

# GRASS AND FORAGE SEED BROCHURE 2024



# CONTENTS



<b>3</b>	<b>Introduction</b>
<b>4</b>	<b>Reseeding – An Overview</b>
<b>5</b>	<b>Farmer Testimonial</b>
<b>6</b>	<b>Nitrates Derogation Overview</b>
<b>7</b>	<b>Cultivation Methods</b>
<b>8</b>	<b>Improving Grassland Utilisation</b>
<b>10</b>	<b>Soil Nutrition Management</b>
<b>12</b>	<b>Sustainability Action Payment</b>
<b>14</b>	<b>Weed Control</b>
<b>16</b>	<b>Premium Mixtures</b>
<b>22</b>	<b>Quality Mixtures</b>
<b>26</b>	<b>Horse Pasture &amp; Heavy Ground Mix</b>
<b>27</b>	<b>Organic Mixes</b>
<b>28</b>	<b>Recommended Lists 2024</b>
<b>30</b>	<b>Pasture Profit Index 2024</b>
<b>32</b>	<b>Wild Bird Cover – ACRES</b>
<b>33</b>	<b>Cover Crops</b>
<b>34</b>	<b>Forage Crops</b>
<b>35</b>	<b>Management of Forage Crops</b>
<b>36</b>	<b>Swedes &amp; Kale</b>
<b>37</b>	<b>Fodder Rape &amp; Stubble Turnips</b>
<b>38</b>	<b>Silage Quality</b>
<b>39</b>	<b>Tirlán FarmLife Branches</b>



# WELCOME TO THE TIRLÁN MASTERCROP GRASS AND FORAGE SEED BROCHURE 2024

There have been many new challenges facing Irish Agriculture in recent times. Farmers are being challenged with achieving reductions in environmental emissions, improving water quality, energy driving costs of production, changes in Derogation and the knock on reduction of Nitrogen.

Grassland continues to be the lowest cost feed for Irish milk and meat production systems and reseeding is the best way to maximise that return. Reseeding also offers other benefits including carbon sequestration and increased Biodiversity.

The Mastercrop name is synonymous with quality, choice and value for money. Our 2024 range of grass seed certainly delivers on all these criteria which is backed by our professional retail and agronomic advisory service.

In this year's brochure we will look at different forage solutions that Tirlán offer which include:

- Getting the best out of White Clover swards
- How to incorporate Red Clover silage into the farm
- Multi Species Swards and a wide range of Winter forage options
- Tirlán's Sustainability Action Programme

## GREAT GRASS

Maximising Grassland Yields

The 2024 Pasture Profit Index (PPI) table and Recommended Lists on P28 - P30 provide great feedback for farmers, as the primary function of a sward is the ability of the grazing animal to utilise it effectively.

We also spoke to Wexford farmer Shane Murphy who discusses his reseeding plan which features on p5.

For further information on Tirlán's Great Grass Programme please get in touch with your local representative.

**Phil Meaney,**  
Grass Seed Technical Advisor, Tirlán



# RESEEDING - AN OVERVIEW

Reseeding should be given strong consideration when any of the following features become evident in a sward:

- **High content of weed grasses (e.g. scutch, bent grass)**
- **Low ryegrass content**
- **High content of broad-leaved weeds e.g. chickweed, docks, thistles and buttercups**
- **Reduced milk yield or liveweight gain**
- **Poor re-growth following grazing or cutting**
- **Bare patches throughout sward**
- **Reduced silage DMD values**

In general, swards cut twice annually for silage should be reseeded every 5 - 8 years. For grazed swards, the arguments for reseeding lie in the areas of an extended grazing season, improved re-growth and the continued improvement in yield and quality achieved by the breeding of new ryegrass varieties.

## Advantages of reseeding

- **On average, an extra 3 tonnes DM/ha per year is produced from reseeded pastures, mainly in spring**
- **8% higher milk output/ha relative to permanent pasture**
- **Use of newer grass varieties**
- **Improved silage quality**
- **Swards respond better to applied Nitrogen which will increase the NUE (Nitrogen Use Efficiency) of the farm**
- **Improved grass qualities**



### Reseeding Checklist

- Identify paddocks for reseeding (poorer performing paddocks; low perennial ryegrass content)
- Soil test and lime
- Sowing date
- Method of reseeding
- Spray off paddock
- When cultivating - prepare a good seed bed
- Choose appropriate grass cultivars
- Sowing rate
- Roll
- Slug and other pests
- Control weed early
- Graze at 2 leaf stage
- Avoid poaching and over grazing

# Wexford Dairy Farmer's Approach to Reseeding using Tirlán Mastercrop



**Shane Murphy delves into his family farm's strategy for reseeded and reduction of Nitrogen usage, along with the obstacles they encounter in 2024 regarding grazing covers.**

Shane Murphy, a dairy and tillage farmer based in Duncormick, County Wexford, runs a family-operated farm alongside his brother, Art, and parents, Lorcan and Marian Murphy. Their farm, consisting of 230 cows, primarily Holstein breed, is managed with a focus on spring calving, with approximately 220 cows being milked during the summer months.

The start of the 2024 grazing season presents a considerable challenge for all, not excluding Shane Murphy and his farm, due to unprecedented and unfavorable weather conditions. Despite the traditional expectation of starting grazing in January, the prolonged wet weather has confined the cattle indoors. Shane explained, "Our cows have been housed since 15th October, and haven't been out yet. During a normal growing year, we'd be measuring grass and walking paddocks every week at the moment. Grass is abundant with many covers at 1800 and 2000 kg/dm/ha, but too wet to graze, unfortunately. We're lucky, once we get to grass, that we can grow grass very well. Most years growing 12 and 13 tonnes annually. The main downside in the southeast is drought and its effects on growth rates."

## Implementing a Structured Reseeding Programme

The Murphy family focuses on maintaining and improving their soil health through frequent soil testing, a liming program and good reseeded practices. "Overall, the soil is in good condition. We soil test every three years, with the majority of the farm at Index 3 and 4. Like every farm, we have one or two paddocks stubbornly stuck at Index 2, which is a heavy type of soil. We spread about 60 tonnes of lime every year, to ensure the soil is at optimum pH." This holistic approach allows Shane to assess the condition of the grass and make informed decisions regarding reseeded, highlighting the integral role of soil testing in their farm management practices.

Implementing a structured reseeded program on any farm will have lasting benefits to both the environment and a farmer's bottom line. Shane highlights that, "having good grass is very important, especially in the southeast, where we're prone to drought. New reseeded including the multispecies swards handle drought conditions better than older swards, which helps sustain milk production. Along with that silage quality, especially in a year like 2024 is very important." Good quality grass ensures production

is maximised right across the grazing season. The 220 milking cows averaged "500kg milk solids with 6,300 litres at 4.35% butterfat and 3.43% protein" Shane explained.

## Grass Seed Selection

The reseeded strategy on the Murphy farm is carefully planned from year to year, which Shane explains, "We reseed 20 to 30 acres of grassland annually, with that, we sow 25 acres in Westerwolds Ryegrass. This is sown after a crop of barley, which we try to graze in the autumn followed by an early cut of silage. It is then ploughed and sowed in April with barley or maize. On the other ground, we use Tirlán Mastercrop Grass seed mixes, including multispecies and grazing mixtures which include Timothy and White Clover."

With Tirlán Mastercrop Premium you can achieve up to 40% difference in grass production when compared with older pasture. Research shows that permanent pastures are up to 25% less responsive to Nitrogen when compared to high perennial ryegrass swards according to trials at Teagasc Moorepark. As a result, these permanent pastures are costing farmers up to €300/ha per year due to reduced herbage production and reduced Nitrogen (N) use efficiency. Reseeded costs averaging around €750/ha, can be recouped within just two years due to improved profitability from enhanced milk performance and reduced feed and fertiliser costs, making reseeded among the most economically sound investments on farms.

## The Road to Sustainability

Shane's approach to sustainability extends beyond reseeded. By diversifying plant species, particularly through clover and multi-species mixes, Shane anticipates a significant reduction in fertiliser usage, up to 30 to 40 units of Nitrogen per hectare. This practice not only reduces dependency on fertilisers but also improves biodiversity and promotes soil health. Clover incorporation was one of Tirlán's Sustainability Actions for 2023. Incorporating clover can increase milk production from 30 to 60 kgs per cow per year. Additionally, the Murphy family's commitment to sustainability extends to tree planting, promoting good management of hedgerows, installing solar panels in 2023, and the purchase of energy-efficient equipment like a variable rate vacuum pump.

## Tirlán Support

Paddy Wickham is Shane's Tirlán FarmLife business manager. Shane believes that the support available from the team at Tirlán is a valuable service to have access to, claiming that "Paddy is nothing but helpful. If I ask Paddy for anything specific like the seed mix with Timothy and White Clover, it's never an issue."

