



Tipperary Grass SEED MIXTURES



With almost 40 years' experience in the grass seed business, Agritech are one of the longest established blenders of grass mixtures in Ireland.

At Agritech we recognise reseeding as one of the most cost effective investments that can be made. Quality grass swards allow for higher animal output, increased grass utilisation and more efficient use of fertiliser.

Our '**Tipperary Grass**' brand is a market leader throughout Ireland with our flagship premium mixture '**Tipperary No 4A**' used in every county in Ireland. Our grass seed range have long enjoyed a reputation for mixtures of high digestibility, yield and longevity. The application of our unique **GroQuik®** dressing to all of our mixtures helps to ensure optimal germination, establishment and increased yield in new leys. The benefits of our dressing are sustained long beyond the sowing and germination period.

Grass seed assembly is the backbone of Agritech and we have long recognised that the key criteria in the assembly of grass mixtures is including varieties that complement each other, coupled with optimal levels of clover.

We pride ourselves as experts in offering farmers the very best grass mixtures available and our mixtures speak for themselves as year after year customers return, making our grass seed mixtures one of the leading selling ley mixtures in Ireland.



**Tipperary
Grass**

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GROQUIK® Biological Seed Stimulant

- GroQuik® is a biological seed stimulant specially designed to improve seedling establishment.
- GroQuik® accelerates germination and root growth in both grasses and clover.
- GroQuik® is especially beneficial under stress conditions, such as cold wet soil when seeds are slow to develop and are prone to damping off diseases. In dry soil GroQuik® gives the young seedling the extra boost to enable them to grow away.
- GroQuik® contains natural biological growth promoters, which need no specific handling precautions. GroQuik® contains natural plant stimulants from brown seaweed, humic acids, trace elements and vitamins.
- Each seed is coated with GroQuik® for uniform establishment, even under difficult growing conditions. This helps the seed mixture sown to out-compete weed species to produce higher yields. Its benefit in difficult seed establishment conditions and to clover establishment is particularly apparent.

GROQUIK® BENEFITS



- Improves seed germination and establishment
- Improved nutrient uptake
- Increased chlorophyll synthesis
- Stimulates beneficial microbial activity
- Stimulates root and shoot growth
- No handling precautions
- Healthier plants and improved yields
- Seed mixtures grow away quicker
- Higher yields of grass and clover

GROQUIK® SEED STIMULANT INCLUDED

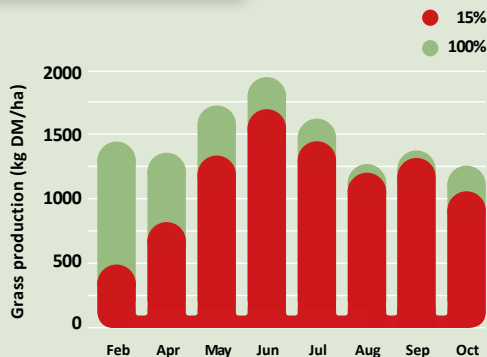
BENEFITS SUSTAINED LONG BEYOND SOWING AND GERMINATION

WHY RESEED?

Grass is the cheapest energy source available for all farm livestock. Pastures can lose quality as they get older, and maintaining a high percentage of perennial ryegrass is crucial in order to maximise output from the forage. Following reseeding you will have a better sward composition, improved sward density with increased dry matter yield and feeding value.

RESEEDED SWARDS ARE MORE PRODUCTIVE

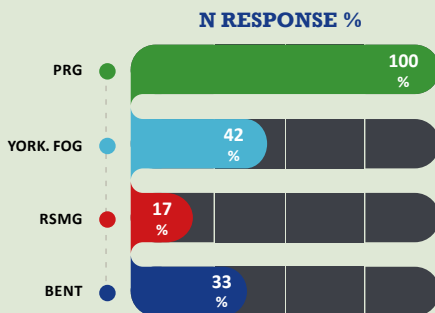
- Yields from newly reseeded perennial ryegrass swards will give 2.7 t DM/ha more than a 15% perennial ryegrass sward
- Higher yields particularly in the spring period
- Over a period of years the % of sown perennial ryegrass will reduce year by year with a gradual reduction in the early years but after 4-5 years the ingress of weed grasses is more rapid
- Swards with less than 40% perennial ryegrass should be reseeded



Grass production per month (February to October) in a sward containing 15% perennial ryegrass and 100% perennial ryegrass.

