AMURI IRRIGATION CO

Phosphorus and Sediment Loss Management: The Essentials for a Winter Management Plan

Planning

- The manager should understand the environmental risks associated with phosphorous, sediment and effluent run off and likely sources of these
- Critical nutrient source areas and other high run off risk areas need to be identified and nutrient/sediment losses from these appropriately managed.
- Put a plan in place to reduce P and sediment losses from critical source and other high risk run off areas
- Develop a winter fodder crop management plan before you order the seed

Cultivation and Location of crops

- Minimum or no till cultivation techniques should be used when high risk of run-off or flooding of cultivated paddocks
- Winter forage crops should be located in areas of lowest risk from flooding, soil loss and land damage
- Lighter soils are often located near waterways and heavy soils have higher pugging and run off risks. Management needs of each is different

Tracks and Laneways

- Laneways should be located away from waterways and use buffer strips to avoid direct runoff of stormwater or effluent
- Laneways alongside waterways (and water races) are designed for lane run-off to be directed away from the waterway
- Runoff from tracks approaching waterway crossings should be diverted away from the waterway. Use bunds or reprofiling in high risk locations
- Runoff from tracks on sloping country is particularly high risk – try to intercept and divert away from waterways

Grazing Practises

- Cattle should be grazed on and off fodder block
- Strip next to riparian margin grazed last when break feeding winter feed crops
- Where possible graze from top of slope to bottom using crop as buffer strip
- Keep welfare issues in mind

Margins and Buffer Strips

- Vegetated buffer strip of sufficient width to filter any runoff is left between grazed fodder crop blocks and waterways.
- A strip may need to be several metres wide to be effective – key factors are slope, crop and soil.
- The steeper the slope the wider the strip.
- Drains are shaped to minimise risk of bank erosion
- Drain cleaning is undertaken in a manner that minimises sediment losses.

Fertiliser Use

- No super-phosphate application in high risk / rainfall months i.e. June-September.
- Regular soil tests (at least 2 yearly) must be undertaken as aid to determining P needs
- P fertiliser application rates based on Advisor's recommendations and designed not to exceed optimum Olsen P level
- Slow release P fertilisers are used where risk of P loss from conventional P fertilisers are high
- GPS technology used for precise application of all P fertiliser spread

Key Points

1. Phosphorus (P) is an essential plant nutrient but a high-risk pollutant in the aquatic environment. You should be keeping it where plants can use it and out of waterways. Good for your pocket and good for the environment.
2. When P is bound to soil particles it is relatively insoluble. If you manage soil and sediment loss, you largely manage your P loss; BUT
3. Superphosphate fertilisers are very soluble for about the first six weeks – so have a high risk of being leached in the time following application. Do not apply soluble P fertilisers when there is a risk of heavy rain no applications during winter months.
4. There is a high P load in faeces – keep crap out of waterways.
5. Tracks, laneways and crossing points are high risk areas that concentrate sediment and crap – focus attention on managing run off from these.
6. Winter forage crops are very high risk. Manage crops carefully. Plan your winter-feeding areas and – apply all the rules for grazing and buffer strips.