## Future Plans

Even during challenging periods farmers like Shane and his family continue to look at ways to improve their business to make it more efficient. For Shane, he emphasises that, "the main goal is to cut Nitrogen uses and to continue reseeded. We are also looking at constructing a new cubicle shed which is a big investment but a necessary one. Along with that we also hope to continue improving cow genetics, to increase to 550 kg of milk solids."

# NITRATES DEROGATION OVERVIEW

Ireland's Nitrates Derogation provides farmers an opportunity to farm at higher stocking rates, above 170kg N/Ha, currently to a maximum of 250kg N/Ha. This increase in allowable stocking rate is subject to additional conditions and regulations designed to protect the environment. Since the 1st of January 2024, the D derogation limit in designated areas has been reduced to 220kg N/ha from 250kg N/ha.

## Grass reseeded completed by Derogation farmers must include clover.

A minimum of 1.5 kg/ha naked clover seed OR 2.5 kg/ha of pelleted clover seed is required for all new grass reseeds. Either white (grazing) or red (cutting), mixture of clovers can be used. Over sowing of grass seed mixtures with clover post weed control will be permitted provided it's done in the year of reseeded.

## Save money, enhance the environment!

Ireland has a natural resource of almost four million hectares of grassland which combined with our mild, moist and changeable climate allow us to grow abundant grass, and produce milk naturally and at low cost.

We are currently not optimising grass production and utilisation. Teagasc research indicates that the current levels of grass growth can be increased significantly.

Our Great Grass programme is here to help you improve soil nutrition and grassland yields.

The table below shows how soil pH effects the availability of Nitrogen (N), Phosphorus (P), and Potassium (K)

Where soil samples indicate a lime requirement there must be a farm scale liming programme on derogation farms. The details of the liming programme must be provided in the Nutrient Management Plan. The liming programme must be 4 years in duration with a minimum of 25% of lime spread in year 1 and the balance applied over the remaining 3 years.

Studies have shown lime applications can give a 7:1 return on investment

	pH 4.5	pH 5.0	pH 5.5	pH 6.0	pH 7.0
Nitrogen (N)	30%	43%	77%	89%	100%
Phosphorus (P)	23%	31%	48%	52%	100%
Potassium (K)	33%	52%	77%	100%	100%

Those who wish to plough grassland shall do so between 1st March and 31st May.



# CULTIVATION METHODS

Whatever method of seedbed preparation is used, the ultimate aim must be to produce a fine firm seedbed.

## This will ensure:

- Good contact between soil and seed
- Moisture is conserved in the soil
- A level field will result
- For farmers in Derogation, grassland can only be ploughed between 1st March and 31st May and should be sowed within 3 weeks

## Ploughing

- Avoid ploughing too deep (>15 cm) as this can bury the top layer of soil (the most fertile soil)
- Use a land leveller until an even seedbed is generated
- Aim to develop a fine, firm and level seedbed
- If the seedbed is cloddy and loose, grass seed (and especially clover seed) will be too deep and will not germinate

## Discing and One-pass

- Aim for 3 to 4 passes of the disc harrow in angled directions to break the sod and turn up enough soil for a seedbed
- Forward speed must not be excessive as it can lead to rough, uneven seedbeds

## One-pass

- The slower the forward speed of the machine the better in terms of finish
- Often left rough and patchy due to operators moving too fast across fields

## Spring vs. Autumn for water quality

Cultivation of the of soils in the autumn can lead to an increase in mineralization of N in the soils and with the N demand low in bare soils / freshly set grass seed coupled with higher rainfall, nitrate can be leached more readily into groundwater in the autumn so carrying out an earlier reseed is more favourable. For farmers in derogation livestock manure should not be spread in the autumn before grass cultivation.

### CULTIVATION TECHNIQUES

	DO	DO NOT
Ploughing	Shallow plough. Develop a fine, firm and level seedbed.	Plough too deep (>15 cm). Cloddy, loose seedbed.
Discing	Graze tight, apply lime. 3-4 runs angled directions.	Forward speed too fast - rough, uneven seedbed.
One-pass	Graze tight, apply lime. Slow forward speed at cultivation	Forward speed too fast - rough, uneven seedbed.
Direct drill	Graze tight, apply lime and slug pellets. Wait for moist ground conditions (slight cut in ground).	'Trashy' seedbed - no seed/soil contact. Use when ground is dry and hard.

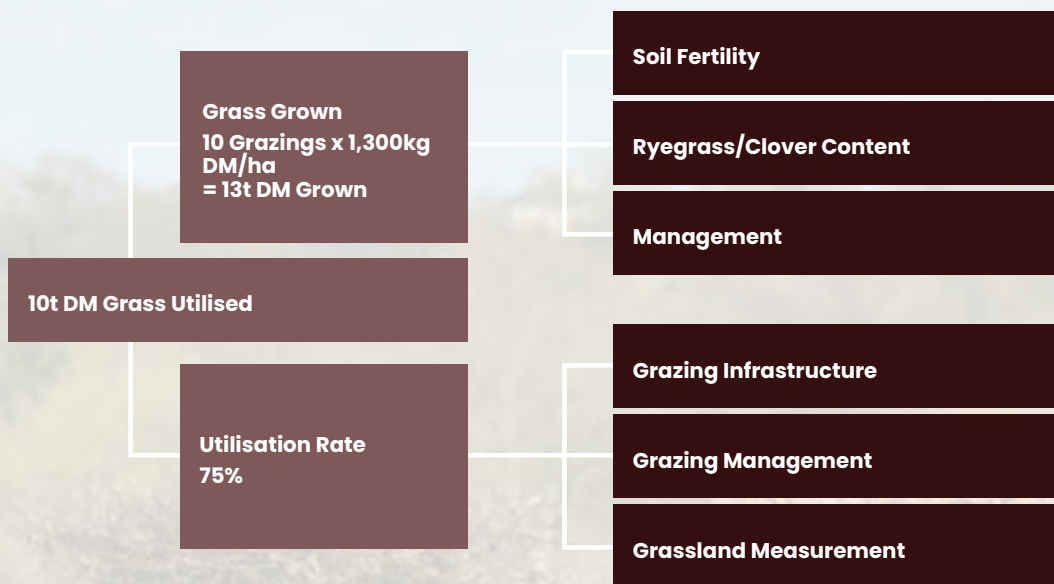
## Top Tip

We should be mindful of buffers when it comes to ploughing beside streams and watercourses. A minimum buffer of 1.5m should be maintained for grassland reseeds to provide a sediment trap to break the potential for nutrient run-off.

Aim to minimise the amount of time that the soil is bare while cultivation of the field is ongoing - this will help ensure that nutrients and sediment are at less risk of leaching or being washed off while there is no crop in place.

Roll after sowing to prevent large sediment losses if high rainfall occurs.

# UTILISING GRASS FOR GRAZING



**Source:** Teagasc Grass 10T - Achieving 10t DM/ha grass utilised per year

## IMPROVING GRASSLAND UTILISATION

Grass utilised (measured in tonnes DM/ha) can be increased on farms by either increasing the amount of grass grown and/or improving the utilisation rate. How much grass is grown is influenced by soil fertility, sward composition (ryegrass/clover content of swards), and grassland management decisions (including measurement).

The utilisation rate is influenced by grazing infrastructure, grazing management and grassland measurement.

Grass10 which is a four-year campaign from Teagasc to promote sustainable grassland excellence will focus on each of these areas.

The objective of Grass10 is to increase the number of grazings per paddock to 10 and the amount of grass utilised to 10 tonnes of grass dry matter per hectare.

As part of the nitrates derogation, participants must complete a minimum of 20 grass measurements on PastureBase Ireland OR Attend a grassland management course.



# NITROGEN USE EFFICIENCY - (NUE)

Nitrogen use efficiency is the efficiency in that the N entering the farm is utilised within the farm and converted to a product that is sold from the farm. The sources of N entering the system: Chemical N, Organic N (Slurry, farmyard manure, and urine deposited to pasture by animals), Concentrates, and feed purchased. Incorporating clover has the ability to improve NUE due to the reduction in chemical N inputs whilst also increasing animal output. Sources of N removed from the farm: (Milk, cull cows, calves).

Nitrogen use efficiency can be significantly improved by better grazing management and grass measurement. Measuring grass and using the tools and technologies available will increase tonnes of dry matter grown per hectare and increase the overall utilisation of this grass.

The current average NUE on farms at 25%, with an industry goal to increase this to 35% across all farms.



# SOIL NUTRITION MANAGEMENT

## Guidelines

- Soil test for pH, P and K
- Aim to have correct soil pH particularly for clover swards
- To utilise organic fertiliser as effectively as possible analyse nutrient content

Table below shows P and K requirement when reseeding at different Index levels P and K rates are required for pasture establishment.

Soil P Index	Range	Range kg/ha
1	0–3.0	60
2	3.1–5.0	40
3	6.1–10.0	30

Soil K Index	Range	Range kg/ha
1	0–50	110
2	51–100	75
3	101–150	50

## Conversation

Soil P Index	Range	Range kg/ha
	P	K
Pig	7	20
Soil Water	0.7	5
Cattle	6	32

(kg/ha x 0.8 = units/ac)

## TIRLÁN'S SOIL NUTRITION PROGRAMME

Tirlán's soil nutrition programme offers soil testing services to create a soil nutrient plan.

