Barley - Scotland | | | |
|-------------------------------------|-------------|--------------------|---------------------------|
| | Farmer Seed | Nickerson Original | Increase |
| Yield | 7.8 t/ha | 8.68 t/ha | 0.88 t/ha 11% response |

| 2010 Solstice Winter Wheat – Durham, Northumberland | | | |
|---|------------------|--|--------------------------|
| | Solstice + Kinto | Nickerson Original Solstice + Kinto + G.P.A. | Increase |
| Yield | 9.8t/ha | 10.4t/ha | 0.6t/ha 5.4% response |

Benefits include:

- Precision and even application of chemical to the seed
- Accurate drilling and even establishment
- Controlled release of chemical prevents phytotoxic effects on plant growth
- Higher yields
- Larger roots and shoots
- Better establishment
- Reduced stress and higher yields