

Cocksfoot – *Dactylis glomerata*

Cocksfoot is a tufted, perennial grass that is best adapted to cool-season production. Due to the abundance of leaves produced, it does not lose much quality in winter or when it becomes reproductive. It grows strongly during spring and autumn, with poor growth during winter and limited summer growth (not as strong as Tall Fescue). This grass is the most drought-tolerant among the temperate perennials and is best adapted to areas where the annual rainfall exceeds 700 mm and distribution correlates with the crop’s production curve. In South Africa, cocksfoot is normally planted under irrigation, often in blends with other temperate species.



Strengths

- 14 - 18 t DM/ha/season
Depending on environmental conditions and management
- Good quality forage production
- Strongly perennial species
- Good drought tolerance for a temperate species
- Ideal foggage crop in terms of quality
- High DM levels – high DM intake

Limitations

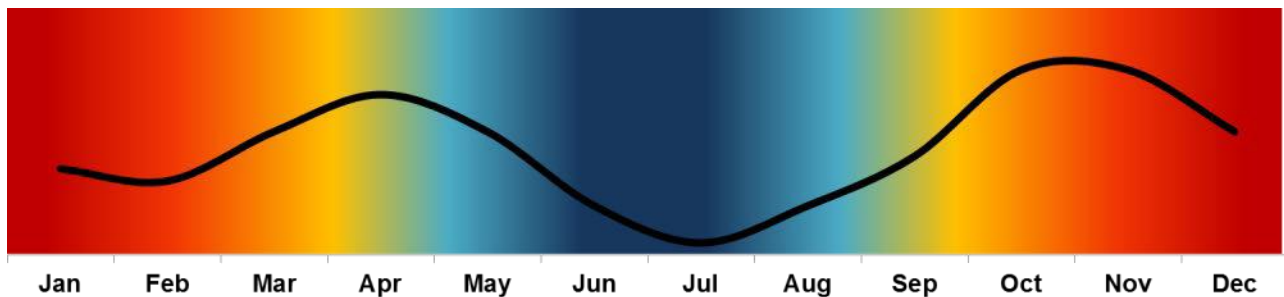
- Lower production than Perennial Ryegrass and Tall Fescue
- Low winter production

What can it be used for?

Grazing: Utilise with production animals like weaner calves or sheep. Rotational high-pressure grazing ensures optimal utilisation.

Silage: Surplus production can be ensiled to use during times of low production.

Production potential: Cocksfoot has the potential to yield 14 - 18 t DM/ha/season, depending on soil fertility, environmental conditions and frequency of utilisation. It has a higher summer production potential than Perennial Ryegrass, but winter production is just as poor as that of Tall Fescue. Forage for winter is normally grown in autumn and utilised as foggage. The production lifetime also depends on management and climate, but under ideal conditions, Cocksfoot can be productive for well over 10 years (1, 2).



Relative growth curve of an established Cocksfoot stand - one year cycle

Metabolic disturbances in animals on cultivated pastures:

No metabolic disturbances has been recorded

Establishment

Climate: Cocksfoot does best in cool areas or on southern slopes in warmer areas, if properly managed. Seedlings exposed to extreme heat or – cold can be damaged and stand loss may occur.



Moisture: Under dryland conditions Cocksfoot requires at least 700 mm per annum, if distribution correlates with its production curve. Best production is achieved under irrigation. Even though Tall Fescue and the Ryegrasses will produce better under irrigation, cocksfoot is more drought resistant.

Soil: It can grow satisfactorily on any soil type as long as it has good fertility. It cannot withstand waterlogged conditions. Can tolerate soils with pH (KCl) levels as low as 4.5 and acid saturation of as high as 25 %, but the ideal pH (KCl) is above 5.

Fertilization: Cocksfoot responds very well to high Nitrogen fertilisation (250 – 450 kg/ha/season) if sufficient moisture is received and it can be applied as 5/ 6 applications of 70 kg N/ha between August and April. It does however react well to levels as low as 180 kg N/ha/season. A soil analysis before establishment is essential ^(1, 2, 3).

	N (kg/ha)	P (mg/kg soil)	K (mg/kg soil)
Requirement for establishment***	30-50*	25-30	120-140
Seasonal application (kg/ha)	250-450**	Use removal rates	
Production - Removal rates (kg/ton):			
Good quality fodder	40	3.7	38.8
Average quality fodder	26	2.8	28.9
Poor quality fodder	16	1.8	18.9

*Fertilizer just after establishment (kg/ha)

**Selected rate should maximise profit

***Determined by production potential

Phosphorus (P) and Potassium (K) can be recycled back to pastures when grazed by stock. This is dependent on the grazing system and the type of animals used. Up to 40% of P and 90% of K can be recycled ⁽⁴⁾. It is however necessary to do annual soil analysis to determine the level to which recycling occurred. The difference should be fertilized.





Methods: Establish on a firm, fine, weed free seed bed. Consolidating (rolling) the seedbed after sowing/planting will ensure good seed-soil contact and subsequently better germination and establishment.

Our prescribed seeding rate:	Rows ^(1, 2)	Broadcast ^(1, 2)
	15-20 kg/ha	25 kg/ha

Planting time: Best establishment months are March – June. Seedlings are very sensitive to hot periods and burn-off may easily occur.

Management

Utilisation: Cocksfoot can be utilised from 10 – 12 weeks after planting (depending on the planting date). Under irrigation at optimal management, grazing cycles on average of 35 days can be expected. This can be achieved by grazing 4 – 5 days per camp using a six-camp system. More camps will not necessarily mean a higher production, but will decrease wastage.

Cultivars

Cristobal

Cristobal Cocksfoot is a very persistent perennial grass that tolerates summer dry conditions, moderate soil fertility, insect attack and continual grazing.

Adremo

Adremo is a late flowering cocksfoot. It is high yielding with a constant production through the season. It has excellent persistence and is very tolerant to cold and drought.





Resources

1. Pasture Handbook, Kejafa Knowledge Works, ISBN 0-620-31994-1
2. Gids tot die volhoubare produksie van weiding. Alles oor natuurlike veld en aangeplante weiding vir kleinvee, grootvee en wildboere. Prof Hennie Snyman, 2012.
3. Feedipedia - Animal feed resources information system - Cocksfoot (*Dactylis glomerata*) - <http://www.feedipedia.org/node/466>
4. Dannhauser CS. 1991. Die bestuur van aangeplante weiding in die somerreënvaldele, vol. 1. Warmbad