If you're interested in this service contact your local Tirlán representative or branch.





# SUSTAINABILITY ACTION PAYMENT

Tirlán has introduced a Sustainability Action Payment for all milk suppliers, to support the delivery of key on farm sustainability actions. In developing the elements of the payment, a focus is placed on key measures which will enhance on-farm economic and environmental performance. All suppliers who declared at least seven sustainability actions from the table on their TirlanFarmLife.com account in 2024 will receive their 0.5 cpl sustainability action payment in 2025.

## New in 2024

Purchase of protected urea (option 7) now represents two actions. Participation in a Genotyping Programme (option 19) and Water Quality EIP Programme (option 20) are two new measures. These changes are introduced to further support suppliers address key water quality and emissions reduction challenges.



### CARBON REDUCTION

- Measuring grass growth
- Incorporating clover\*
- Multi-species swards\*
  - Milk Recording
  - Improve herd EBI
- FarmGen solar energy\*
  - Use of sexed semen
  - Genotyping



### AIR QUALITY

- LESS equipment
- Protected urea\*
- Low Protein Concentrate Feed\*



### BIODIVERSITY

- Native trees\*
- Hedgerows\*



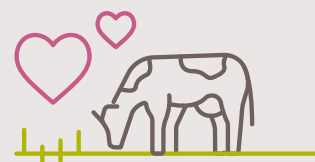
### SOIL HEALTH

- Nutrient management plan



### WATER PROTECTION

- Water quality improvement plan
- Water protection measures
  - Water Quality EIP



### ANIMAL HEALTH

- SCC improvement
- Herd Disease Screening\*
- Twenty20 Beef Club

\*Delivery of the actions will be verified by purchase of relevant product/service from Tirlán.



# Sustainability Action Payment – Menu of Options

**Option 7 Protected Urea.**  
Declaration of this action now represents **two** actions.

Suppliers need to action seven options to receive full payment from January 2025.

Sustainability Option	On-Farm Action	Requirement	When Action to be Taken
<b>1. Measuring Grass Growth</b>	Grass cover measurement & uploaded to PastureBase Ireland or equivalent	Minimum of 10 covers uploaded/year	2024
<b>2. Clover incorporation</b>	Clover seed purchased in 2022 – 2024 from Tirlán	Minimum purchase of 5 Kg	2022 – 2024
<b>3. Multi-species swards</b>	MSS seed purchased in 2022 – 2024 from Tirlán	Minimum purchase of seed required for sowing 2 acres (24 Kg)	2022 – 2024
<b>4. Milk recording</b>	Engage in milk recording for the herd	Minimum of four recordings/year	2024
<b>5. Improve Herd EBI</b>	EBI of the herd is improved vs previous year	Improvement of €1 or greater required	2024 vs 2023
<b>6. Low Emissions Slurry Spreading</b>	Spread Slurry using Low Emissions Equipment	Some or all slurry spread by LESS	2024
<b>7. Purchase of Protected Urea</b>	Purchase of protected urea fertiliser from Tirlán	1.5 tonne purchased per 100,000 litres of milk supplied in 2024	2024
<b>8. Native trees</b>	Additional native trees on the farm via Tirlán	Minimum 20 trees purchased	2024
<b>9. Hedgerows</b>	Additional hedgerows on the farm via Tirlán	Minimum 100 hedging plants purchased	2024
<b>10. Nutrient Management Planning</b>	Soil Nutrient Management Plan in place	NMP in place for 2024	2022 – 2024
<b>11. ASSAP water quality planning</b>	ASSAP water quality plan completed where farm is in EPA water quality Priority Area for Action (PAA)	Where required, to be completed in 2024 or before	2024 or before
<b>12. Fencing off watercourses</b>	At least one field/paddock with drain, river or stream watercourse permanently fenced off	Completed during 2022 – 2024 & outlined on a farm map	2022 – 2024
<b>13. Renewable energy generation</b>	Renewable energy generation system installed & operational – solar PV, solar thermal or wind	System in place in 2024, including previous installations. Solar PV installations from 2022 to be FarmGen	Installed in 2024 or before
<b>14. Herd Disease Screening</b>	Participating in Tirlán bulk tank disease screening service	Three or more tests/year for minimum of six diseases	2024
<b>15. Twenty20 Beef Club</b>	Participant in Tirlán Twenty20 Beef Club	Calf supplier or rearer as part of Twenty20 Beef Club	2024
<b>16. Udder Health</b>	Management of mastitis in the herd through 2024 delivers a low or improved herd SCC	2024 average SCC for the herd is lower than 2023 OR average herd SCC for 2024 is less than 150,000 cells/ml	2024 vs 2023
<b>17. Low Protein Concentrate Feed</b>	Purchase of low protein dairy feed, (max 15% crude protein) from 1st April to 30th September, from Tirlán	Four tonnes purchased per 100,000 litres of milk supplied in 2024	2024
<b>18. Use of sexed semen</b>	Use of sexed semen inseminations in the dairy cows and/or replacements	Receipts for sexed semen purchases or ICBF breeding data records	2024
<b>19. Genotyping</b>	Genotype the breeding dairy stock on the farm	Participate in the National Genotyping Programme and/or genotype all replacement Heifers through the ICBF Genomic Service	2024 or before
<b>20. Water Quality EIP</b>	Participate in Water Quality Improvement EIP operated by LawPro, Teagasc and DII	Plan submitted to Water Quality EIP in 2024	2024

## LIVING PROOF

### Our comprehensive sustainability strategy

As part of our sustainability strategy, Living Proof, Tirlán has pledged to achieve a 30% absolute reduction in carbon emissions from its processing sites and a 30% reduction in GHG emissions associated with each litre of milk produced by 2030. The company is also committed to delivering on Science Based Targets initiative (SBTi) to show its clear and unambiguous commitment to reducing greenhouse gas (GHG) emissions by implementing the best science and technology.



# WEED CONTROL

## Herbicides for control of weeds in grassland

MAIN TARGET WEED	PRODUCT	PCS NO.	ACTIVE INGREDIENT
<b>Docks</b>	<b>Governor (Doxstar)</b>	06355	150 g/l Triclopyr, 150 g/l Fluroxypyr
	<b>Esteem (Pastor Trio)</b>	06356	100 g/l Fluroxypyr, 2.5 g/l Florasulam, 80 g/l Clopyralid
	<b>Eagle</b>	04315	75 g/kg Amidosulfuron
	<b>Barclay Hurler</b>	02905	200 g/l Fluroxypyr
	<b>Halcyon (Forefront T)</b>	05393	30 g/l Aminopyralid, 240 g/l Triclopyr
	<b>(Pasture Pack) 5 L Thrust 2 L Tandus</b>	04520 05836	344 g/l 2,4-D, 120 g/l Dicamba, 200 g/l Fluroxypyr
<b>Thistles</b>	<b>HAKSAR 500 (MCPA)</b>	05968	500 g/l MCPA
	<b>Thistlex</b>	03831	200 g/l Triclopyr, 200 g/l Clopyralid
<b>Ragwort</b>	<b>Stapler (D50)</b>	06857	500 g/l 2,4 D dimethylamine salt
	<b>Halcyon (Forefront T)</b>	05393	30 g/l Aminopyralid, 240 g/l Triclopyr
<b>Rushes</b>	<b>HAKSAR 500 (MCPA)</b>	05968	500 g/l MCPA
<b>Docks, Thistles &amp; Nettles</b>	<b>Pradera</b>	06524	233g/l MCPA, 50g/l Fluroxypyr, 28g/ Clopyralid
	<b>Grazon Pro</b>	05182	60 g/l Clopyralid, 240 g/l Triclopyr
	<b>Scrubkiller Ultra</b>	06734	240 g/l Triclopyr, 60 g/l Clopyralid
<b>Seedling weeds in new ley (CLOVER-SAFE)</b>	<b>ProClova XL</b>	06831	75.5 g/kg Rinskor, 360 g/kg Amidosulfuron, Methylated Seed Oil (MSO)
<b>Seedling Weeds in New Ley (Non Clover Safe)</b>	<b>Envy</b>	05806	100 g/l Fluroxypyr, 2.5 g/l Florasulam
	<b>Esteem</b>	06356	100 g/l Fluroxypyr, 2.5 g/l Florasulam, 80 g/l Clopyralid
<b>Grassland Destruction</b>	<b>Garryowen XL</b>	05660	360 g/l Glyphosate plus wetters/surfactants depending on product
	<b>Glypho Rapid</b>	06715	450 g/l Glyphosate (plus wetters/surfactants)

