

# Grass ID Guide



syngenta.



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# Syngenta Grass Identification Guide

**Rescue** is an exciting new selective herbicide from Syngenta, for the control of unwanted Ryegrass infestations in fine turf surfaces.

Before using **Rescue**, accurate identification of grass species is essential to determine:

- (a) Which grasses will be removed
- (b) How much turf cover will be removed
- (c) Which grasses will be left
- (d) The need for over seeding

## How to use this guide

The easy to use Syngenta Grass Identification Guide, produced in conjunction with specialists from the Sports Turf Research Institute (STRI), provides a quick and reliable means to accurately assess the main turf grass species.

The Syngenta Grass ID Guide is uniquely designed to help identify grass species in closely mown turf. Following a route of characteristic physiological features you will be able to determine the grass species present, and make a visual assessment of the sward composition.

The Grass ID Decision Tree on pages 8 & 9 tracks through a logical sequence of characteristics to quickly and accurately determine the species.

The Guide includes a set of novel, easy to remember visual icons (pages 6 & 7) of the key features to look out for with each species, along with clear guidance of the grass species which will be controlled with **Rescue**.

Designed in a format to keep with you during all turf assessments, identifying and recording grass species composition at different times of the year will give valuable practice and experience, as well as building a better picture and awareness of turf composition. Record patches of Ryegrass or other weed grass species throughout the season, to help prioritise treatment areas.

If you are in any doubt over the grass species composition of your turf, consult your adviser before using **Rescue**.

## Grass ID icons

### General features to look for:

Is the emerging **leaf rolled** or **folded** in the shoot – when you twist the stem between your thumb and finger does it ‘judder’ (indicating the leaf is folded) or does it roll smoothly like spaghetti (indicating the leaf is rolled)?

Is the **leaf blade ribbed**?

Is the **underside of the leaf shiny**?

Is the **leaf blade hairy**?

Is the **leaf spiky and needle-like**?

Does the **leaf have tramlines**?

Is there any **colouration at the base of the stem**?

Are there any **auricles** - clasp like projections (like the pointed tips of a shirt collar) where the leaf blade joins the leaf sheath?

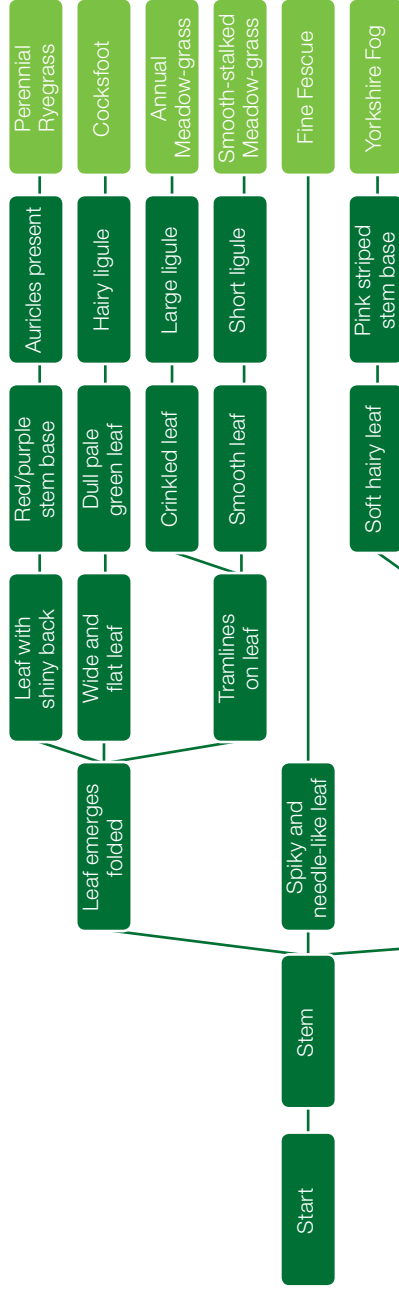
Are there any **ligules** - a pale membrane (like the back section of a shirt collar) where the leaf blade joins the leaf sheath?

Inflorescence – is it a **panicle or spike**?

Are there any **stolons** (above ground creeping stems) or **rhizomes** (underground creeping stems)?

