COBRA NOVA

Agrostis stolonifera

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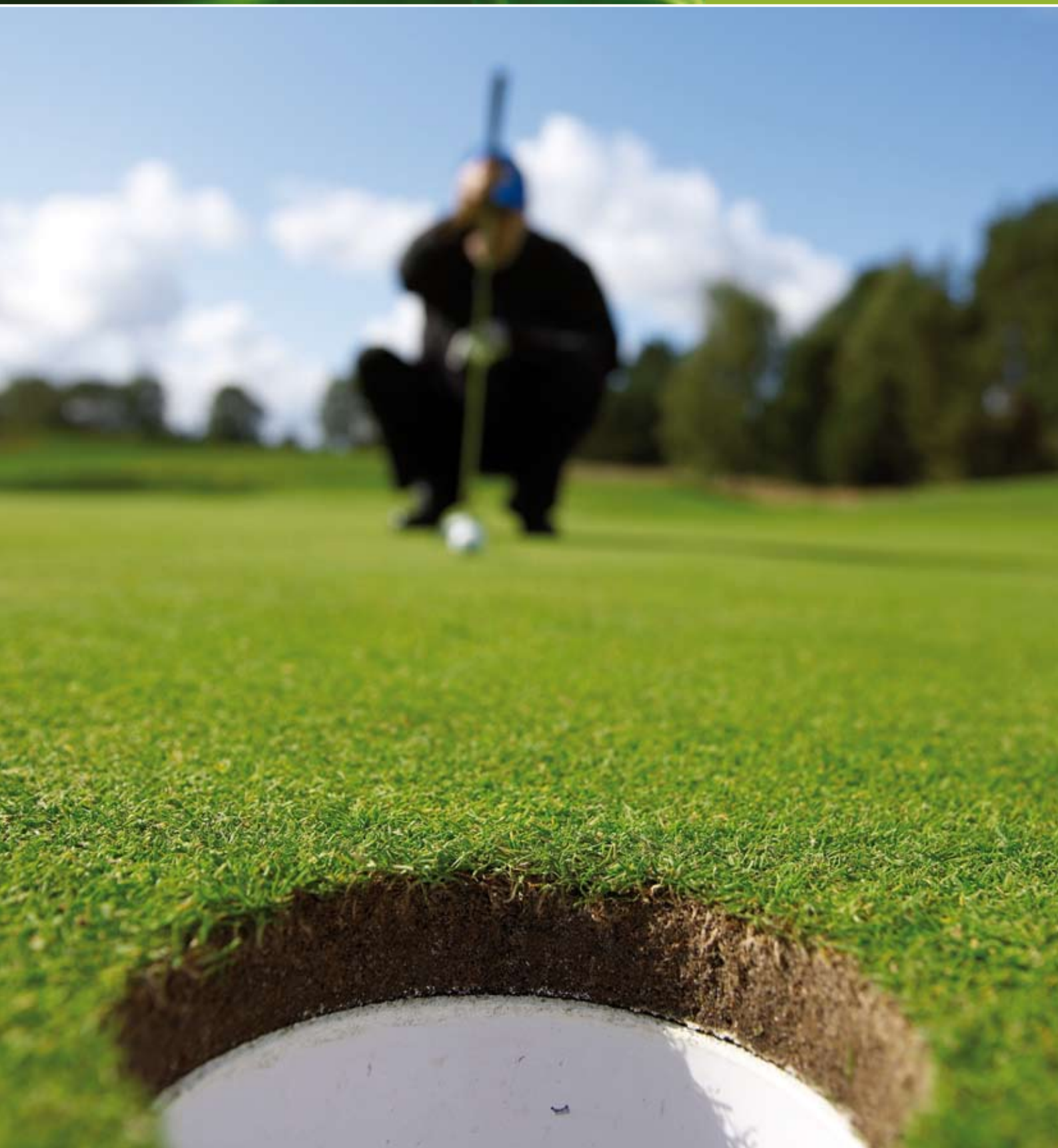


