

TOP TIPS FOR WINTER CROP Paddock SELECTION

Summary

- 1 Steeper paddocks come with bigger risks
- 2 Consider proximity to waterways and gullies, and propensity to flood
- 3 Soil type can impact productivity, nutrient loss and animal welfare
- 4 Other factors such as class of stock, animal welfare, access, biosecurity and catch crops should be planned for

Which paddock should I use for winter crop?

Pasture renewal is important but shouldn't be the only thing that is top of mind when selecting a paddock for a winter crop. There are other important considerations to reduce the possible risks of contaminant loss from winter crops, increase production and look after your animals.

Grazing tip: The higher the risk of soil, phosphorous or nitrogen loss the smaller the animal you should be grazing on the paddock or the lower the stocking intensity for heavier animals.

Higher risk paddocks = graze sheep or 1-year-old cattle. Lower risk paddocks = ok to graze older cattle and deer

Keep this in mind for paddock selection—do you have some low-risk paddocks to graze your heavier cattle on?

1 Steeper paddocks come with bigger risks

- Increasing slope enhances the risk of losing valuable top soil. Think about slope in relation to establishment methods, how the paddock will be grazed and what animals will be grazing it. If it is too steep to get a tractor, then it might be too steep to intensively graze cattle on. Remember, its best to graze from the top down.
- When sowing the paddock try to sow across the hill rather than top to bottom. These rows will act as mini buffers catching soil when it travels down the hill.



2 Consider proximity to waterways and gullies, and propensity to flood

- Proximity to waterways or direct channels to waterways—if you are going to intensively graze the paddock over winter then think really carefully about whether a paddock next to a waterway is a good option for a winter crop—if you have no choice make sure you leave an uncultivated buffer of at least 5m next to the waterway for flat paddocks—the buffer will need to increase with increasing slope.
- Critical Source Areas (CSAs)—these are the areas in the paddock that will be a high risk for channeling nutrients, soil and fecal matter into waterways. Areas such as gullies, those with surface ponding in winter and ephemeral streams should be left uncropped and ungrazed so they are left as grass buffer zones.
- Consider placing sediment traps in CSAs, at tile or pipe outlets, or near streams, as these are very effective at reducing sediment loss. To be most effective they must: exclude stock, have soil cover (e.g. be grassed), slow the flow of water so that the sediment can settle out, and be emptied on a regular basis.

3 Soil type can impact productivity, nutrient loss and animal welfare

- Soil type—should play a critical part in selecting areas for winter crops. Generally, heavier soils and those with drainage impediments are more prone to P and soil loss (particularly when combined with slope), stony soils are less prone to pugging and the risk of overland flow but have higher risk of N loss. Soils prone to winter pugging will likely have less risk of N leaching loss but increased risk of longer term soil damage and impact on subsequent production.
- Soil fertility—Make sure you soil test before selecting the paddock and deciding on crop type or fertilizer application. Optimal applications of fertilizer reduce the risk of nutrient loss. A nutrient budget (OverSeerFM) will help highlight potential nutrient losses from different crop types and fertilizer applications.



4 Planning should include other factors such as class of stock, animal welfare, access to the paddock during grazing, biosecurity and catch crops.

- Consider your options for a catch crop when sowing or choosing paddocks. The sooner you can get something growing after the main crop the less chance of losing nutrients—think about what the options are for establishing a quick growing pasture or crop after winter that might also give you summer feed or fattening options.
- Animal welfare considerations include:
 - a. Carefully planning feed management so that animals are well fed on high quality fodder.
 - b. Is the paddock large enough and suitable to feed the intended number of animals for the intended length of time?
 - c. If you need to, can you get to animals to help them or get them to a handling facility easily?
 - d. Shelter (which may be topography as well as vegetation), access to water (consider the location of water troughs and where they sit when thinking about the best way to graze the paddock).

- e. Quality and amount of water is important for welfare and productivity. Dairy cows in particular can become stressed by water shortages, so as well as supply make sure your troughs have enough capacity to have several animals drinking at once. Do you need to purchase some portable troughs so that you can graze from the top of the paddock down?
 - f. If your soil is prone to pugging consider leaving areas of the paddock in grass for animals to lie down on, having a runoff paddock with grass or a standoff area. In extreme cases, have an alternative paddock for animals until soil conditions are suitable to return animals to the crop.
 - g. The distance animals have to walk to water or supplements.
 - h. Keep an eye out for weak, injured, ill or harassed animals and be prepared to take them off the crop or out of the mob.
- **Aspect**—consider how aspect affects risks. Is it a south facing paddock which may mean that it doesn't dry out as well as a north facing paddocks which means more pugging?
 - **Biosecurity**—diseases such as *M. bovis* may require isolation of mobs between or within farms from each other. Can you keep space between mobs if needed? Either with an ungrazed paddock or with hotwires?
 - **Accessibility**—you're going to have to get to this paddock all through the winter possibly with a tractor. Heavy tractors can also cause sediment loss and soil damage when its wet. Laying out balage in the crop prior to winter will reduce this impact.

B+LNZ RESOURCES

 www.knowledgehub.co.nz
www.beeflambnz.com/wintergrazing

Further reading to download:

- [Winter forage crops: Management before grazing](#)
- [Ten top tips for winter grazing crops](#)

For hard copies of publications please email: resources@beeflambnz.com

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