## What icons to look out for



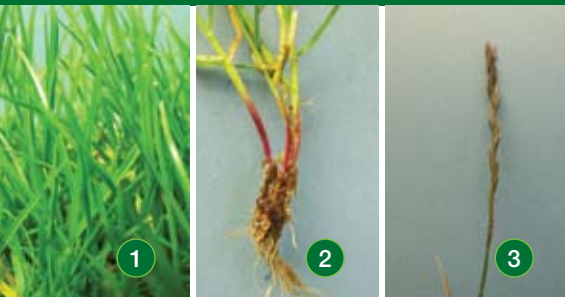


**Key ID features which work at relevant heights of cut:**

- **Stem base colour:** Red/purple, Pink, Green
- **Upper leaf surfaces:** Ribbed, Smooth
- **Lower leaf surfaces:** Shiny, Dull
- **Leaf:** Hairy, Spiky and needle-like, Tramlines, Crinkled, Wide and flat leaf
- **Ligule:** Some situations
- **Auricle:** Some situations

## PERENNIAL RYEGRASS

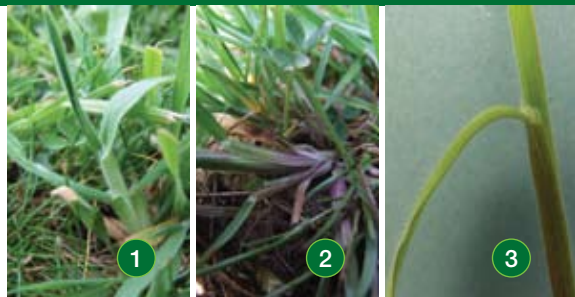
*Lolium perenne*



CONTROLLED by **Rescue**

## YORKSHIRE FOG

*Holcus lanatus*



Trials have shown that Yorkshire Fog is  
CONTROLLED by **Rescue**

### Key identifiers

- Youngest leaf folded in shoot
- Leaves shiny on underside **1**
- Upper surface of leaf very strongly ribbed
- Red stem base **2**
- Auricles present
- Inflorescence – Spike **3**
- Susceptible to Leaf Spot

### Key identifiers

- Youngest leaf rolled in shoot
- Soft grey/green hairy leaves **1**
- Pink/purple stripes on leaf sheath, especially at the stem base **2**
- Obvious ligule **3**
- Inflorescence – Panicle
- Susceptible to Crown Rust



### Can be confused with:

**Bentgrass (page 15)** – With Ryegrass look for the youngest leaf folded (not rolled) and a shiny leaf underside, compared to dull Bentgrass leaves. The red stem base is characteristic of Ryegrass

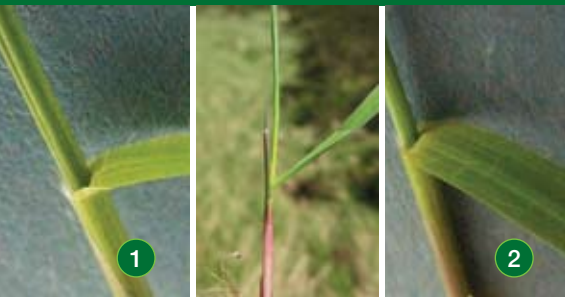


### Can be confused with:

**Bentgrass (page 15)** – look for dense hairs and pink stripy stem base on Yorkshire Fog

## PURPLE MOOR-GRASS

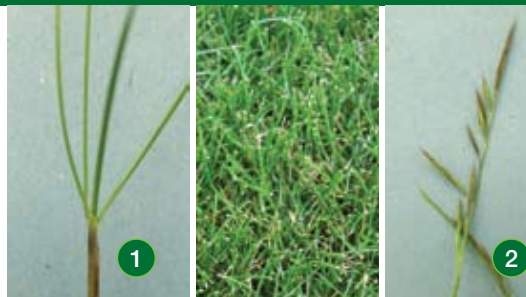
*Molinia caerulea*



Limited trials data has shown that Purple Moor-grass is **CONTROLLED** by **Rescue**

## FINE FESCUE

*Festuca* species



**NOT AFFECTED** by **Rescue**

### Key identifiers

- Youngest leaf rolled in shoot
- Upper leaf smooth with no ribs
- Leaves hairy **1**
- Ligule present but a line of hairs rather than a membrane **2**
- Inflorescence – Panicle but may be dense resembling a spike
- Mostly found in wet moorland, heaths, commons and fens

### Key identifiers

- Spiky, needle-like leaves **1**
- Leaf sheath tubular
- Inflorescence – Panicle **2**
- Slender Creeping Red Fescue – rhizomes present, very fine leaves
- Chewings Fescue – no rhizomes, very fine leaves
- Strong Creeping Red Fescue – rhizomes present, coarser leaves
- Susceptible to Dollar Spot and Red Thread