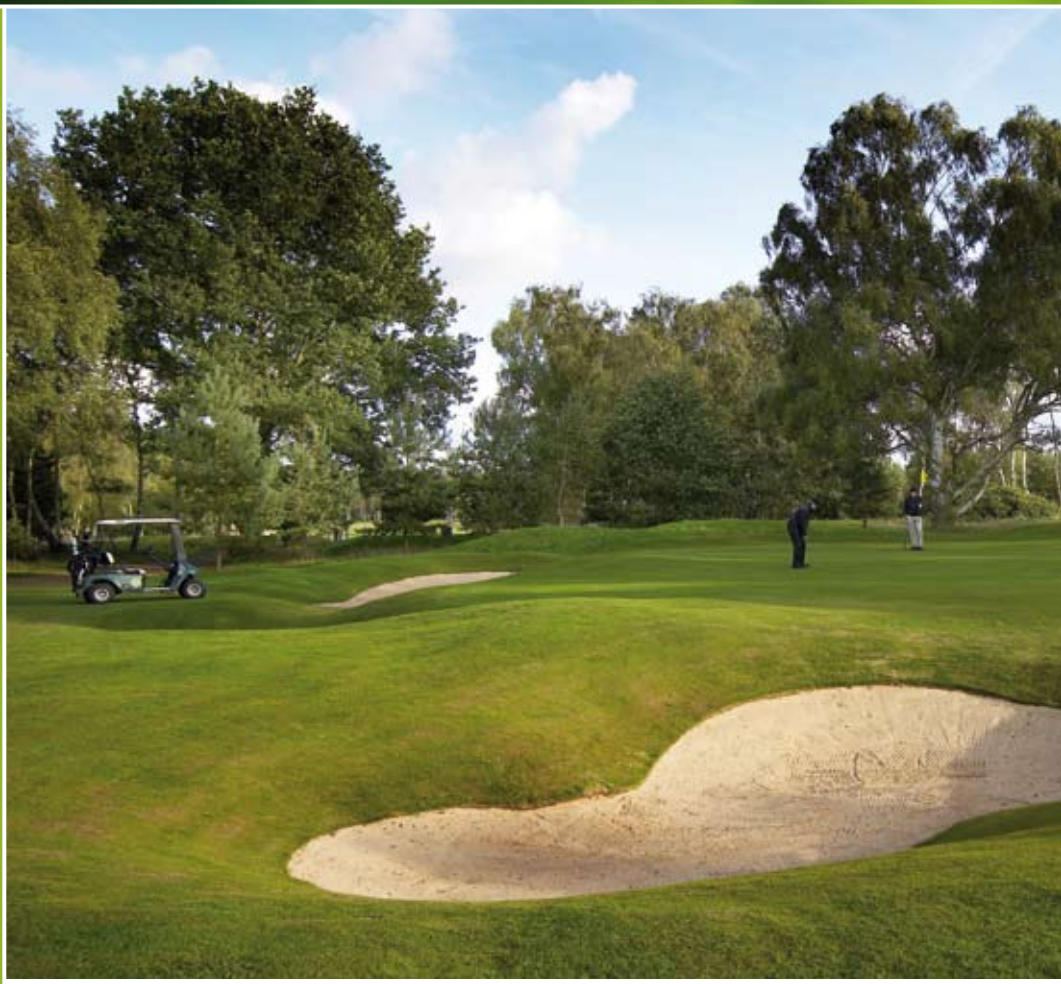
COBRA NOVA

The best all-round variety for greens and other close mown surfaces there is.

The main use of creeping bentgrass (Agrostis stolonifera L.) is on golf greens. This is due to it's ability to withstand very close mowing and produce a very high quality putting surface.

Creeping bentgrass can also be used in high quality laen mixtures for private gardens. The species is best at mowing heights of 10 mm or less.

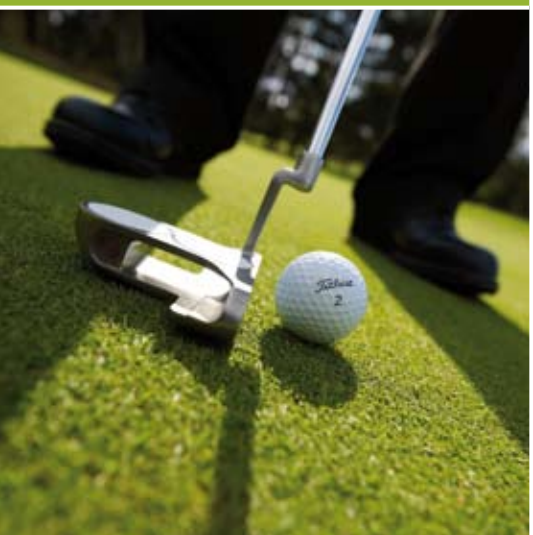
- Highest turf quality
- Rapid establishment
- High density
- Excellent tolerance to close mowing
- Good disease resistance
- Excellent winter colour
- Good wear tolerance



Usage
The original COBRA was well known for it's combination of playing quality, disease resistance and efficient fertiliser use. COBRA NOVA now brings you these same attributes with the benefits of the new generation of creeping bents.

COBRA NOVA was bred for golf course greens, but can also be used for bowling greens, golf tees, fairways, croquet lawns and tennis courts.

COBRA NOVA can also be used as a component in mixtures for the winter overseeding of warm season greens, when combined with Poa trivialis.