RATE	COMMENT
2.0 l/ha	One application or split application with half rate in Spring and half rate in Autumn. Will kill clover. Must leave a minimum of 7 days between spraying and cutting but best results are achieved if the interval is > 3 weeks. Same as Doxstar Pro.
2.0 l/ha	Will kill Clover. Excellent on docks, thistles, chickweed, mayweed and buttercrops. Will offer some control on nettles. Can be used on newly sown leys at a rate of 1.0 l/ha, will kill clover however. Same as Pastor Trio.
40-60 g/ha	Clover safe. Controls both broadleaf and curled docks.
2.0 l/ha	Medium term dock control, excellent on chickweed. Can be used on new leys at 0.75l/ha. Will kill clover.
2.0 l/ha	Excellent long-term control of docks, nettles, thistles, buttercup, dandelion and ragwort. Will kill clover. Do not graze for at least 7 days after application. Only use on silage ground once last cut is taken but before the end of July.
1 pack/2ha 2.5 l/ha Thr +1.0 l/ha Tan	For use on established grassland only. Also strong on ragwort, chickweed and dandelion etc. Can cut for silage and graze 14 days after application.
2.7 l/ha	Treat before flower buds appear. Maximum of 2 applications/year. Do not spray within 5m of a water source.
1.0 l/ha	Excellent knockdown of thistles; also effective on nettles. Will kill clover.
2.8 - 3.3 l/ha	Treat ragwort at rosette stage before end of April. If weeds are gone to seed, top and spray the regrowth. Avoid extremes of temperature when spraying.
2.0 l/ha	Excellent long term control on Docks, thistles, nettles, buttercups and Ragwort. Very good on chickweed too. 7 day grazing interval and don't use on silage ground. Apply before end July.
2.7 l/ha	Best results are achieved when the rush is soft and actively growing, i.e. after topping. The addition of a surfactant such as Presto/ Torpedo / Solar Plus at 200mls/ha will also enhance performance.
3.0 Litres/ha	One application a year from 1st March to 31st August, Can graze / Harvest 7 days after application. For high infestations of docks add Hurler @ 1.3l/ha.
60 ml in 10 l knapsack	Very useful product for spot treatment only (with knapsack). Can graze pasture 7 days after treatment provided no ragwort present. Apply any time of year that weeds are actively growing.
60 ml in 10 l knapsack	For spot treatment only (with knapsack). Can graze pasture 7 days after treatment provided no ragwort present. Apply any time of year that weeds are actively growing.
85 g/ha ProClova 0.165 l/ha XL (3.0 ha (5 acres) / 7.5 acres pack)	Clover safe weedkiller. Control docks, chickweed, redshank, fathen, red dead nettle & more in newly sown leys. Can use at the higher rate 1pk = 2ha when over 90% ground cover. Refer to Best Practice Guide before use. NB* Does not control thistles.
1.5 l/ha	Can also be used on established grassland at 2.0 l/ha. Excellent on daisy, buttercrop and dandelion.
1.0 l/ha rate for new leys	Apply between 1st Feb - 30th Sep. Good on cleavers, thistle, mayweed and charlock. Poor on fat hen. Same as Pastor Trio.
6.0 l/ha	Translocation and overall effectiveness of product will be affected by growing condition. Grassland can be cut/grazed 5 days after application.
4.44 l/ha	Formulation of glyphosphate from Barclays with improved uptake and rainfastness.

# PREMIUM MIXTURES

These represent the elite products from the Tirlán Mastercrop range, formulated with the intensive, top-class farmer in mind.

## PREMIUM GRAZING SWARD

### Suitability

- Intensive, continuous grazing systems

### Key points

- Inclusion Abergain ensures maximum spring growth
- Aberchoice and Astonenergy with their high D values
- 56% Tetraploid
- Combination of leading small and medium-leaved clovers on recommended list
- A highly palatable mixture

		Heading Date
3.0 kgs	Aberchoice	11th June
3.5 kgs	Aston Energy (T)	1st June
3.0 kgs	AberGain (T)	4th June
2.0 kgs	AberBann	10th June
1.0 kgs	Med Leaf White Clover	
12.50 kgs		

**AVAILABLE WITH 1KG OF PLANTAIN AS AN OPTION**



# 40% DIFFERENCE IN GRASS PRODUCTION BETWEEN FARMS



# PREMIUM MIXTURES

## PREMIUM ONE CUT & GRAZE

### Suitability

- Grazing with one large silage cut in late May/ early June

### Key points

- Judicious use of Tetraploid varieties which have high yield, palatability and drought tolerance characteristics
- Also suitable for early grazing before closing up for silage
- 47% Tetraploid

		Heading Date
3.0 kgs	Astonconqueror	27th May
3.0 kgs	Abermagic	28th May
3.5 kgs	Nashota (T)	3rd June
2.0 kgs	Ballintoy (T)	4th June
1.0 kgs	Med leaf white clover	
12.50 kgs		

## MASTERCROP EXTEND

		Heading Date
3.0kgs	Ballintoy (T)	June 4th
3.25kgs	AberGain (T)	June 4th
2.0kgs	Ballyvoy	June 3rd
3.0kgs	Aberchoice	June 11th
0.75kgs	Med leaf white clover	
12kgs		

# PREMIUM MIXTURES

## TETRAPLOID MIX

### Key points

- High digestibility and palatability – improving animal intakes
- Larger leaf size and a more upright growth habit making them easier to graze
- Produces slightly higher grass yield and offers improved animal performance under grazing
- Teagasc research has demonstrated the increased ease with which animals can graze on Tetraploid swards over diploids, improving the utilisation of the sward
- Suitable for overseeding – to repair unproductive swards, sow at a rate of 8 kgs/acre when overseeding

		Heading Date
4.0 kg	Nashota (T)	3rd June
4.0 kg	Aston Energy (T)	1st June
4.0 kg	AberGain (T)	4th June
1.0 kg	Med leaf white clover	
13 kgs		

## PERMANENT PASTURE

### Permanent Pasture (Incl. Hi Clover)

		Heading Date
2.5 kgs	OakPark	2nd June
3.0 kgs	Meiduno (T)	3rd June
2.0 kgs	Glenfield (T)	3rd June
3.4 kgs	AberBann	10th June
0.6 kgs	Med leaf white clover	
11.5 kgs		

# PREMIUM MIXTURES

## PREMIUM SILAGE SWARD

### Suitability

- Intensive two-cut silage systems

**1% DMD increase equates to a 5% improvement in animal performance**

### Key points

- Leading conservation varieties
- Clover available on request increasing options of weed control
- Narrow range of heading dates for optimum silage production

		Heading Date
3.5 kgs	Aberclyde (T)	25th May
4.0 kgs	Abermagic	28th May
4.0 kgs	Moira	26th May
11.5 kgs		



# PREMIUM MIXTURES

## RED CLOVER SILAGE

As farmers come under increased pressure regarding input costs and environmental emissions targets, Red Clover silage is something that may help. With the potential to grow 15 T of DM without Nitrogen it seems the perfect answer but there are a number of important management factors that need to be applied.

- **Grazing and tight grazing will shorten the life of the sward so ideally cutting only.**
- **Spray for weeds with DB Plus once clover has one leaf usually 5 weeks after sowing.**
- **Fert requirements - Red Clover fixes its own N but 20 kg /acre will aid establishment, pH of 6-6.5 is required and then replace what is taken off for silage work at Solohead suggest 25 kgs of Potash (K) and 3 kgs of Phosphate (P) for every tonne of dry matter (DM) harvested, they apply 3 Gals of Slurry and two bags of 0/7/30 three times during the year.**

- **Cutting – cut when 10% of the field is in flower at 8 – 10 cm (no lower) and avoid driving on the crop where possible.**
- **Red Clover swards are much harder to ensile, it needs to be wilted for 48 hours and may require an additive.**
- **Red Clover should last 3 –4 years where the white clover will boost growth for a couple of years before reseedling will be required but there is a big saving on N use.**
- **A five year break after growing Red Clover is a must as Stem Nematode can be a problem.**

## Red Clover Silage Mix

		Heading Date
3.5 kgs	Aberclyde (T)	28th May
3.5 kgs	Moira	26th May
1.0 kg	White Clover	
4.0 kgs	Red Clover	
12 kgs		

# QUALITY MIXTURES



These are proven, tried and trusted mixtures which combine sound principles of mixture formulation with varieties which have performed consistently well in recommended list trials. They represent excellent performance at a reduced cost.

## HI CLOVER SWARD



### 20% clover content in pasture to contribute N

HI clover sward is the same as permanent pasture plus extra 1.5 kg of clover making it a 13 kg mixture with 2 kg of clover.

### Suitability

- Grazing with option of one silage cut in late May/early June

### Key points

- Excellent total yield across grazing season
- Large leafed clover plant which will fix N and allow for reduced chemical applications
- Outstanding flexibility to suit wide range of management systems

For proper establishment of clover it is important to sow earlier in the year as it takes up to 10 weeks for it to establish properly. Clover does not have the N fixation ability for the 1st year post-sowing.

### Over sowing of clover

This provides the opportunity to incorporate more clover across the farm promptly. This should be carried out between late spring and early summer with higher sowing rates of between 3.5-5kg/ha.



