**Risk Management Guide for Intensive Winter Grazing on Arable Farms**

Answer ‘yes’ or ‘no’ to having each risk factor in your winter grazing system. For each factor you answered ‘yes’ to, see what the associated risks are of nitrate leaching, phosphorus (P) and sediment losses, and soil damage through compaction and pugging. Risk management options relevant to each risk factor are listed in the last column and refer to the table on the next page.

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| --- | --- | --- | --- | --- | --- |
| yes/no | Risk factor | Risk of nitrate leaching | Risk of P and sediment losses | Risk of compaction and pugging | Risk management options |
|  | Light soils (sandy, stony) | x |  |  | 1 |
|  | Heavy soils |  | x | x | 1, 2, 4, 6 |
|  | Poor soil structure |  | x | x | 1, 2, 4, 6 |
|  | Steep slopes |  | x |  | 1, 4, 5 |
|  | Critical sources (waterways, natural drainage streams) |  | x |  | 1, 5, 6 |
|  | High stocking density (cows/ha/day) | x |  | x | 3, 6 |
|  | High soil residual N levels | x |  |  | 1, 2, 3 |
|  | High protein level in feed | x |  |  | 3, 6 |
|  | Lack of knowledge or skills in staff managing winter grazing | x | x | x | 1, 5, 6 |
|  | Consecutive winter cropping | x | x | x | 2 |
|  | High rainfall (all above risk factors are intensified with high rainfall) | x | x | x | 1, 2, 3, 4, 5, 6 |

**Risk Management Options**

|  |  |
| --- | --- |
| 1. PADDOCK AWARENESS | Some paddocks may need to be avoided completely |
| Only graze high risk areas in dry conditions |
| Graze heavier soils early in the season before they get saturated, and light soils later in the season after the biggest risk of drainage |
| Begin grazing at the top of the slope and work downhill |
| When near waterways, begin grazing away from the critical source and work towards it, leaving at least a 3 meter buffer zone |
| 2. CROP ROTATION AND CULTIVATION | Allow paddocks to recover between grazing events (soils prone to compaction should have longer periods between winter forage crops) |
| Fit the crop rotation so that it helps break weed, disease, and pest cycles |
| Minimise tillage before and after the forage crop |
| Sow a crop that can utilise remaining N in soil (cereal, grass) as soon as soil conditions are suitable |
| 3. CROP SELECTION AND MANAGEMENT | Manage fertiliser inputs to forage crop to meet crop demand |
| If grazing a high yielding crop, use reactive management strategies (see number 6) |
| Graze a lower yielding crop (Italian ryegrass, forage oats) to decrease stocking density requirements |
| Understand nutritional qualities of crops, and supplement accordingly (e.g. kale is high in protein but low in fibre, so supplement needs fibre but not protein) |
| 4. FEED PREPARATION | Place bales of straw or baleage throughout paddock for break feeding to eliminate the need to drive heavy equipment on vulnerable soils |
| Lift fodder beet in dry conditions and feed off the paddock when needed |
| 5. STAFF TRAINING | Ensure staff responsible for managing grazing are up-skilled with management strategies to react in wet conditions (see number 6) |
| Set up guidelines in a contract if staff from off-farm are managing grazing |
| 6. MANAGING GRAZING ON WET SOILS | Shift more than once a day with small breaks before soil begins pugging |
| Increase amount of supplement fed, and feed out in less vulnerable areas |
| Back fence and use transportable water troughs to minimise hoof traffic on bare soils |
| Split the mob into multiple groups to reduce grazing density |
| Have a stand-off paddock or pad in very wet conditions |