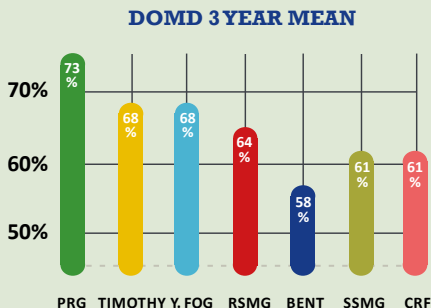
RESPONSE TO NITROGEN

- Perennial ryegrass is the most responsive species in the sward to the application of nitrogen compared with less than 50% with weed species
- Optimum performance and increased profits



SWARD DIGESTIBILITY

- The higher the perennial ryegrass % the greater the digestibility
 - o Greater palatability
 - o Higher intakes & more efficient feed conversion
 - o 1 unit increase in DOMD will increase DMI by 0.2kg/cow/day and milk yield by 0.4 litres/cow/day



Source: Moorepark Dairy Levy Research Update, April 2014

GRAZING MIXTURES

**GROQUIK® SEED
STIMULANT INCLUDED**

TIPPERARY GRASS NO. 4A

Our flagship premium mixture is specially formulated to produce high yielding leafy pasture for intensive long term grazing and high quality silage. Tipperary 4A has been refined over many years to now become a market leader playing a key role on grassland farms today ensuring that the maximum return is achieved from grass leys. It successfully encompasses all of the key traits required in a grass seed mixture for the modern grassland farmer.



- Proven reputation and expertise
- **GroQuik® dressed** for enhanced germination and dry matter yield
- Higher animal performance - increased milk, milk solids and liveweight production
- Increased herbage yield
- Excellent digestibility
- Longer lasting with excellent persistency
- Highly palatable swards with higher animal intakes
- Contains 1kg of clover for increased nitrogen efficiency and herbage output
- Lower residuals post grazing
- Quick recovery after grazing/cutting
- Also suitable for high D value silage
- Selection of the best available varieties on the market based on research trials

**White clover inclusion in grass swards receiving
up to 250kg N/ha can increase total annual
herbage production by 1.1t DM/ha.**

Source: Teagasc Moorepark 2013

TIPPERARY GRASS NO. 3

This general purpose ley is suitable for less demanding farming systems looking for good grazing and the potential to produce good quality silage.

- A versatile multi-purpose long term mixture suitable for grazing and/or cutting
- Produces high quality silage yields from mid May onwards or suitable for hay cutting later in June
- A mixture of late and intermediate varieties, selected for excellent seasonal distribution of yield and increased palatability
- Excellent mid-season and late growth maintaining good summer production and extended autumn grazing
- Ideal mixture suitable for cattle or sheep



TIPPERARY GRASS NO. 4

A grazing mixture designed with the option of a late cut of silage delivering quality, yield and persistency for all round performance.

- Comprised of late heading perennial ryegrass
- High dry matter digestibility
- Productive swards in Spring and Autumn
- High performance in both cutting and grazing regimes
- Clover performs well in both regimes
- Good sward density
- Option of similar mixture without clover, 4XC
- Suitable for cattle or sheep



**ALSO AVAILABLE
WITHOUT CLOVER,
'4XC'**

GRAZING MIXTURES

**GROQUIK® SEED
STIMULANT INCLUDED**

RENOVATION OVERSEEDING MIXTURE

- Specially formulated mixture of late tetraploid perennial ryegrass to extend the life of an existing sward maintaining productivity of yield and quality
- Overseeding can improve an existing sward with the addition of new seed without the cost of a full reseed
- Inclusion of larger late tetraploid seed to allow it establish and compete with existing sward
- Sowing rate 10kg/ac
- GroQuik® dressed for faster germination



Research studies show tetraploids give +4% MILK YIELD, +5% MILK SOLIDS. Tetraploids are proven to be 7% more productive than diploids and more drought tolerant.

Source: Teagasc Moorepark 2013

TIPPERARY GRASS HORSE GRAZING

An equine mixture formulated to cater for diverse needs providing nutritious, persistent and palatable pastures.