## Moorepark Experiment

1. Grass / clover - 150 kg N/ha
2. Grass / clover - 250 kg N/ha

3. Grass only - 250 kg N/ha  
With 2.75 cows/ha

Moorepark Clover Trial 2020 Update	Grass-Only Sward (250 Kg N/Ha)	Grass-White Clover Sward (150kg N/Ha)
Milk yield (kg/cow/day)	21.24	22.23
Milk solids yield (kg/cow/day)	1.69	1.92
Fat%	4.44	4.90
Protein%	3.56	3.79
Pre-grazing yield (kg DM/ha)	1300	1300
Post-grazing sward height (cm)	4.3	4.2
Milk solids produced YTD (kg/cow)	322	339
Grass Grown YTD (T DM/ha)	8.4	8.5
Clover % / paddock	-	39.5

## Clonakilty Experiment

Extra revenue from clover:

- €245/cow or €675/ha
- Significant potential to improve profitability

## Benefits of Multi Species Sward

- Similar DM yields to Perennial Rye Grass swards at significantly lower rates of inorganic N fertiliser
- More tolerant of drought conditions due to warm-season deep-rooting species chicory and plantain
- Reduces N<sub>2</sub>O (nitrous oxide) emissions and nitrate leaching
- Higher rates of carbon sequestration due to deeper roots
- Enhanced biodiversity both below and above the soil
- To date Johnstown Castle research has shown MSS produced similar milk solids per cow compared to grass-clover swards

## Management of Multi Species Sward

- Providing animals access to paddocks for a short time (1 – 3 days) will help maintain sward diversity by preventing the selective- and over-grazing of more palatable herb species
- It is important to provide a sufficient rest period for multi-species swards to recover from grazing. Allowing 21 – 28 days between grazing will improve persistence without reducing forage quality



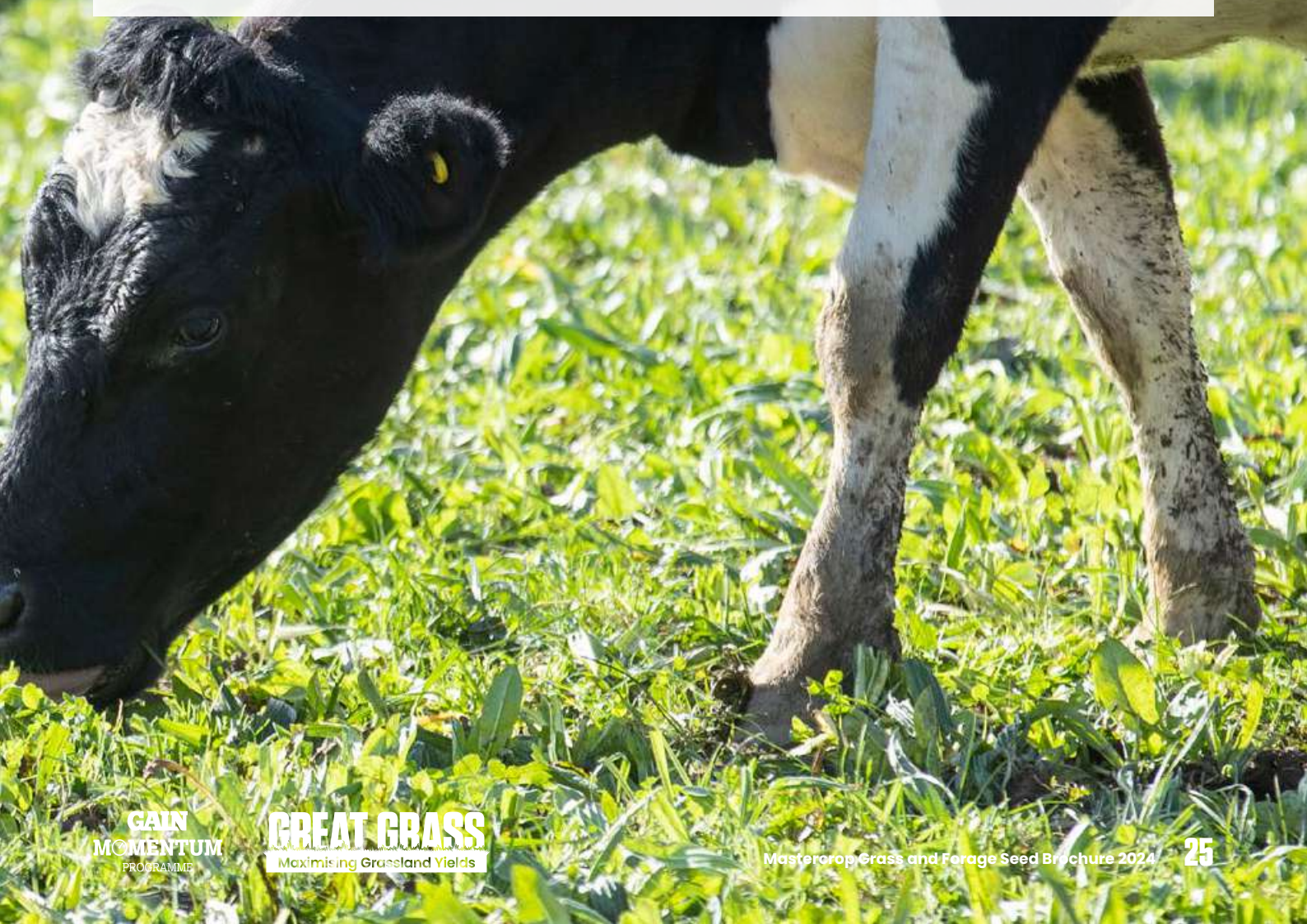


## MULTI SPECIES SWARD



A multi-species sward mixture is a mixture of three or more species that complement each other in improved productivity compared to each species grown on its own, typically come from grasses, legumes and herbs with each bringing different benefits to the sward.

Comments			
3.3 kgs	Glenfield	Grass	High yielding, digestible and persistent under frequent tight grazing
3.3 kgs	Aston King	Grass	High yielding, digestible and persistent under frequent tight grazing
0.7 kgs	Timothy	Grass	Grows well in cold soils, especially in Spring, different root structure to PRG
1.5 kgs	White Clover	Legume	Persistent under tight grazing, fills in gaps in swards
1.5 kgs	Red Clover	Legume	More erect than white, deeper tap root, not persistent under tight grazing
1.0 kgs	Plantain	Herb	
0.7 kgs	Chicory	Herb	Different root structure, anti-worm properties, used as a drought feed
12kgs			



# HORSE PASTURE

## Mastercrop Horse Pasture

### Key points:

- Designed to produce a high quality grazing and if required, a very high quality hay cut in summer
- Can be used to patch poached areas on the farm
- Extremely persistent, dense and hard wearing
- Packed in half acre bags

4.50 kgs	Oakpark PRG
4.50 kgs	AstonKing PRG
2.50 kgs	Dwarf Perennial ryegrass
3.00 kgs	Smooth stalked Meadowgrass
1.50 kgs	Timothy
16 kgs/Ac	

Note : Packed in half acre bags

## Heavy Ground Mix

### Key points:

- Heavy ground or difficult sites
- Superb persistence and ground cover
- Excellent mid-Summer and Autumn grazing

		Heading Date
4.0kgs	Aston King	5th June
3.5 kgs	Briant (T)	3rd June
4.0kgs	OakPark	2nd June
0.5 kgs	Small leaf white clover	
12 kgs		

# ORGANIC MIXTURE

## Organic Grazing Mixture (77% organic)

		Type	Heading Date
4.8kgs	Organic AberChoice	PRG (D)	11th June
1.20 Kgs	Organic Aberwolf	PRG (D)	30th May
2.00 Kgs	Organic Aberclyde	PRG (T)	25th May
2 kgs	Organic Aberspey	PRG ( T )	27th May
1 kgs	Comer	Timothy	
2 kgs	White Clover Blend		
13 kgs			

## Organic Red Clover Sward (70% organic)

		Heading Date
3.00 Kgs	Organic Astonenergy PRG ( T )	1st June
2.00 Kgs	Organic Oakpark PRG	2nd June
2.00 Kgs	Organic Astonconqueror PRG	27th May
1.40 Kgs	Harmonie Organic Red Clover	
2.60 Kgs	Rozeta Red Clover	
0.50 Kgs	Chieftain White Clover	
0.50 Kgs	Barblanca White Clover	
12.00 Kgs		