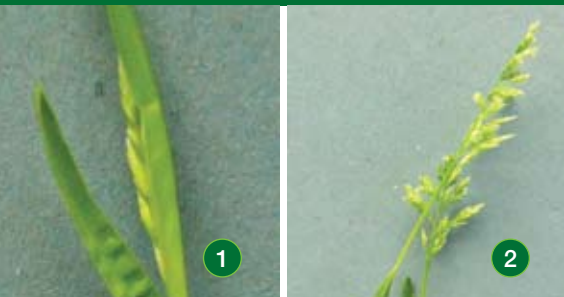


### Can be confused with:

**Yorkshire Fog** (page 11) – look for the ligule in Yorkshire Fog; Purple Moor-grass has just short hairs instead

## ANNUAL MEADOW-GRASS

*Poa annua*



NOT AFFECTED by **Rescue**

## BENTGRASS

*Agrostis capillaris (Browntop/Colonial)*



Trials have shown that temporary yellowing/browning may occasionally be seen following **Rescue** application – usually outgrown in 7–10 days

### Key identifiers

- Youngest leaf folded in shoot
- Tramlines on leaf
- Older leaves often 'crinkled in centre' **1**
- Large ligule
- Inflorescence – Panicle. Often in flower in mown turf, even at very short heights of cut **2**
- Susceptible to Fusarium Patch and Anthracnose

### Key identifiers

- Youngest leaf rolled in shoot
- Upper leaf blade ribbed **1**
- Leaves hairless
- Leaves dull on underside
- Inflorescence – Panicle
- Spread by stolons or rhizomes **2**
- Susceptible to Fusarium Patch and Take-all Patch



### Can be confused with:

**Smooth-stalked Meadow-grass (page 19)** – look for large ligule, paler colour and leaf softness in Annual Meadow-grass

### Can be confused with:

**Yorkshire Fog (page 11)** – look for hairy leaves and red/purple at stem base of Yorkshire Fog, which are not present in Bentgrass

**Perennial Ryegrass (page 10)** – look for the shiny leaf of Ryegrass compared to the dull leaf of Bentgrass

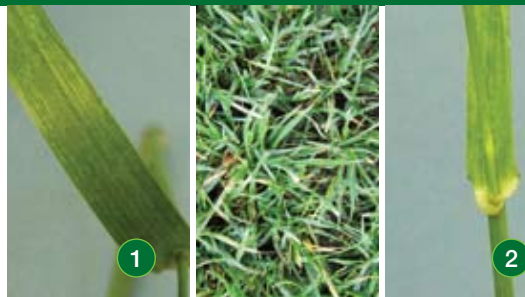


### TUFTED HAIR-GRASS *Deschampsia caespitosa*



Trials have shown that Tufted Hair-grass is  
**NOT AFFECTED** by **Rescue**

### TALL FESCUE *Festuca arundinacea*



Trials have shown that Tall Fescue is  
**NOT AFFECTED** by **Rescue**

#### Key identifiers

- Youngest leaf rolled in the shoot
- Leaves strongly ribbed and rough, tapering to a pointed tip **1**
- Hairless leaf
- Ligule present, very long and pointed **2**
- Inflorescence – Panicle

#### Key identifiers

- Youngest leaf rolled in shoot
- Leaves strongly ribbed **1**
- Older leaves wide and flat, tapering to a point
- Hairy auricles **2**
- Ligule present
- Inflorescence – Panicle



#### Can be confused with:

**Tall Fescue (page 17)** - Tufted Hair-grass does not have the hairy auricles of Tall Fescue



#### Can be confused with:

**Perennial Ryegrass (page 10)** – look for hairs on auricles and ligule of Tall Fescue

**Tufted Hair-grass (page 16)** – look for auricles, which are not present on Tufted Hair-grass

**SWEET VERNAL-GRASS**  
*Anthoxanthum odoratum*


Trials have shown that Sweet Vernal-grass is  
**NOT AFFECTED** by **Rescue**

**SMOOTH-STALKED MEADOW-GRASS**  
*Poa pratensis*


Trials have shown that temporary yellowing/browning may  
 occasionally be seen following **Rescue** application –  
 usually outgrown in 7–10 days

**Key identifiers**

- Youngest leaf rolled in shoot
- Ribbed leaf
- Leaves are loosely hairy **1**
- Ligule present
- Inflorescence – Spike **2**
- Flowers early in spring
- When leaves are crushed they have a very strong 'mown grass' smell

**Key identifiers**

- Youngest leaf folded in shoot
- Tramlines visible on either side of the leaf blade mid-rib **2**
- Smooth leaf
- Boat shaped leaf tip **1**
- Short ligule
- Inflorescence - Panicle
- Rhizomes present **3**