- Suitable for hay, haylage or as a grazing mixture
- GroQuik® dressed for faster germination
- Minimal poaching damage due to inclusion of strong creeping red fescue, smooth stalked meadow grass and dwarf perennial ryegrass



CUTTING MIXTURES

**GROQUIK® SEED
STIMULANT INCLUDED**

TIPPERARY GRASS NO. 3A

This 2-cut silage mixture has a tall erect growth habit to give a cleaner and better crop at cutting.

- Producing a high quality and high energy crop
- Contains intermediate and late heading varieties
- High sugar content to aid fermentation
- Formulated with varieties for high digestibility and yield for silage
- Cutting date from mid May to optimise quality and yield
- Excellent persistency and sward density
- Produces high quality grazing for cattle or sheep
- Also available without clover



HYBRID RYEGRASSES

Hybrid ryegrass is a cross between perennial and Italian ryegrass combining yield, quality and persistence. Types range from perennial ryegrass to intermediate and Italian types. Usage has mainly been for conservation, but the new perennial types have proved to be excellent for grazing.

Hybrid ryegrass has improved drought tolerance compared to Italian ryegrass, especially the very dense hybrids. Spring growth is similar to early perennial ryegrasses whereas the heading is more like intermediate perennials. This gives a great deal of flexibility in the spring and high quality forage.

TIPPERARY GRASS MULTICUT

A hybrid ryegrass mixture for farmers who demand high yield from multiple cuts of silage. Hybrid ryegrass and red clover are the ideal companions with erect growth habits making it most suitable for cutting.

- Will facilitate at least 3 cuts of silage with quality aftermath grazing
- High performance
- High yielding short term mixture of 3-5 years
- Inclusion of red clover:
 - Extra protein, 15-20% from red clover
 - Reduces N fertiliser
 - Nitrogen fixation
 - Improves soil fertility
 - Improves soil structure



CUTTING MIXTURES

**GROQUIK® SEED
STIMULANT INCLUDED**

NO. 5 HYBRID BOOST

A hybrid mixture suitable for intensive cutting or grazing giving excellent Spring growth and high total annual yields. This mixture is a short term mixture of 3-5 years with the option of inclusion of red or white clover.

- Early grazing
- Ideal for zero grazing
- Shorter grazing rotation
- Very high yields in comparable to perennial leys
- High digestibility
- Inclusion of red clover:
 - Extra protein, 15-20% from red clover
 - Reduces N fertiliser
 - Nitrogen fixation
 - Improves soil fertility
 - Improves soil structure
- Suitable as an overseeding mixture to maintain production and extend the expected life of the sward. Particularly suited to overseeding a cutting sward but also optional with grazing.



HIPRO FORAGEXTRA WHOLECROP

HiPro-ForageXtra can be sown with barley or oats as a unique low cost winter solution to give a TMR diet of starch, protein and fibre.

- High protein forage with the inclusion of high levels of annual clovers and red clover
- Complements the wholecrop grain with added yield and protein
- It is the cheapest alternative forage to produce
- A high dry matter, high intake forage
- Feeds out exceptionally well
- Increase production from home grown forage
- Can also be sown as a stand-alone mixture for high protein intensive cutting
- Inclusion of red clover:
 - Extra protein, 15-20% from red clover
 - Reduces N fertiliser
 - Nitrogen fixation
 - Improves soil fertility
 - Improves soil structure



FORAGE CROPS

RAPE

Forage Rape is an excellent break crop between grass and leys. It has the ability to survive on relatively poor soils and can be ready to utilise between 13-15 weeks from sowing.

Sowing rate: 6 - 10kg/ha (May to September)

KALE

Kale is being grown increasingly on Irish dairy farms, for feeding dry cows and younger stock. Kale produces high yields of quality feed that can be grazed in-situ. Early sown crops which establish well are most likely to give highest yields.

Sowing rate: 2.5 - 5kg/ha (April to mid July)

HYBRID RAPE/KALE

A Kale Rape Hybrid, this is a fodder crop that provides rapid growth ability and good all year round performance. It is mainly used as a high energy, high protein graze for cattle and sheep and ideal for out-wintering systems.



ATTENTION TO DETAIL = KEY TO SUCCESSFUL RESEEDING

The benefits of a reseeding programme are well proven and documented through ongoing research at this stage. Increased production levels coupled with much improved quality over old existing swards throughout the growing season and a better response to applied fertiliser all ensure that the cost of reseeding is easily recouped within two years.

There is however a high level of management required to ensure that the reseeding process is carried out properly. Too often the return on investment is restricted due to poor sward establishment.

