

GROWING WINTER FEED

THE WINTER FEED-GAP BUILDING FEED-WEDGES

Of all the factors that influence winter pasture growth, low temperatures generally have the greatest impact, and can lead to winter **feed-gaps**.

Developing a strategy that manages **feed supply and stock demand** is critical.

Building a **feed-wedge** will provide more pasture than stock can consume during late summer and into autumn, providing a bank of feed for **winter consumption**.

BioAg's winter pasture production methodology incorporates specific and key conventional inputs, and introduces improved pasture quality and balance to production by incorporation of biostimulant foliar and natural long lasting sources of nutrients.

- » Winter temperatures can cause pasture growth rates to drop to very low levels
0-15 kg DM/ha/day
- » Long-term phosphate trials have shown its positive effect on winter production³
1 kg P/ha grew 1.7 t DM/ha
15 kg P/ha grew 2.8 t DM/ha
- » Balance & Grow with nitrogen and gibberellic acid are "get out of jail" cards when short of winter feed
- » Growth stimulation can be seen as early as seven days after application

A BioAg ryegrass/clover mix pasture near Crookwell, NSW



Better soils. Better crops. Better stock.™

www.bioag.com.au



The winter feed-gap

Generally, temperature has the greatest negative impact on winter growth. Growth rates can drop to very low levels (0–15 kg DM/ha/day), and may be insufficient to meet stock demand. **This is known as the winter-feed gap.**

Winter pasture management strategy

- keep pastures in the Phase II growth phase (capturing more sunlight/assists photosynthesis and regrowth)
- increase winter active species
- consider reducing feed demand (stocking rates)
- develop a feed wedge for winter feed

Developing the winter feed wedge

Building a feed-wedge refers to growing excess pasture during late summer/autumn, **delivering a bank of feed for winter consumption.** This preserves feed on paddocks that may otherwise be grazed out, minimising soil damage and supplementary feed requirements.

Phosphorus

Winter pasture growth can be significantly improved through improving soil fertility. Phosphorus is a critical component of fertile soils and adequate amounts can also improve applied nitrogen responses¹. Fertilisers such as **BioAgPhos** provide sustained release², enabling either annual or biennial (every second year) application. Long-term phosphate trials have shown its positive effects on winter dry matter production³:

- 1 kg P/ha grew 1.6 t DM/ha in winter (Olsen P 5 mg/kg)
- 15 kg P/year grew 2.8 t DM/ha in winter (Olsen P 13 mg/kg)

Balance & Grow

Balance & Grow with nitrogen and gibberellic acid are get out of jail cards when **caught short of winter feed.**

This combination **supplies the nitrogen required by pastures during winter**, and supplies the plant's requirements to convert nitrogen into true plant proteins (vitamins, minerals, proteins, amino acids, carbohydrates and plant hormones).

Balance & Grow is best applied to green leaf just after a grazing has finished and can be mixed with gibberellic acid and foliar nitrogen fertilisers for one application.

Whilst BioAg programs are tailored to suit each grower, the basis of the program is Balance & Grow and UAN (UAN is interchangeable with calcium nitrate if calcium levels are low).

Balance & Grow Organic is certified for use by organic growers.

Nitrogen (urea, sulphate of ammonia, Easy N (UAN), calcium nitrate)

Balance & Grow is compatible with foliar nitrogen fertilisers, so can be applied as a single application. Nitrogen is best applied immediately after stock have been removed from the paddock.

Soil temperature, soil moisture, soil fertility and species composition all impact on the pasture responses to applied nitrogen.

In winter, a north facing slope can be 2°C warmer than a south facing slope. Applying nitrogen to north facing slopes in July and south facing slopes in August (as temperatures begin to warm) can give a greater growth response than applying nitrogen to both areas at the same time.

If pasture is moisture stressed (too dry or too wet), the response to nitrogen will be restricted. The greatest response to nitrogen fertiliser is seen in annual grasses, followed by short rotation grasses, then perennial grasses.

If other nutrients (e.g. phosphorus¹, potassium) are limiting growth, the response to nitrogen could also be reduced.

Contact a BioAg Area Sales Agronomist for application details.

Gibberellic Acid (Pro Gibb, Gala, Ryz-Up)

Gibberellic acid is a naturally occurring plant hormone that stimulates growth through cell expansion. In grasses, this results in stem and leaf elongation. Its production naturally slows during colder months.

Applying gibberellic acid mixed with Balance & Grow in colder winter months stimulates the plant and can improve the quantity of feed on offer. The rapid growth is often lighter (yellow) in colour for the first couple of weeks after application, which does not affect the quality of the feed on offer. **Growth stimulation is usually seen within seven days of application.**

A BioAg Area Sales Agronomist can provide further details on its application, use with a rotational grazing program, frequency of use, expected responses from various pasture types, and optimal period of use.

Balance & Grow[®]

Contains growth nutrients in a highly evolved and plant available state.

Designed for maximum foliar uptake.

Stimulates vegetative growth, roots, stem and leaf production in the plant.

A natural bio-chelator of water-soluble nutrients, enhancing plant uptake of these nutrients.

BioAgPhos[®] (P 12.7% : S 1% : Ca 35%)

Citric solubility >41%, formic solubility 73%

A natural fertiliser and source of phosphorus in a long-lasting³, plant available form used by BioAg customers since 2000.

Based on high grade, highly reactive phosphate rock and BioAg's liquid microbial digester.

Reduces leaching and lock up changing how it is solubilised into a plant available form (i.e. root acid soluble and biologically soluble).

BioAg Superb[®] (P 9% : S 7% : Ca 31%)

A BioAgPhos and gypsum blend ideal for soils needing sulphur, phosphorus and calcium. Suits grazing enterprises and crops (such as canola) that require more sulphur. A direct substitute for SSP.

BioAgPhos[®] S10 (P 11.5% : S 10% : Ca 32%)

Suits higher rainfall conditions, and higher leaching environments where elemental sulphur is agronomically superior. Sulphur is supplied in bentonite pastille form with low dust.

Certified organic variants of our range is available for organic growers.

References

¹Data from a cutting trial at Ellinbank indicated that responses to nitrogen are limited at soil phosphorus levels below 14 mg/kg Olsen P.

²The Role of RPR Fertiliser in Aust. (Tas.) CSIRO Publishing, 1997.

³Hamilton Long-Term Phosphate Experiment.

More information

Northern NSW

Paul Medlock - 0429 820 360

Southern NSW

David Phelps - 0438 269 939

South-west NSW

Robert Gill - 0427 247 844

BioAg Head Office

T 02 6958 9911 E sales@bioag.com.au



Better soils. Better crops. Better stock.™

www.bioag.com.au

