

# Oats and your winter feed program

Advice from Northern Tablelands Local Land Services  
**Glen Uebergang** (Senior Lands Services  
Officer- Mixed Farming)

## Introduction

Oats is widely adapted to many growing conditions and is the major winter cereal grazing crop. Graziers may consider planting oats to fill a winter feed gap and to provide high quality stock feed. Grazing oats can reduce grazing pressure on other pastures and reduce the necessity for hand feeding during winter. Oats can tolerate cereal diseases such as take-all, crown rot and common root rot. Other uses, such as hay and silage, pasture renovation, and as a component of integrated weed management, make oats a versatile crop in farming systems.

***Following are some key points to consider when planning to grow oats to provide high quality winter feed.***

## Paddock selection and preparation

- Select soil types with sufficient water holding capacity and nutrition.
- Avoid planting on steep slopes where there is an increased risk of losing valuable nutrients, organic matter and top soil from erosion. Grazed oat paddocks usually have little ground cover in the following summer.
- Select paddocks with low weed pressure, particularly low annual grasses that are difficult to control in crop with the use of herbicides.
- Select paddocks with adequate stock water and are of suitable size for effective grazing management. If planting large paddocks consider the use of temporary electric fencing.

## Seed

- Different oat varieties have been bred for their forage characteristics, grain or for dual purpose use. Select an oat variety suited to your growing conditions and purpose.
- Ensure seed has been graded. Graded seed has weed contaminants removed from the sample. Not only does this eliminate planting weed seed, it also eliminates planting weed seeds that are genetically more likely to be resistant to in-crop herbicides. Graded seed also has debris and dust removed from the sample which could otherwise block planter hoses and metering units, this can result in bare areas within the crop where weeds can thrive from the lack of competition. You will require a higher seeding rate using ungraded seed to

achieve the same plant density compared with graded seed.

- Select paddocks with low weed pressure, particularly low annual grasses that are difficult to control in crop with the use of herbicides.

## Planting

Avoid planting into rapidly drying soils or soil temperatures consistently above 25°C as this can cause patchy establishment. Optimum sowing times vary for each variety in respective zones. Sowing later than recommended increases the risk of lower yields. Oat crops used for grazing and grain need to be planted earlier as grazing will delay crop maturity.

***The following sowing times provide a guide only.***

### Tablelands

- **Feb - Apr, winter/spring grazing**  
dual purpose or grazing only
- **May – mid-Sep, spring grazing**  
grazing only or grain only

### Slopes

- **Mar-May, winter/spring grazing**  
dual purpose or grazing only
- **May-Jun, spring grazing**  
grazing only or grain only
- A sowing depth of 5cm is ideal but oats can be sown as deep as 7cm if moisture seeking.
- High seeding rates give quicker feed and high forage yields. Use higher rates and narrower row spacing where weed competition is expected, if seed quality is substandard, or if expecting above average growing conditions.
- Seed size varies significantly between oat varieties. Adjust seed rate accordingly.

***The following seeding rates provide a guide only to maximise production***

### Tablelands

- 80 - 120 kg/ha, grazing and grain
- 60 - 80 kg/ha, grain only

### Slopes

- 60 - 80 kg/ha, grazing and grain
- 40 - 60 kg/ha, grain only

### Irrigation

- 100 - 150 kg/ha, grazing and grain
- 80 - 120 kg/ha, grain only

### Hay Production

- 60 - 100 kg/ha, dryland
- 80 - 140 kg/ha, irrigated

### Soil Nutrition

- Apply fertiliser to address the nutrients that are most limiting production. The most common limiting nutrients are Phosphorus (P), Sulfur (S) and Nitrogen (N).
- Higher nutrition is required for dual purpose crops.
- New varieties with increased genetic potential require increased nutrition and moisture to achieve their production potential.
- Ensure fertiliser is not placed with the seed at excessive rates that may be toxic to an emerging seedling. This varies with soil type, moisture and soil disturbance at planting. As a guide in an average season up to 20kg/N/ha can be placed with the seed at 7" row spacing.



## Grazing

- Grazing can start when plants are well anchored and have reached the tillering stage. This will generally occur 6-8 weeks from plant emergence. Be careful with chemically treated seed and adhere to grazing withholding periods as some can be greater than 8 weeks.
- High stocking densities are used under rotational grazing. Rotational grazing can be used to maximize the grazing value of a crop, by reducing wastage from trampling and/or frost damage.
- Continuous grazing may be better for fattening stock than rotational grazing, though adequate plant material must be maintained to give continuous and quick regrowth, e.g. minimum of 1000-1500 kg/ha of dry matter.
- Stocking rates need to be balanced with crop growth rates to ensure the feed on offer is not being significantly depleted.