# RECOMMENDED LISTS 2024

## Recommended Intermediate & Late Perennial Ryegrass Varieties 2024 (by maturity and ploidy)

Variety Name	Ploidy	Heading Date	Simulated Grazing (t DM/ha)				DMD (g/kg)	Silage (t DM/ha)		Ground Cover
			Spring	Summer	Autumn	Total Yield		1st Cut	2nd Cut	
<b>INTERMEDIATE VARIETIES</b>										
<b>Barwave</b>	<b>T</b>	<b>22-May</b>	1.51	7.44	2.40	11.35	836.3	5.13	4.39	5.0
<b>Fintona</b>	<b>T</b>	<b>24-May</b>	1.24	7.23	2.30	10.78	839.3	5.36	3.90	5.4
<b>AberClyde</b>	<b>T</b>	<b>25-May</b>	1.23	7.61	2.27	11.12	852.0	5.24	3.98	5.6
<b>Tollymore</b>	<b>T</b>	<b>25-May</b>	1.33	7.33	2.30	10.95	844.6	5.67	4.22	5.7
<b>AberSpey</b>	<b>T</b>	<b>27-May</b>	1.16	7.49	2.44	11.08	858.5	4.85	4.16	5.7
<b>Dunluce</b>	<b>T</b>	<b>29-May</b>	1.09	7.35	2.33	10.77	845.8	4.59	4.55	5.5
<b>Galgorm</b>	<b>D</b>	<b>26-May</b>	1.36	7.76	2.50	11.63	845.3	5.38	3.87	5.8
<b>Moira</b>	<b>D</b>	<b>26-May</b>	1.58	6.87	2.37	10.82	826.9	5.02	3.98	6.1
<b>Astonconqueror</b>	<b>D</b>	<b>27-May</b>	1.38	7.24	2.27	10.89	835.7	5.28	3.83	6.0
<b>AberMagic</b>	<b>D</b>	<b>28-May</b>	1.13	7.52	2.56	11.22	845.1	4.79	4.02	6.1
<b>AberWolf</b>	<b>D</b>	<b>30-May</b>	1.26	7.33	2.31	10.90	841.0	4.85	4.26	6.6
<b>AberGreen</b>	<b>D</b>	<b>31-May</b>	1.17	7.64	2.49	11.30	842.3	4.43	3.99	6.5
<b>Gusto</b>	<b>D</b>	<b>31-May</b>	1.25	7.18	2.44	10.87	839.1	4.44	3.91	5.8

Notes: D – Diploid, T = Tetraploid

## UTILISATION STAR RATINGS

### STAR RATING



### GRAZING UTILISATION RANGE

Moderate



Excellent

Where varieties are represented by a hyphen (-), there is currently no grazing data available

# RECOMMENDED LISTS 2024

## Recommended Intermediate & Late Perennial Ryegrass Varieties 2024 (by maturity and ploidy)

Variety Name	Ploidy	Heading Date	Simulated Grazing (t DM/ha)				DMD (g/kg)	Silage (t DM/ha)		Ground Cover
			Spring	Summer	Autumn	Total Yield		1st Cut	2nd Cut	
<b>INTERMEDIATE VARIETIES</b>										
<b>AberBite</b>	T	01-Jun	0.94	7.33	2.34	10.61	849.6	4.73	4.53	6.0
<b>Astonenergy</b>	T	01-Jun	1.00	7.10	2.26	10.37	854.3	4.55	3.87	5.5
<b>Triwarwic</b>	T	02-Jun	1.07	7.24	2.13	10.44	842.7	4.79	4.27	5.8
<b>Nashota</b>	T	03-Jun	1.27	7.31	2.20	10.78	846.0	4.79	4.39	6.0
<b>Glenfield</b>	T	03-Jun	1.31	7.50	2.22	11.03	841.3	4.90	4.43	5.4
<b>Meiduno</b>	T	03-Jun	1.24	7.30	2.28	10.82	849.2	4.52	4.19	5.3
<b>Briant</b>	T	03-Jun	1.01	7.36	2.28	10.65	841.4	4.67	4.34	5.5
<b>Aspect</b>	T	03-Jun	1.02	7.18	2.13	10.33	848.7	4.39	4.49	6.1
<b>Gracehill</b>	T	04-Jun	1.23	7.42	2.39	11.03	841.1	5.51	4.44	5.5
<b>AberGain</b>	T	04-Jun	1.15	7.43	2.31	10.89	852.2	4.94	4.40	5.6
<b>Ballintoy</b>	T	04-Jun	1.21	7.36	2.28	10.85	846.7	4.68	4.35	5.5
<b>Anurad</b>	T	05-Jun	1.27	7.22	2.23	10.73	846.9	4.60	4.08	5.5
<b>Xenon</b>	T	07-Jun	1.02	7.13	2.18	10.33	846.3	4.15	4.66	6.1
<b>AberPlentiful</b>	T	08-Jun	1.30	7.49	2.32	11.11	842.2	4.48	4.51	5.5
<b>Solas</b>	T	10-Jun	1.05	7.09	2.35	10.48	838.0	4.39	4.72	5.7
<b>Oakpark</b>	D	02-Jun	1.14	7.23	2.33	10.70	833.5	4.51	4.46	6.5
<b>Ballyvoy</b>	D	03-Jun	1.34	7.06	2.29	10.69	843.3	4.30	4.20	6.2
<b>Callan</b>	D	03-Jun	1.37	6.89	2.16	10.42	830.2	4.77	3.84	6.2
<b>Drumbo</b>	D	05-Jun	1.09	7.01	2.24	10.33	842.9	4.36	4.24	6.2
<b>Astonking</b>	D	05-Jun	1.32	7.18	2.20	10.69	828.5	4.53	4.20	5.8
<b>AberBann</b>	D	10-Jun	0.97	7.94	2.54	11.45	832.2	4.59	5.24	5.9
<b>AberChoice</b>	D	11-Jun	1.04	7.56	2.39	10.99	844.8	4.35	4.79	6.0
<b>Bowie</b>	D	16-Jun	1.08	7.22	2.35	10.65	839.1	3.99	5.07	6.4

Notes: D - Diploid, T = Tetraploid

# PASTURE PROFIT INDEX 2024

Group	Variety Name	Ploidy	Heading Date	Total PPI (€ per ha/year)	Spring Growth
Intermediate Diploids	Galgorm	D	26-May	266	60
	AberMagic	D	28-May	198	22
	AberWolf	D	30-May	186	43
	Moira	D	26-May	183	95
	Astonconqueror	D	27-May	182	63
	AberGreen	D	31-May	173	28
	Gusto	D	31-May	156	40
Intermediate Tetraploids	AberSpey	T	27-May	240	26
	AberClyde	T	25-May	229	38
	Barwave	T	22-May	227	84
	Tollymore	T	25-May	225	54
	Fintona	T	24-May	174	40
	Dunluce	T	29-May	172	14
Late Diploids	AberChoice	D	11-Jun	174	7
	AberBann	D	10-Jun	171	-5
	Ballyvoy	D	03-Jun	170	57
	Bowie	D	16-Jun	163	13
	Oakpark	D	02-Jun	135	24
	Drumbo	D	05-Jun	130	14
	Astonking	D	05-Jun	126	52
	Callan	D	03-Jun	109	61
Late Tetraploids	Gracehill	T	04-Jun	225	37
	AberGain	T	04-Jun	217	24
	Nashota	T	03-Jun	194	45
	Aberplentiful	T	08-Jun	193	50
	Glenfield	T	03-Jun	191	50
	Ballintoy	T	04-Jun	183	34
	Anurad	T	05-Jun	180	45
	Meiduno	T	03-Jun	180	39
	Aberbite	T	01-Jun	148	-11
	Astonenergy	T	01-Jun	145	1
	Briant	T	03-Jun	140	2
	Solas	T	10-Jun	131	7
	Xenon	T	07-Jun	127	4
	Triwarwic	T	02-Jun	125	11
	Aspect	T	03-Jun	125	3

Notes: D - Diploid, T = Tetraploid

<sup>1</sup>Teagasc Grazing Utilisation Trait - see Appendix 1

PPI Sub-indices (€ per ha/year)					
Summer Growth	Autumn Growth	Quality	Silage	Persistency	'Teagasc Grazing Utilisation Traits Rating 1 - 5
66	67	25	47	0	-
57	74	18	27	0	***
49	46	11	37	0	**
31	52	-32	36	0	***
46	41	-10	42	0	****
62	66	5	12	0	*
43	60	2	10	0	****
56	59	65	34	0	****
61	41	44	45	0	****
54	55	-19	52	0	*****
49	44	21	70	-13	-
45	45	-4	47	0	*****
50	48	24	35	0	****
58	54	22	32	0	**
74	71	-25	56	0	***
38	43	19	13	0	*
45	50	29	26	0	-
45	48	-11	29	0	*
36	37	25	16	0	*
43	33	-25	22	0	***
32	29	-35	21	0	****
53	54	11	70	0	**
53	46	48	45	0	****
48	33	28	39	0	*****
56	46	11	29	0	***
56	36	4	44	0	*****
51	42	24	33	0	****
45	37	32	21	0	****
48	42	28	22	0	****
49	49	33	40	-13	*****
40	40	50	13	0	*****
51	42	13	32	0	***
40	50	1	32	0	***
41	31	30	21	0	*****
46	26	7	35	0	-
43	26	28	25	0	*****

# WILD BIRD FOOD IN ACRES

Wild bird cover is a spring sown crop that is left un-harvested over winter. The objective is to sow a seed crop mix that provides a food source and winter cover for farmland birds and other fauna.

