## **Farm Nutrient Loss Index Paddock Record Sheet**

Farm\_

Date\_\_\_\_\_

## **Land features**

Factor rating	1	2	4	8	Paddock		
Surplus rainfall and storm likelihood (Use the next higher score if irrigation is used)	NSW - Central & Southern Tablelands, Southern Slopes & Plains SA - Adelaide Hills, Kangaroo Island, Lower Murray WA - Great Southern	Qld - Darling Downs and Burnett Vic - North Central, Wimmera NSW - Northern Slopes & Plains	NSW - South Coast, Northern Tablelands Qld - Dry tropics, Coastal South East Tas - Midlands & East Coast, South, North East SA - South East Vic - South West, North East, East Gippsland	NSW - North Coast Qld - Wet Tropical Coast Tas - North, North West Vic - West Gippsland WA - South Coast, South West, West Midlands			
Slope	Flat: < 1%	Gentle: 1 – 5% 2WD	Hilly: 6 – 15% 4WD	Steep: >15% TRACTOR			
Dominant land shape	Flat: < 1% slope	Diverging hillslope	Uniform	Converging hillslope			
Waterlogged area	0 – 1%	1 – 10%	10 – 50%	> 50%			
Runoff modifying features	Net Retention: Features retain all or most runoff on-farm eg farm dams, soil surface detention, irrigation re-use systems	Net Deceleration: Overall, features slow runoff from leaving the farm eg. riparian buffer strips, wetlands and natural drainage lines	No features: Features neither slow or accelerate runoff	Net acceleration: Overall, features accelerate most or all surplus water leaving the farm eg. surface or tile drain and gully			
Proximity to nearest receiving waterway	300+ m	100 – 300 m	30 – 100 m	<30 m			
Soil profile type	High infiltration and drainage: Uniform or gradational sandy to light clay profiles which are well structured. No horizon is wet for more than a day after saturation. Excess water flows downward past the root zone readily.	Moderate infiltration and drainage: Soils with a deep A horizon (> 50 cm) and a well structured B horizon or poorly structured gradational profiles. Horizons may remain wet for several days but less than weeks after saturation.	Moderate infiltration but poor drainage: Texture contrast profiles with a sandy to loam A horizon (< 50 cm) and/or a poorly structured B horizon or Uniform medium and heavy clay profiles. Seasonal ponding of water and perched water tables may occur.	Poor infiltration and drainage: Heavy clay profiles or hard surface. Water remains at or near the surface for most of the wet period of the year. Very little infiltration into B horizon			
Groundwater depth	> 1.5 m	Groundwater discharges to surface	_	<1.5 m			
<b>Topsoil P fixation</b> (Phosphorus Buffering Index, PBI)	Very high (eg. clay and clay loam) PBI > 280	High (eg. clay loam) PBI 140 - 280	Medium (eg. sandy loam) PBI 35 - 140	Low (eg. sand) PBI < 35			

## **Nutrient management**

The triangement										
Factor rating	1	2	4	8	Paddock					
Soil P test (mg/kg)	Low soil P	Medium soil P	High soil P	Very high soil P						
Olsen P 0-10 cm 0-7.5 cm	<7 <9	7 - 15 9 - 19	16 - 25 20 - 30	>25 >30						
Colwell P (10cm) light soils medium soils heavy soils	<6 <12 <18	6-18 12-35 18-50	18-30 35-60 50-90	>30 >60 >90						
Fertiliser P rate (kg P/ha)	None or <11 kg/ha annually	11-25 kg/ha annually	25-59 kg/ha annually	> 60 kg/ha annually; single dose and/or no soil test, nutrient budget						
Fertiliser N rate (kg N/ha)	0 to <30 per application < 100 annually	30 - 60 per application 100 -250 annually	30 - 60 per application >250 annually	> 60 per application and/or> 250 annually						
Nutrient hotspots (% area of paddock)	Low: < 5%	Medium: 5 - 10%	High: 10 - 20%	Very high: > 20%						
Timing of fertiliser application	Apply when very low runoff or drainage risk: Apply P when soil is dry and storm event is not forecast within 4 days. If N is used, apply during active pasture growth when soil is moist, but not waterlogged, except 2 days before or after storm rain or irrigation. More than 28 days between N applications.	Apply when low runoff or drainage risk: Apply P when soil is dry and storm event is not forecast within 4 days. Apply N during active pasture growth at any time of year, except 2 days before or after storm rain or irrigation. More than 28 days between N applications.	Apply when moderate runoff or drainage risk: Apply P when soil is dry or moist, but not waterlogged, and storm event is not forecast within 4 days. Apply N more than 3 times per year at any time, except 2 days before or after storm rain. N might be applied to water-logged soil or before irrigation. More than 28 days between N applications.	Apply when high runoff or drainage risk:  Apply P or N at any time of year regardless of heavy rain forecast and/or less than 28 days between N applications.						
Effluent rate	No effluent applied	Applications match pasture needs. Effluent quality tested.	Low rate regardless of pasture needs: < 25 mm/ha per application, irrespective of soil condition or plant needs.	Effluent not tested and/or applied at high rate: >25 mm/ha, irrespective of soil condition or plant needs.						
Effluent timing	Summer or autumn surface application or incorporation. Backup recycle dam used to capture excess effluent.	Spring application when no heavy rain forecast for 7 days. 'Short watering' used to eliminate runoff from flood irrigation.	Effluent applied when soils already waterlogged or heavy rain expected in <7 days.	Effluent applied to land during winter and/or no effluent storage system and/or effluent drains directly off-farm.						

## Pasture management

Stocking rate	≤ 1.5 milking cow/ha Less than 1 beef cattle/ha 8 DSE/ha or less	1.5-2.5 milking cow/ha 1-1.5 beef cattle/ha 9-13 DSE/ha	2.5-3.5 milking cows/ha 1.5-26 beef cattle/ha 14-24 DSE/ha	3.5 milking cows/ha or more 2 beef cattle/ha 25 DSE/ha or more			
Pasture type	Lucerne eg >30% lucerne	Deep rooted perennials eg >30% phalaris, kikuyu or native red grass.	Shallow rooted perennials eg >30% perennial ryegrass, white clover, cocksfoot or wallaby grass.	Annual species such as grasses and sub clover, eg < 30% perennial species			
Ground cover - lowest in the year	>80 %	70 - 80 %	50 - 70 %	< 50 %			

For FNLI v1.18