THE KEY FOCUS AREAS WHEN RESEEDING ARE RECOMMENDED AS FOLLOWS:

- **Destroying existing vegetation**

It is vital to burn off the existing sward.

- **Establishing soil nutrient status**

It is foolhardy and also false economics not to ensure that the new reseed receives adequate phosphate, potash and has a suitable soil pH environment in which the new reseed can prosper. Care must be taken when testing the soil to ensure that the sample is a reflection of the soil from which the new reseed will grow and not a top layer of existing sour soil which has accumulated over the years from slurry applications. **Agritech recommend a complete soil analysis rather than the basic NPK and pH.**

- **Choice of Mixture**

We at Agritech firmly believe that the target enterprise of the reseeded sward is the principal criteria for the choice of mixture. For grazing we base our mixtures on high production, digestibility, recovery, palatability and groundcover with our renowned Tipperary 4A mixture the flag bearer in this area.

For multiple cut silage the target cutting date of the first cut will be the principal driver for the choice of mixture with the date at 67D value highly important.

- **Use of improved Technology and Science**

Our unique GroQuik® germination dressing is applied to all of our mixtures to ensure maximum germination and a stronger well rooted plant. GroQuik® has been independently verified to be worth €30 /€40 per acre with its benefit in difficult seed establishment conditions and to clover establishment particularly apparent.

- **Seedbed preparation and sowing of seeds**

The aim when preparing a seedbed is to produce both a fine and firm seedbed when sowing grass seeds. The development of the modern methods of cultivation have ensured that it is now much easier to ensure a firm seedbed is achieved. It will generally be necessary to roll the ground before sowing to achieve this. The seeds should be sown when the soil moisture and temperature is adequate for good growing conditions. The seed should be covered very lightly post sowing and rolled again. This approach will ensure that the seeds are sown in the very top layer of soil (particularly important for clover establishment), giving the best chance for a maximum strike.

- **Fertiliser application**

As per results of soil analysis, 30 units of nitrogen, 30 units of phosphate and 60 units of potash are always required to ensure proper establishment.

- **Post emergence spray**

The application of a post emergence spray is the last part of the jigsaw. When one creates a seedbed for any crop an ideal environment is also created for all seeds present to germinate and not just the seeds sown. It is therefore most important to apply a post emergence spray when the clover has reached the trifoliate stage and before the grass has covered in any emerging seedling weeds with the dreaded dock being most important.

- **Management of new reseeded sward**

The emphasis with any reseeded pasture must be to encourage tillering of the newly established seeds. The more often the reseeded sward can be grazed the better and in some cases as often as every 14-17 day intervals during the first season is recommended in order to avoid high grass cover accumulations and hence grass tiller losses.

MANAGEMENT OF RESEEDED SWARDS

It takes about 11 months for a new sward to establish; therefore the management of the reseed in this period is crucial to the long term productivity of the crop.

DO'S

DO NOT'S

FIRST 8 WEEKS	<ul style="list-style-type: none"> Spray weeds before grazing Graze when grass is at 2 leaf stage Nitrogen and P & K Slug pellets (if required) 	<ul style="list-style-type: none"> Graze at high cover (>1200 kg DM/ha) Do not harvest for silage It is important that the post emergence spray isn't applied until after the clover has acquired three leaf stage, (Trifoliate).
SECOND GRAZING ONWARDS	<ul style="list-style-type: none"> Graze at 1,000 - 1,400kg DM/ha (6 -7cm) Re-spray weeds if necessary 	<ul style="list-style-type: none"> Allow high covers to develop Graze in really dry or wet conditions
AUTUMN	<ul style="list-style-type: none"> Keep grazing at 1,200- 1,400 kg DM/ha Graze off well before first winter (<4cm) Light slurry application 	<ul style="list-style-type: none"> Overgraze or poach Apply excessive slurry
SECOND YEAR	<ul style="list-style-type: none"> Ensure the new sward receives adequate nitrogen Monitor soil P and K status 	<ul style="list-style-type: none"> Overgraze or poach

It is important to graze the new reseed with calves or youngstock as soon as the plants do not pull out of the ground; approximately 700 - 1000 kg DM/ha. It is especially important that autumn reseeds are grazed before the first winter.

All the benefits of reseeding can be lost after sowing if attention is not paid to weed and pest control.