- Where necessary the action must be protected from livestock using a fence that is fit for purpose. Where no fence is required, the boundary of the winter bird food must be clearly identified with visible posts/markers if no natural boundary feature exists.
- Establish the winter bird food crop by 15 May 2024 using the following mix: At least one or more of these cereals: spring oats/triticale/wheat/barley. At least two or more of the following: linseed, oil-seed rape, phacelia, fodder radish, mustard, spring vetch, lucerne, chicory or birds-foot trefoil.
- The winter bird food crop must be established by 15 May each year for the duration of the contract.
- The sowing rate must be in accordance with the recommended rates for the chosen mix to ensure the crop is delivered.
- Once the crop is sown, pesticides are not permitted. Only the spot treatment of noxious and invasive weeds with herbicides is allowed or if required pre-sowing for crop establishment.
- Fertiliser can be applied up to a maximum of half the fertiliser rate for nitrogen and phosphorus on spring oats as described in Statutory Instrument Number 113 – EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2022, page 46–47.
- Harvesting of the crop is not permitted and must remain in-situ until 15 March of the following year.
- The winter bird food action must remain in the same location for the duration of the contract.
- The winter bird food plot measure is paid on up to 3ha, at a rate of €1,000/ha/yr. The plot must be at least 0.25ha in order to receive payment.

## LIST OF PRESCRIBED SPECIES FOR WINTER BIRD FOOD

SPECIES	MONOCULTURE SEED RATE KG/HA
Spring oats	150kgs
Spring triticale	180kgs
Spring wheat	180kgs
Spring barley	160kgs
Linseed	50kgs
Spring oil-seed rape	6kgs
Phacelia	8kg
Fodder Radish	10kgs
Mustard	15kgs
Spring Vetch	40kgs
Lucerne	25kgs
Chicory	10kgs
Bird's foot Trefoil	12kgs

Note: These monoculture rates should be adjusted according to the number of species in the chosen mix.

## EXAMPLES OF WINTER BIRD FOOD MIXES

Spring oats	50kgs
Linseed	17kgs
Mustard	5kgs

In a three way mix used 1/3 of the recommended seeding rate from the list.

## ACRES GRASS MIX

2 options that require

- Arable grass margins
- Environmental management of fallow land

Both mixes are similar

- 60% Timothy or Cocksfoot
- 40% other grass species

Rate 15/kg/ha, sold in half hectare bags



# COVER CROPS

Also known as cover crops or green manure, catch crops play a role in the regulatory requirements for green cover under the ACRES scheme. The following specifications are relevant to farmers sowing these crops within ACRES.

- Catch crop must be sown annually by 15<sup>th</sup> September
- Use light cultivation techniques - ploughing is not permitted
- The seed mixture must contain at least 2 species from the list, 1 crop can't take up more than 60% of the seed mix
- There is no maximum in terms of the number of species that can be used, but at least 100% of a full sowing rate must be reached
- The catch crop must remain in-situ from the date of sowing to 1<sup>st</sup> January annually
- Grazing of catch crops is permitted after 1st January
- A main cereal crop cannot be undersown with catch crop species
- When sowing the catch crop, the under sowing or sowing of a grass crop is not permitted
- The catch crop can be rotated each year once the field/area is of equal size to the area outlined in the contract in year one

Catch Crop species	Monoculture seed rate (kg/ha)
Buckwheat	50kg
Crimson Clover	15kg
Berseem Clover	15kg
Balansa Clover	15kg
Squarrosa Clover	15kg
Forage/Fodder Rape	8kg
Mustard (White)	15kg
Mustard (Brown)	7kg
Oats	100kg
Black Oats	60kg
Phacelia	8kg
Sunflower	20kg
Rye	150kg
Tillage Radish	10kg
Vetch	30kg
Leafy Turnip	8kg
Peas	80kg
Beans	140kg
Linseed	30kg
Red Clover	20kg
Fodder Radish	10kg
*Kale/Rape hybrid	8kg
Mustard (White)	15kg

\*Note: The Kale/Rape hybrid is classified as one species; another species will be required to meet the minimum requirement of at least two species in the mix.

**WE ALSO CATER FOR A NUMBER OF FORAGE CROPS AND ARABLE SILAGE WITH EITHER PEAS AND BARLEY OR PEAS AND OATS**

# FORAGE CROPS

The drive to cut production costs is creating a large interest in growing fodder crops so much so that they are already starting to play a significant role alongside grass in low input, low cost livestock farming. With forward planning fodder crops can also significantly extend the growing season when grass is finished growing.

Each farm and livestock enterprise has individual requirements. However, there are always three fundamental questions to ask before deciding on the most cost-effective type and variety of fodder crop for your livestock production system.



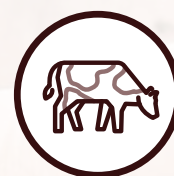
## 1. When do you want to use the crop?

With versatile, winter hardy varieties available, fodder crops can be utilised by stock from June right through to April. If extra fodder is needed in the summer, early sown Kale and grazing turnips can be ready to feed in June and are very useful for plugging a mid or late summer grazing deficit. There are plenty of options to choose from if fresh fodder is required through the winter months. Be ready to feed in June and are very useful for plugging a mid or late summer grazing deficit. There are plenty of options to choose from if fresh fodder is required through the winter months.



## 2. When does the land for growing fodder crops become vacant?

Crop rotation, soil type and local conditions will dictate when fodder crops can be sown. Most farmers can now sow fodder crops from as early as February through to September. Catch crops of stubble turnips or kale can be sown early and utilised by stock mid to late summer before the land is returned to grass or arable production.



## 3. How many animals will a fodder crop feed?

Fodder crops are suitable for high yielding dairy cows, beef cattle, ewes and lambs. The number of stock your brassica crop will feed will depend on the type of crop sown, the dry matter yield and the stock utilisation rate.

	DM (kg/ha)	DM (%)	ME (MJ/kg)	Animals/ha for 100 days (70% of diet)			
				Cows	Youngstock	Ewes	Finishing lambs
Swedes	9-14,000	10-12	12-14	15	14	83	65
Kale	11-12,000	12-15	10-13	19	18	107	84
Stubble Turnips	6,500	9-12	10-13	11	101	63	49
Grazing Turnips	4,000 (regrowth 2,000)	10-14	10-13	9	8	49	38
Hybrid Brassica	7-9,000	12-14	10-13	11	10	63	49
Forage Rape	4-5,000	11-13	10-13	7	6	30	30

Assumptions: Cow liveweight 500 kg (adjust upwards for dairy cows); youngstock liveweight gains 0.75 kg/day; 55 kg ewes on maintenance feeding; lamb liveweight gains 200 g/day.

# MANAGEMENT OF FORAGE CROPS



Crop	Fodder Beet	Swedes	Kale	Fodder Rape	Stubble Turnips
Sowing Date	Late March Early April	May - Early June	May - June	June - August	June -August
Seeding Rate Per Acre	40,000 - 50,000 Seed	50,000 Pelleted Seeds	2.5 kg Broadcast, 2 kg Direct Drill	3-4 kg	1.5 kg Drilled 2.5-3.5 kg Broadcast
Fertilisation Per Acre	10 x 50 kg of Beet Compound	7 x 50 kg of 6.10.18 + B	4.5 x 50 k 10.10.20 + 2 50 kg CAN	4.5 x 50 kg 18.6.12	4 - 5 x 50 kg 18.16.12
Time of Utilisation	Nov - Feb	Nov - Mar	Sept - Dec	Sept - Dec	Sept - Dec Nov - Dec
Fresh Yield Per Acre Leafed White Clover	33-40 (Roots) 18 (Tops)	25-30	20-30	14-16	15-25
% DM Yield (Tonnes/Ac)	16 (Root) 11 (Tops)	11	15	12	14-15 (Bulb) 9-10 (Leaf)
CR Protein as % of DM	6.5-7 (Roots) 17 (To Silage) (Crop Silage)	11	14	19	20-24
Nett Energy UFL/ kg DM	1.12 (Roots) 0.87 (Tops)	1.21	1.03	0.85	1.10 (Top and Root)

## SWEDES



Very adaptable crop for both grazing and storage. Grown on their own, modern varieties can also offer the option of being lifted for culinary use as well as livestock fodder.

The pH of the soil should preferably be around 6.5. Swedes are quite tolerant of acid soils but below a pH of 5.4 growth is increasingly restricted. At pH 7.0 and above boron becomes less available. Allow a minimum break of 4-5 years between all brassicas.

To minimise the build up of pests and particularly diseases a rotation of 7-8 years between swede crops is desirable. Average yields of packed out swedes would be about 35 tonnes per ha. The weight of an individual swede is around a kilo.

## KALE



A very adaptable crop providing useful forage. Can be ensiled as kaleage or zero and strip grazed. A fine, firm seedbed (like grass) and moisture is essential for rapid emergence as kale has small seeds. All brassicas will yield poorly where compaction has occurred. Placing some fertiliser at sowing may aide establishment. Ploughing and powered cultivation is the surest method of establishment but in well structured soils, direct drilling will also be successful.