**The following table gives the sustainable continuous stocking rate for green oats at 2000kg dry matter/ha, 20 cm tall, 73% digestible dry matter and assuming 25% spoilage rate and 30kg dry matter/ha/day of crop growth (GrazFeed™).**

Stock Class	Kg of forage dry matter removed / head / day	Sustained stocking rate / ha
Ewes and lambs (6 weeks)	3.2	9.3
Weaned lambs (30kg)	2.0	15.0
350Kg Steers	12.4	2.4
450Kg Steers	13.9	2.1
Cow and calf	19.1	1.5

- Always check where the seed head is in the stem in relation to grazing height. When stem elongation occurs immature heads are located just above the highest node. If these are removed by grazing tiller death occurs. Plants are usually able to produce more tillers from the crown of the plant, though forage and grain production will be severely reduced.
- Ensure stock are removed before grazing the immature head in the stem if the crop is to be



spelled for grain recovery. Traditionally stock are removed in August for optimum grain recovery, but this may be earlier or later depending on the season.

- Weight gains around 1.2 kilograms / head /day for steers, and 200 grams / head /day for lambs are common.
- All cereals in the vegetative stage under good growing conditions are highly digestible and often contain 80% - 85% moisture (15% - 20% dry matter).

## Animal Health Disorders

- Disorders can occur under certain growing conditions such as enterotoxaemia (pulpy kidney), hypomagnesaemia (grass tetany), hypocalcaemia (milk fever), nitrate / nitrite poisoning. Veterinary advice should be sought for animal treatment.
- Possibility of health disorders can be minimised by ensuring stock are vaccinated, and by never moving hungry stock straight onto a young crop.
- It is normal for stock to experience scouring when grazing on highly digestible, high moisture, green feed. Veterinary advice should be sought if abnormal scouring occurs as this may be the result of internal parasites.
- Consider the nutritional requirements of your animals to determine whether you will benefit from adding hay or roughage to the diet, by providing an ad lib roughage feed source. This may extend the grazing life of your oat paddock by reducing the animals daily intake of the oat crop, but may also reduce livestock performance.

## Weeds

- Preventing annual weeds seeding in previous seasons reduces in crop weeds and improves crop production.
- Some herbicides can control or reduce annual rye grass populations and broadleaf weeds but timing of application is critical.
- Higher seeding rates, narrower row spacing and maintaining crop canopy (bulk) will improve competition against weeds.

## Diseases

- Barley yellow dwarf virus (BYDV) is transmitted by aphids. Early sown crops are more at risk. Sow tolerant varieties or be prepared to control aphids to prevent disease transmission. Imidacloprid is registered for the use on cereal crops as a seed dressing for the management of aphids in early crop growth stages.
- Significant losses can result from either stem or leaf rust. Rusts can be managed by selecting appropriate varieties, adjust grazing management and by the use of foliar fungicides in crop.

## Insects

- Earth mites commonly effect young crops and can be controlled with insecticides.
- Army worm can cause severe damage to ripening crops. Chewing of leaf margins and/or oat spikelets on the ground are sure signs of armyworm presence. Always inspect the most dense areas of the crop. Army worm can be controlled with insecticide. Windrowing crops for harvest may be a suitable alternative to spraying.

## Alternatives to grazing oats to fill your winter feed gap

When considering planting oats, it is important to do a full cost analysis and assess potential risks. This also applies when considering the following alternatives to growing oats, to determine which option / or combination of options is the most suited to your farming business.

- Plan your livestock program to be running a reduced stocking rate during the winter feed shortage.
- Run classes of livestock such as wethers or dry cows during winter that will still be productive on the lesser quality feed available.
- Grow winter active perennial pastures- depending on your location you may be able to grow varieties of phalaris, fescues, rye grass or cocksfoot. These will not need to be replanted every year.
- Fertilise native pasture and increase production and nutrition provided from them.
- Supplement livestock for production when they graze existing standing dry feed of native or introduced tropical pastures.
- Source feed paddocks for agistment.
- Grow fodder crops for hay or silage in seasons when feed is plenty and provide this during periods of feed shortage.
- Provide a full ration on farm if you have the resources and infrastructure or have your stock custom fed at a commercial feedlot.
- Assess paddock weed pressure, soil nutrition and feed requirements and consider growing alternative forage crops such as forage brassicas, triticale or graze and grain wheat, barley or canola.
- Reduce stock numbers and grow grain or other crops rather than fodder crops.

## Reference

Adapted principally from NSW Department of Primary Industries- Winter crop variety sowing guide. Authors- Peter Matthews, Don McCaffery and Leigh Jenkins.

## For more information

If you would like to discuss the use of oats in your feed program please do not hesitate to contact Glen Uebergang, Northern Tablelands Local Land Services Mixed Farming Officer on mobile 0429 217 066, drop into the Inverell office at 15 Vivian St or email [glen.uebergang@lls.nsw.gov.au](mailto:glen.uebergang@lls.nsw.gov.au).

© State of New South Wales through Local Land Services 2016. The information contained in this publication is based on knowledge and understanding at the time of writing March 2016. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of Local Land Services or the user's independent adviser.

For updates go to [www.lls.nsw.gov.au](http://www.lls.nsw.gov.au)