

# 4TURF

Extra power

 **DLF  
TRIFOLIUM**  
SEEDS & SCIENCE



**4turf**  
by DLF-TRIFOLIUM

## 4TURF

### FACTS

- Rapid installation
- Increased stress tolerance (drought, cold)
- Excellent disease resistance
- Good wear tolerance
- Glossy dark green color
- Faster a green area
- Excellent survival in extensive management
- Excellent recovery from drought and heat stress
- Excellent winter behaviour
- Less weed pressure
- Excellent mixture partner



### What is 4TURF?

4turf is a new turf type of tetraploid perennial ryegrass bred especially for rapid installation and unique stress tolerance.

Tetraploid ryegrasses have long been known to show better stress tolerance and disease tolerance compared to diploids. Now these advantages have become available for turf grasses as 4TURF.

### Better sward quality after stress

In southern and continental areas in Europe 4TURF shows better recovery from drought and heat stress.

Thus it outperforms ordinary diploid ryegrasses.

### DROUGHT TOLERANCE

| VARIETY                          | LES ALLEUDS | CARPENTRAS |
|----------------------------------|-------------|------------|
| Diploid Lp (mean of 3 varieties) | 100         |            |
| Diploid Lp (mean of 6 varieties) |             | 100        |
| 4TURF (mean of 3 varieties)      | 133         | 119        |

Scores for drought tolerance in Les Alleuds (Loire region) and Carpentras (South of France)

### BETTER SWARD QUALITY AFTER WINTER STRESS

| COUNTRY | VARIETY    | FUSARIUM | RANK        | RED THREAD | RANK         | WINTER GREENNESS | RANK        |
|---------|------------|----------|-------------|------------|--------------|------------------|-------------|
| NL      | Tetragreen | 8.3      | 4 out of 46 | 7.8        | 1 out of 46  | 8.0              | 1 out of 46 |
| UK      | Tetragreen |          |             | 8.6        | 3 out of 101 |                  |             |
| UK      | Double     |          |             | 9.2        | 1 out of 101 |                  |             |

4TURF is healthier in winter times. After winter it is outperforming diploid ryegrasses (Source: official trials in the Netherlands (sport, sown in 2006, table 1 and 2) and UK (lawn, sown in 2007, table 5.10). (Score: 1=poor, 10=best)

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## BENEFITS OF 4TURF

**Better sward quality after summer stress**

**Better sward quality after winter stress**

**Reduced fertiliser and chemical input costs**

**Reduced labour costs**

### Rapid installation

4TURF seeds are 1.5 times bigger than normal turf grasses. It produces stronger seedlings with faster establishment, resulting in less chances for the establishment of weeds. Thus 4TURF is the perfect overseeding choice for perennial ryegrass applications.

4TURF is very well suited for overseeding Bermuda in the transition zone resulting in a fast establishment and excellent turf quality but no more clippings, as was indicated by Richardson et.al [Crop Science (2007) 47:83-90].

### Better disease resistance and stress tolerances

4TURF has an improved disease resistance, both under warm and cold conditions. In DLF-trials from Scandinavia to the Mediterranean it has proven to be more resistant against f.e. rust, Fusarium, Helminthosporium, Drechslera, and red thread. It is very well suited for extensive management conditions as well.

### Good wear tolerance

In Germany 4TURF varieties Double and Tetragreen are rated 8 for sport/wear conditions [Strapazierrasen]. The shear strength will improve due to a deeper root system

### Excellent mixture partner


4TURF is slightly less dense compared to normal diploid turf ryegrasses. As a result its companion species in mixtures better chances for establishment. When combined with smooth-stalked meadowgrass, the latter will have better chances to establish at a higher level. When combined with tall fescue the larger leaves of 4TURF result in a more homogeneous aspect of the turf. When combined with an elite diploid perennial ryegrass, the result will be a dense sward, combining the best of both worlds. The slightly more open structure compared to diploids results in a faster re-growth of the Bermuda after dormancy when 4TURF is used for overseeding Bermuda.

## LOWER COSTS AND LESS ENVIRONMENTAL IMPACT

| GROWTH HABIT | COLOUR     | ESTABLISHMENT RATE (LOW TEMP) | ESTABLISHMENT RATE (HIGH TEMP) | WEAR TOLERANCE | THATCH PRODUCTION | COMPONENT MIX | SHADE TOLERANCE | COLD TOLERANCE | DROUGHT TOLERANCE | ET RATE (MM/DAY) | SALINITY TOLERANCE (MS/CM) |
|--------------|------------|-------------------------------|--------------------------------|----------------|-------------------|---------------|-----------------|----------------|-------------------|------------------|----------------------------|
| Bunch        | Dark green | Fast 7-10d                    | Fast 10-20d                    | Very Good      | None              | Fair-Good     | Fair-Good       | Fair-Good      | Good              | High 9-10        | Good <11                   |



## MAINTENANCE OF 4TURF

|                                  |  |
|----------------------------------|--|
| <b>Seeding rates</b>             | To be adapted to local conditions (soil conditions, climate conditions, utilization. etc..)  |
| <b>Seeding date</b>              | Best mid August to October, 2nd best February 15 - March 30.   |
| <b>Fertilisation (at sowing)</b> | <ul style="list-style-type: none"> <li>• Normal Seed               <ul style="list-style-type: none"> <li>- pre-plant incorporated: 0 - 50 kg N/ha</li> <li>- pre-plant topdressed: 0 - 50 kg N/ha</li> </ul> </li> <li>• iSeed: if iSeed is used no starter fertilization is necessary</li> </ul>  |
| <b>Fertilisation (season)</b>    | NPK, depending on use and climate. Micronutrients depending on soil analysis or plant tissue tests during the year   |
| <b>Mowing</b>                    | <p>First mowing at plant heights of 5 - 8 cm.<br/>           Get to the desired mowing height within 4 - 6 weeks.<br/>           Normal 1.5 - 5 cm, good durability at 3 - 4 cm.<br/>           Mowing frequency: 1 - 2x per week .</p>  |

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DLF-TRIFOLIUM focuses closely on the demands of customers as well as on the market trends of clover and grass seed. Offering one of the world's largest research and breeding programmes for both turf and forage, DLF-TRIFOLIUM is working continually to improve the quality and reliability of all varieties. To meet market expectations, these varieties are tested through a worldwide trialling network for adaptation to different climatic and environmental conditions.

DLF-TRIFOLIUM is the world's largest producer and distributor of grass seed. With subsidiaries in Denmark, Sweden, Holland, Belgium, UK, France, Germany, Czech Republic, Russia, China, New Zealand, South America and United States, an extended distributor and customer network serves the markets worldwide.