WEED CONTROL

Weeds in new reseeds are best controlled when the grass is at the 2-3 leaf stage. Docks and chickweed are the two most critical weeds to control in reseeds but high populations of other weeds such as fat hen, charlock, redshank, mayweed can also cause problems.

- It is essential to control docks and chickweed at the seedling stage and this is achieved by applying a herbicide before the first grazing
- To achieve the best lifetime control of docks in a sward, eradicating the dock at seedling stage in a reseed is the best opportunity
- Herbicide choice for dock control will depend on the presence of white clover in the reseed
- Chickweed can be a problem particularly where regular grazing is not expected to take place (silage fields), therefore herbicide choice is important

You should consult your local distributor or adviser for advice on the correct herbicide, remembering to keep the prescribed cross-compliance records and follow the instructions on the product label. Pesticide users must comply with the regulations as outlined in the Sustainable Use Directive (SUD).

SEEDLING BROAD-LEAVED DOCK

Photo of seedling dock taken 5 weeks after reseeding



SEEDLING CHICKWEED

Photo taken 5 weeks after reseeding



PEST CONTROL

The three most significant pests of reseeded are Frit Fly, Leatherjackets and Slugs

FRIT FLY

Frit Fly is most prevalent in autumn after a dry summer, and in reseeded swards with high levels of debris (minimum cultivation), however reseeding carried out by direct drilling is also at risk. Evidence of Frit Fly can be seen when the centre shoot turns yellow and at this stage the plant dies away. New grass sown after grass or grassy cereal ground is most at risk.

Control of Frit Fly is achieved by spraying an insecticide if 10% or more of shoots of plants are damaged. (Walk diagonally across the field and tug 100 central shoots of new plants. If 10% of shoots pull away easily apply an insecticide).

LEATHERJACKET

Leatherjacket is most active in wetter/heavier soils. Leatherjacket damage is characterised by dead plants on the soil surface. Control is achieved by application of an insecticide.

SLUG

A Slug attack is most prevalent during wet weather or where fields tend to be damp, such as headland areas. Having high levels of trash in the seedbed will also increase the likelihood of slug attack.

The most common evidence of slug attack is shredded leaves; more prevalent where reseeding is carried out by direct drilling. This method creates slits in the ground which act as a protective shelter for slugs. The likelihood of damage to the new grass plants can be greatly reduced by ensuring a firm seedbed by rolling. Most of the major slug species cannot burrow into the soil.

Slug pellets can be applied to control the problem. Usually applying slug pellets to the margins of fields/paddocks is adequate. Higher seeding rates should be considered where reseeding is carried out by direct drilling to counteract slug attack.

You may need to consult your local distributor or adviser in dealing with any case of weed or pest control.

SOIL FERTILITY

To get the maximum from a new reseed and to improve the productivity of a sward, soil fertility must be correct. Prior to reseeding it is crucial to carry out soil tests for P, K and pH (lime requirement), testing to a minimum of 10cm soil depth. For accuracy, it is important that the newly cultivated soil is tested and not the soil of the pre-existing sward.

Target pH - 6.3 for mineral soils and 5.5 for peat soils.

P and K **must** be brought up to soil Index 3. N is essential for new reseeds and should be applied at 30 units/acre. When ploughing it is recommended to re-test new reseeds the following year to ensure optimum soil fertility for maximum grass performance.

PHOSPHORUS AND POTASSIUM

Phosphorus (P) is essential for root development. It is immobile in the soil, and if the young seedling roots are to get adequate P, there must be an abundance of this element dispersed in the soil. Table 1 shows the P and K requirements when reseeding grassland at the different P and K index levels.

SOIL P INDEX	SOIL P RANGE (MORGAN'S MG/L)	P APPLICATION RATE (KG/HA)
1	0.0-3.0	60
2	3.1-5.0	40
3	5.1-8.0	30
4	>8.0	0

SOIL K INDEX	SOIL K RANGES (MG/L)	K APPLICATION RATE (KG/HA)
1	0-50	110
2	51-100	75
3	101-150	50
4	> 150	30

Table 1. P and K rates required for pasture establishment

An additional 15 kg P/ha is permitted in addition to normal allowances for reseeded grassland on index 1, 2 and 3 soils. These advice rates must be checked against total annual P allowances for the farm under Nitrates rules.

**Contact your local
Agritech distributor**



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