# Pasture palatability

## Animal Production

Animal production

**Poor pasture palatability is caused by various factors, usually in combination. Your ryegrass cultivar is not one of them! Herbage tests can help identify where the help identify where the problem lies.**

## Weather conditions

Most issues occur in spring during wet periods, when sunshine is low and growth rates are rapid. This reduces pasture DM (<15%), and stops animals from eating enough to their meet daily energy requirements, because they are consuming a lot of water. Water soluble carbohydrates also drop with a lack of sunshine, reducing stock intake further. The issue typically solves itself when the weather improves. Meantime, mowing problem paddocks pre or post-grazing can help maintain residuals and feed quality.

## Not cultivar

While the vast majority of seed we sell produces pastures that are well grazed, very occasionally we see a palatability issue. Often these farms have 2 or 3 paddocks sown with an identical seed mix on the same day, and only one paddock has an issue. The problems we see are paddock related, not related to any cultivar.

## Rising residuals

Palatability suffers when post-grazing residuals creep up. This is common in late spring. Check for high levels of basal stem and dead matter in the pasture base – animals actively avoid eating this. Dead leaves also accumulate if pre grazing covers are too long (> 3rd leaf). Reset residuals by mowing, to 4-5 cm for dairy cows and 3-4 cm for sheep; or by grazing with dry stock.

*Would you eat this? Dead 4th leaf close up, dead leaves in the base of new pasture .*

## Animal preference

Given a choice, animals can develop a distinct preference for tetraploid vs diploid ryegrass pastures. In this case, focus on grazing diploids well, possibly earlier than tetraploids. High volumes of supplement also reduce pasture intake and desirability, so feeding less of this can help.

## Effluent application

Animals don't like grass freshly sprayed with effluent. Also, repeat effluent applications can raise nitrogen and potassium levels in both soil and herbage, which can both reduce palatability. Harvest silage from such paddocks to 'export' surplus nutrients and correct the imbalance.

## Nutrient imbalance

Non-effluent paddocks can have nutrient imbalances, too. Herbage test results often reveal useful information. For example, this paddock tested below had palatability issues, even though feed quality was very good (ME = 12.5).

**Plant Analysis Results**

**Sample Name:** Viscount - Herbage
**Lab Number:** 2037240.1
**Sample Type:** Mixed Pasture, Dairy (P301)

| Analysis | | Level | Optimum | Below Optimum Above |
|---|---|---|---|---|
| Nitrogen* | % | 4.6 | 4.5 - 5.0 | |
| Nitrogen* | %DM | 4.9 | | |
| Phosphorus | % | 0.47 | 0.35 - 0.40 | |
| Potassium | % | 3.4 | 2.5 - 3.0 | |
| Sulphur | % | 0.30 | 0.25 - 0.35 | |
| Calcium | % | 0.38 | 0.50 - 1.00 | |
| Magnesium | % | 0.16 | 0.20 - 0.30 | |
| Sodium | % | 0.179 | 0.100 - 0.150 | |
| Iron | mg/kg | 302 | 50 - 65 | |
| Manganese | mg/kg | 75 | 60 - 150 | |
| Zinc | mg/kg | 29 | 25 - 50 | |
| Copper | mg/kg | 9 | 10 - 12 | |
| Boron | mg/kg | 5 | | |
| Molybdenum | mg/kg | 3.2 | 0.30 - 1.0 | |
| Cobalt | mg/kg | 0.09 | 0.06 - 0.10 | |
| Selenium | mg/kg | 0.04 | 0.03 - 0.15 | |
| Chloride* | % | 0.98 | 0.30 - 2.4 | |
| Crude Protein* | %DM | 30.9 | 20.0 - 30.0 | |
| Digestibility of Organic Matter in Dry Matter (DOMD)* | % | 77.9 | 65.0 - 80.0 | |
| Metabolisable Energy* | MJ/kgDM | 12.5 | 9.0 - 12.0 | |

This pasture with a palatability issue had high feed quality (ME = 12.5) so grazing management is unlikely to be the cause.

But other things are going on.

High nitrogen levels in plants reduce palatability. Good spring levels are 3-4%, here they are high at 4.9%

Potassium is also high (3.4%), but not excessively so. High potassium reduces palatability.

Low calcium (Ca) can also reduce palatability.

The test shows N was very high, K was high and calcium (Ca) was low – all known to reduce palatability. Graze or mow to restore residuals and maintain feed quality. Ideally make silage to 'export' surplus nutrients. Apply 1-2 t/ha lime to increase plant Ca uptake and decrease K levels.

## Other characteristics

Seed head is a known palatability issue. Also check for disease, for example, rust in summer.

Finally, *Standard endophyte (SE)* pastures produce alkaloids that animals don't like to eat in summer and early autumn.