Tech facts

Growth habit	**Stolons**
Establishment rate	**Medium 14-21**
3-4 mm cut tolerance	**Excellent**
Mowing frequency	**Daily**
Traffic tolerance	**Good**
Nitrogen required	**Low/medium**
Shade tolerance	**Fair**
Cold tolerance	**Good**
Disease resistance	**Good**

COBRA NOVA: playing quality and easy maintenance combined!

Results from official independent field trials in the UK and the USA show that COBRA NOVA is one of the best creeping bent, if not the best, varieties in the market and particularly adapted to European conditions of play, climate and maintenance. The shoot density and visual merit of COBRA NOVA are exceptional in UK trials. Under close mowing (3-4 mm) COBRA NOVA was also the best performing variety in the 2004-2007 NTEP trials in the USA.

Trial results (STRI - Bingley, UK)

VARIETY	SHOOT DENSITY	VISUAL MERIT	MEAN	DISEASE RESISTANCE MICRODOCHIUM	SUMMER GREENNESS
COBRA NOVA	**7.0**	**7.4**	**7.2**	**6.5**	**6.1**
CY 2	6.4	6.9	6.6	6.3	4.8
INDEPENDENCE 1	6.5	6.6	6.5	6.5	5.5
RUNNER	6.6	6.3	6.4	6.5	5.3
007	6.8	6.9	6.8	6.5	5.5
PENN A-1	6.4	6.8	6.6	6.3	5.8
MACKENZIE	6.3	6.4	6.3	6.0	6.0
TYEE	6.4	6.2	6.3	6.5	5.8
SR1150	6.0	6.0	6.0	6.5	4.9
CRENSHAW	5.5	5.4	5.4	6.0	5.0
BUENO	5.4	5.3	5.4	6.3	6.6
PROVIDENCE	5.0	5.2	5.1	6.5	4.6

Summary of assessments made during 2007 and 2008 - (Source: Breeders report 2009 Bingley)

Trial results (NTEP, USA)

VARIETY	RATING-SAND	RATING-SOIL	CLOSE MOWING	DOLLAR SPOT	MICRODOCHIUM
COBRA NOVA	**6.1**	**6.4**	**6.4**	**6.9**	**9.0**
INDEPENDENCE 1	6.2	6.2	6.1	4.2	8.7
CY 2	6.4	6.4	6.3	7.3	7.3
007 (DSB)	6.3	6.5	6.3	6.9	8.7
TYEE (SRX 1GD)	6.3	6.4	6.1	5.5	9.0
DECLARATION	6.3	6.6	6.3	8.1	9.0
SHARK (23R)	6.3	6.5	6.2	5.3	9.0
AUTHORITY (235050)	6.2	6.5	6.2	6.4	8.3
PENN A-1	6.2	6.2	6.0	6.9	9.0
MEMORIAL (A03-EDI)	6.2	6.4	6.4	7.9	9.0
LS-44	6.2	6.3	6.2	6.2	8.7
MACKENZIE SRX 1GPD	6.1	6.5	6.1	6.3	8.0
T-1	6.1	6.2	6.2	5.0	9.0
BENCHMARK DSR	6.0	6.2	6.1	7.6	6.7
BENGAL	6.0	6.1	6.1	4.9	8.7
ALPHA	6.0	6.1	6.1	5.4	9.0
13-M	5.9	6.4	6.2	7.5	9.0
KINGPIN (9200)	5.9	6.3	6.2	7.3	9.0
PENNLINKS II	5.5	5.7	5.7	7.2	8.3
PENNCROSS	5.0	5.2	5.2	6.5	8.3

Mean turfgrass quality ratings of creeping bentgrass cultivars grown on a sand green (eleven locations) and a soil green (thirteen locations), and under close mowing to 3-4 mm (thirteen locations) in the USA and Canada, 2004-2007 final data. (Turfgrass quality ratings 1-9, 9 = ideal turf)

Maintenance of creeping bentgrass (Agrostis stolonifera)

Seeding rates (sown as straight on golf green):		New plantings: 100 kg/ha Overseeding: 50 kg/ha.
Seeding date:		Spring or autumn
Fertilisation (pre-sowing and sowing)		
	Normal seed:	pre-plant incorporated: 70 kg N/ha pre-plant topdressed: 35 kg N/ha
	iSeed®:	if iSeed® is used no starter fertilization is necessary
Fertilisation (season)		Nitrogen (N): 100-200 kg/ha/yr Phosphorus (P): 50-75 kg/ha/yr Potassium (K): 250-400 kg/ha/yr Micronutrients: depending on soil analysis or plant tissue tests during the year.
Mowing		First mowing at plant heights of 4 - 5 cm Get to the desired mowing height within seven weeks Excellent appearance at mowing heights of 3 - 12 mm
Irrigation		Irrigate only when necessary Keep intervals between irrigation cycles as long as possible
Topdressing and verticutting		Frequent verticutting according to seasonal growth, followed by topdressing

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.

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