**Can be confused with:**

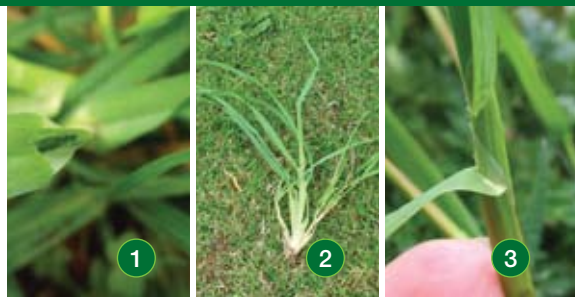
**Annual Meadow-grass (page 14)** – look for small ligule, stiff dark green leaves and the presence of rhizomes not seen in Annual Meadow-grass

### FALSE OAT-GRASS *Arrhenatherum elatius*



Trials have shown that False Oat-grass is  
**NOT AFFECTED** by **Rescue**

### COCKSFOOT *Dactylis glomerata*



Trials have shown that Cocksfoot is  
**NOT AFFECTED** by **Rescue**

#### Key identifiers

- Youngest leaf rolled in shoot
- Smooth, dull blue-green leaves
- Very coarse grass
- Ligule present **1**
- Inflorescence – Panicle **2**
- Onion couch sub-species of *Arrhenatherum elatius* has bulbous swellings at the base (resembling small onions)
- Very difficult grass to eradicate

#### Key identifiers

- Youngest leaf folded in shoot **1**
- Leaves wide and flat
- Flat stem
- Dull, pale green leaf **2**
- Hairy ligule **3**
- Inflorescence – Panicle



#### Can be confused with:

**Annual Meadow-grass (page 14)** - Look for the wide, flat of Cocksfoot compared to the soft crinkled leaves of Annual Meadow-grass



# Summary

**Rescue is an exciting new selective herbicide from Syngenta, for the control of Ryegrass infestations in fine turf swards.**

**Rescue** controls Ryegrass, but is uniquely safe to Fescues and *Poa annua*.

Temporary yellowing may be seen on Colonial/ Browntop Bentgrass and Smooth-stalked Meadow-grass following **Rescue** application. An associated temporary reduction in growth rate may also occur. These effects are transient and are usually outgrown during good growing conditions. Highland Bent has however shown some susceptibility.

For the first time, golf course managers have the opportunity to effectively remove invasive clumpy Ryegrass that adversely affects the quality and playability of turf.

## Benefits of **Rescue**

Removes Ryegrass and some other invasive and coarse grass species

Safe for use on Fescues, *Poa annua* and some other fine turf species

Specifically developed for golf course applications

By following the **Rescue** Programme Ryegrass can be removed and, with the help of over seeding, reinstate finer species to improve turf quality on all areas of the course.

**Rescue** is approved for use across the golf course, including:

Greens	Semi-rough and rough
Tees	Fairways

**Rescue** has been extensively trialed and proven on all golf course types to help improve turf quality and playing surfaces where invasive Ryegrass and coarse grasses cause problems.

Trials have shown **Rescue** can also control some other undesirable coarse grasses, including Yorkshire Fog and Purple Moor-grass.

## **Rescue**

Effectively controls of Ryegrass

Restores high quality, fine playing surfaces

Reduces other invasive coarse grasses

Leaves Fescues and *Poa annua* unaffected

Replaces expensive, time-consuming and ineffective conventional Ryegrass reduction techniques

Allows rapid rejuvenation of fine turf surfaces

Easy to use formulation

## The Rescue Programme

**Best results:** Autumn Window **Alternative:** Spring Window

### Autumn Treatment

Trials have shown that autumn applications of **Rescue** give the highest levels of control. Apply in sufficient time to enable over seeding where required.

### Spring Treatment

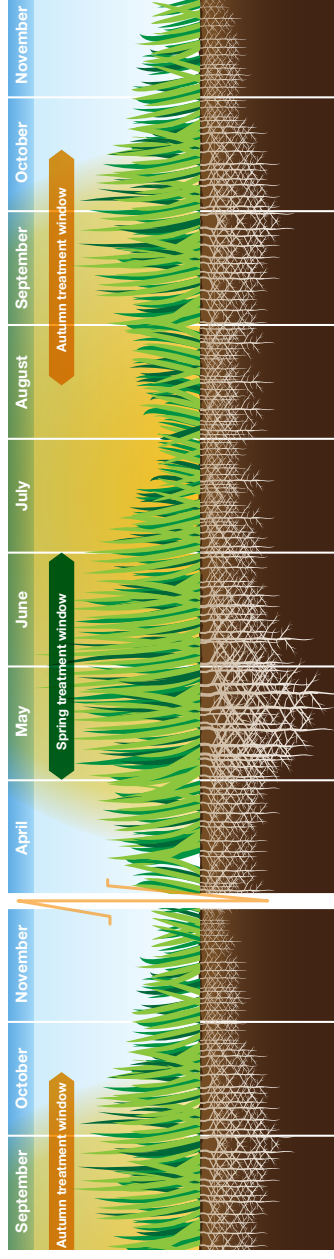
The **Rescue** Programme may also be started in the spring. Any regrowth from initial spring applications tends to be soft and weak and easier to manage. A follow-up autumn application can complete the Ryegrass kill. Any regrowth from autumn **Rescue** can usefully be controlled in the spring.