With direct drilling, it is essential to achieve a good weed kill with glyphosate pre-cultivation. Kale may be precision drilled at 3 kg/ha or direct drilled at 4 kg/ha or broadcast usually with the fertiliser at 5-6 kg/ha.

## FODDER RAPE



A popular forage crop with many livestock farmers due to its ease of production, the flexibility of its sowing date and its palatability at feeding time. It is capable of producing a large bulk of fodder in a short period. Fodder rape is an ideal pioneer crop in the reclamation of hill and marginal land.

Rape is extremely useful as a feed for fattening lambs and lactating ewes and very good performance can be achieved with good grazing conditions. It is also widely used to supplement cattle and cows but care is needed as there is a much greater risk of digestive disorders than with sheep. These problems can be prevented by taking the following precautions:

- **Introduce the rape gradually**
- **Restrict intakes**
- **Always feed hay or silage as a roughage source**

## STUBBLE TURNIPS



Economic and fast to grow, an excellent catch crop which can produce nutritious, highly palatable feed in just 12-14 weeks after sowing. The crop can be sown in spring for feeding in late summer or sown in July or August for feeding in October to February. They are not very winter hardy and losses will occur in frosty weather. Seeding rate depends on sowing conditions and method of sowing. Fine and firm seedbed required similar to grass reseeding. Broadcast at 8 kg/ha (3 kg/acre). Direct drill at 5 kg/ha (2 kg/acre).

# SILAGE QUALITY

Making quality silage is vital for beef and dairy farming in Ireland. In making silage two primary quality parameters that need to be considered, preservation and feeding value. Preservation must always be good in silage making. Covering your silage clamp with a poor quality cover can lead to a serious reduction in the quality of your silage. The cost of silage losses rises dramatically as the size of the pit increases. Poorly preserved silage could lose up to 5% units of DMD. Each drop of DMD units reduces milk yield by almost 1.5 litres of milk per day, and raises the cost of finishing cattle by over €70.

## Recommended Products

### Silage Wrap

- Leading brands including Mastercrop Agristretch and Silawrap
- Colours: Black; Green; White

### Standard Silage Covers

- Black; 400 Gauge (100 Microns)
- Proven quality for years
- Manufactured using virgin and recycled plastic polymers



### Bodyguard Premium Silage Cover Range

- Extremely strong film manufactured from 100% virgin raw materials
- Colour: Green-Black (Top-Bottom)
- High oxygen barrier reduces silage waste
- Ensures faster fermentation and better preservation
- High impact and tear resistant
- Available in sizes: 60 x 80FT, 60 x 100FT and 60 x 120FT

### Underlayer Silage Film

- Strong underlayer film manufactured from 100% virgin raw materials
- Colour: Transparent
- High oxygen barrier; cling seal layer prevents air-pockets
- Can be used with standard black covers or Bodyguard /Hermetix covers
- Available in sizes: 12M x 50M, 14M x 50M and 16M x 50M

### Agrisafe Hybrid Classic 2-in-1 Covers

- Innovative extra strong two-layer sheet including underlayer film
- Manufactured from virgin and recycled materials
- Colour: Black-Transparent (Top-Bottom)

**Other products in the Crop Packaging range include Defender Silage Protection Covers, Bird Nets and Silo Gravel Bags**

**Using premium silage covers will help to minimise silage waste, ensuring faster fermentation and better preservation which in turn will lead to reduction in dry matter loss and forage nutrient loss.**

## Fodder Budget Calculation

A fodder budget should be completed before closing ground for silage and updated after each harvest to ensure there is sufficient fodder availability for all types of stock for the housed period. Always included a rolling fodder reserve of 25% in the fodder budget.

### Animal Type/Month

- Dairy cow 1.6/month
- Suckler cow 1.4/month
- In-calf heifer 1.3/month
- Weanling 0.7/month
- Store cattle 1.3/month
- Ewe 0.15/month

To calculate the amount of silage in the pit, Teagasc has broken down the calculations required as follows:

1. Measure the length, breath and height of the clamp.
2. Multiply the length x breath x height = total available volume for silage (m<sup>3</sup>).
3. Estimate the Dry Matter (DM) content of the silage.
4. Multiply the total volume by either 0.68, 0.77 or 0.81, depending on the correction required for DM, to find the total (tonne) amount of silage in the pit:
  - DM 30% = 0.60
  - DM 25% = 0.68
  - DM 20% = 0.77
  - DM 18% = 0.81
5. Calculate how long this silage will last.

# TIRLÁN FARMLIFE BRANCHES

BRANCH	ADDRESS	TELEPHONE	EIRCODE
Ashford*	Co. Wicklow	0404 - 40105	A67R791
Athboy	Co. Meath	046 - 9432552	C15HE33
Ballacolla	Co. Laois	057 - 8734013	R32VK83
Ballinamult	Co. Waterford	058 - 47102	E91CY50
Ballycanew	Co. Wexford	053 - 9427103	Y25D721
Ballyhale*	Co. Kilkenny	056 - 7768603	R95DIHC
Ballyragget	Co. Kilkenny	056 - 8833107	R95FC44
Ballytore	Co. Kildare	059 - 8623105	R14CH05
Ballywilliam	Co. Wexford	051 - 424514	Y21V628
Bennettsbridge	Co. Kilkenny	056 - 7727104	R95EO2D
Bunclody*	Co. Wexford	053 - 9377122	Y21YN15
Campile*	Co. Wexford	051 - 388102	Y34H521
Cappoquin	Co. Waterford	058 - 54308	P51Y033
Carrick-On-Suir	Co. Waterford	051 - 640002	E32XT67
Castlecomer*	Co. Kilkenny	056 - 4400834	R95KD35
Castlelyons*	Co. Cork	025 - 36337	P61K156
Clonmel	Co. Tipperary	052 - 6129620	E91HW20
Clonroche*	Co. Wexford	053 - 9244136	Y21FW72
Crettyard	Co. Carlow	056 - 4442112	R93D592
Derrygrath	Co. Tipperary	052 - 6138002	E91W8X6
Donaghmore	Co. Laois	0505 - 46315	R32XY61
Dungarvan*	Co. Waterford	058 - 42078	X35KA99
Durrow	Co. Waterford	051 - 293178	X42N278
Fennor	Co. Tipperary	056 - 8834104	E41AW80
Fethard*	Co. Tipperary	052 - 6131108	E91E5C1
Freshford	Co. Kilkenny	056 - 8832100	R95D659
Gaultier	Co. Waterford	051-383124	X91VH33
Glenmore	Co. Kilkenny	051 - 880102	Y34Y079
Graigue	Co. Cork	021 - 4880106	T56KT62
Goresbridge	Co. Kilkenny	059 - 9775155	R95C563
Graigecullen	Co. Carlow	059 - 9131639	R93PC42
Graiguenamanagh	Co. Kilkenny	059 - 9724200	R95 PX51
Inch	Co. Wexford	0402 - 21734	Y25W894
Kells	Co. Kilkenny	056 - 7728233	R95KW25
Kilberry	Co. Meath	046 - 9024204	C15HH7D
Killenaule	Co. Tipperary	052 - 9156205	E41HW27
Kilmanagh	Co. Kilkenny	056 - 7769102	R95V21C
Kilmeaden*	Co. Waterford	051 - 384106	X91PX45
Kilmuckridge	Co. Wexford	053 - 9130133	Y25H934
Monasterevin*	Co. Kildare	045 - 525337	W34PF50
Mountmellick*	Co. Laois	057 - 8624268	R32XF20
Mullingar	Co. Westmeath	044 - 9342299	N91CY68
New Ross*	Co. Wexford	051 - 421274	Y34PF61
Piltown	Co. Kilkenny	051 - 643260	E32WD21
Raheen	Co. Laois	057 - 8731104	R32WK80
Rathcoffey	Co. Kildare	045-902719	W91D681
Rathdrum*	Co. Wicklow	0404 - 46105	A67EV29
Spink	Co. Laois	057 - 8731169	R32D884
Taghmon	Co. Wexford	053 - 9134154	Y35VK85
Tallow	Co. Waterford	058 - 56322	P51EW81
Tullamore*	Co. Offaly	057 - 9341310	R35K820
Windgap	Co. Kilkenny	051 - 648203	R95N209
Tirlán Customer Service Centre	Kilkenny	0818 321 321	R95DXR1

\*CountryLife Store Locations



Tirlán  
Abbey Quarter  
Kilkenny  
R95 DXR1

[www.tirlanfarmlife.com](http://www.tirlanfarmlife.com)

The information contained in this document is provided by Tirlán for your information only and has not been independently verified. While Tirlán endeavours to ensure that all information contained in this document is correct, no warranty is given that the information is accurate. Tirlán disclaims any and all liability to any party for any direct, indirect, implied, punitive, special, incidental or other consequential damages arising directly or indirectly from the use of the information contained in this document.

 **Tirlán**  
FarmLife