### Autumn Treatment

A subsequent autumn treatment may be beneficial to control heavy, well established weed Ryegrass populations.

### Follow-up Treatments

Follow up **Rescue** treatments may be required where new Ryegrass seedlings germinate and establish. A successful over seeding programme and applications of **Primo Maxx** to encourage a thicker sward will minimise the chance of Ryegrass reinfestation.



### Programme start

For best results commence the **Rescue** programme in the autumn, when conditions are conducive for effective Ryegrass control and successful over seeding.

### Primo Maxx aids overseeding

For best results **Rescue** should be used in conjunction with a **Primo Maxx** programme to encourage fast recovery and improve turf quality. For autumn treatment, make the season's final **Primo Maxx** application three to five days prior to over seeding.

### Wait for active growth

Apply **Rescue** when turf is actively growing to achieve rapid uptake and optimum effects. Ensure sufficient soil moisture and temperature to sustain recovery of remaining turf and new growth of seedlings.

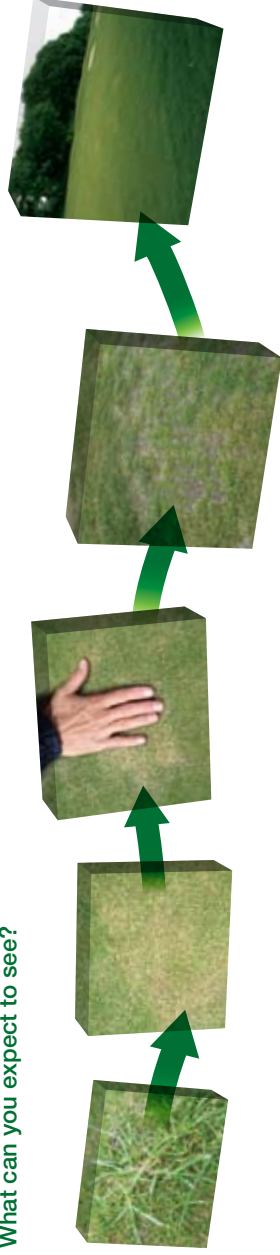
### Primo Maxx programmes

For spring **Rescue** treatments, apply the first **Primo Maxx** application three to five days, prior to over seeding. Routine applications of **Primo Maxx** can commence when new seedlings are at the two true-leaf stage. The **Primo Maxx** programme should continue through the season.

### Autumn end

Autumn **Rescue** applications should be completed whilst weather conditions still allow turf recovery and over seeding establishment.

## What can you expect to see?



### The Finished Result

The removal of Ryegrasses and other unwanted coarse grasses can allow the successful re-establishment and maintenance of a high quality, fine turf playing surface.

#### Before application

Ryegrass infestations on fine turf create an uneven and unsightly surface that is difficult to maintain and unpopular with players. **Rescue** application is a quick and effective route to restoring fine turf quality.

#### 7-21 days after application

Ryegrass and other susceptible weed grasses start to go pale yellow and begin to die back. The timings at which effects are seen will be weather dependent; in good growing conditions results are faster, but in dry or poor conditions it will take longer for **Rescue** to have the desired effect.

#### 7-21 days after application

Do the "**Rescue** Rub Test". When the treated patches have died back, rub the patch with the palm of your hand. If the treated turf surface breaks up it has 'passed' the **Rescue** Rub Test. Any temporary yellowing on Bentgrasses should be outgrown. Over seeding can take place at any time when weather and soil conditions are conducive.

#### 4-8 weeks after application

Target Ryegrass and other weed grasses will have died right back. Over seeding should have taken place and, in good conditions, new seedlings will be starting to emerge.

#### 8-10 weeks after application

Ryegrass and other grass weed species will have been controlled. Any plants that have survived treatment will show weakened growth and susceptibility to a second **Rescue** application. Seedlings from over seeding programmes should be well established.

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