



WITHHOLDING PERIODS AFTER APPLYING FERTILISER TO PASTURE

Regulatory Requirements

Withholding periods before grazing for fertilisers differ from those for agricultural and veterinary chemicals.

With agricultural and veterinary chemicals, failure to comply with the label may result in residues in farm produce, e.g. meat and dairy products, exceeding the Maximum Limits. This may result in the produce being rejected, and being withdrawn from sale.

This will not happen with fertilisers. Fertilisers supply nutrients in forms that occur in nature. They supplement the soil in supplying nutrients in forms readily available for plant uptake. There are no laboratory tests to detect their use. Withholding periods for fertilisers are of a precautionary or advisory nature, and are intended to protect the health of grazing animals.

Animal Health

The health of livestock may be affected in two ways after applying fertiliser. Firstly, there may be direct ingestion of recently applied fertiliser, as a result of fertiliser granules or dust lodging on the leaves of the pasture or forage crops. Secondly, plant concentrations of nutrients taken up from the soil by plant roots may remain high for several days or weeks after the application of fertiliser, depending on when and how much rain (or irrigation) is received, and how quickly regrowth occurs.

Animal health may be directly affected by the fertiliser and the nutrients and impurities it contains, or indirectly as a result of induced imbalances, deficiencies and toxicities. The risks are not high, but there are circumstances where the use of fertiliser has temporarily affected the health of grazing animals, e.g. fluorosis from the fluorine present as an impurity in phosphorus fertilisers, or induced copper deficiency where molybdenum has been applied.

In other cases, the use of fertilisers has resulted in sudden death. This is more likely to occur where nitrogen fertilisers are applied. Urea poisoning has occurred where clumps of urea fines have fallen from the spreader and subsequently been ingested by cattle.

Nitrate poisoning has occurred where stock have had access to fresh green pick, in which nitrate has been taken up from the soil, but not yet assimilated into protein in new plant growth. Nitrate poisoning is most likely to occur where little other forage is on offer.

Spelling Paddocks

If practical, it is best to remove animals from areas being fertilised, and not to readmit them until after rain is received or irrigation applied, and regrowth occurs, i.e. for three to four weeks. This minimises the risk of direct ingestion of fertiliser (by washing fertiliser residues from the leaves), and nitrate poisoning of grazing animals from young regrowth.

Stock may be able to be reintroduced to the paddock within a couple of weeks where rapid growth occurs. Where growth is slow, it may be best to wait for a month or more.

What if the paddock can't be spelled, e.g. on small holdings/acreage blocks?

Apply fertiliser when rain is expected or before irrigating, and conditions (soil moisture, temperature) are favourable for regrowth. Do not apply in drought, and when there is little forage on offer to grazing animals. Stock should have access to a good body of standing feed.

What are the Risks with Phosphorus Fertilisers?

Granular phosphorus fertilisers, such as Incitec Pivot SuPerfect (single superphosphate) and MAP, contain fluorine (F) as an impurity at concentrations that make them unsuitable for use as mineral supplements for livestock. If they were to be used for this purpose, fluorosis would be induced.

The amount of fertiliser (and fluorine) ingested directly from pasture after topdressing will be considerably less than that which would be consumed if these products were inadvertently used as phosphorus supplements, and grazing animals are only exposed temporarily to the fluorine. Nevertheless, it is recommended that pasture not be grazed for three weeks or until rain or irrigation is received after topdressing with phosphorus fertilisers. Stock can be readmitted within three weeks if rain (or irrigation) has been received to wash fertiliser residues from the leaves. There is no need to wait until regrowth occurs, as is recommended with nitrogen fertilisers.

An exception to this rule is where molybdenum (Mo) fortified superphosphate is used, e.g. SuPerfect Mo 0.025%. In the weeks after application, plant levels of molybdenum may be high, either as a result of the fertiliser lodging on the leaves, or uptake of molybdenum by plant roots from the soil. This is most likely to occur on sandy soils low in copper. Elevated concentrations of molybdenum in the pasture may induce copper deficiency in grazing animals. It is advisable to keep stock off treated areas for up to four weeks after applying molybdenum.

Nitrogen Fertilisers?

It is best to wait for three to four weeks after applying nitrogen fertiliser before grazing. High nitrate concentrations in the young shoots during the early stages of regrowth may result in nitrate poisoning and the sudden death of grazing animals. Nitrate concentrations fall as plant growth occurs, due to dilution and the conversion of nitrate to protein.

Potassium Fertilisers?

Muriate of Potash poses no risk to grazing animals if accidentally ingested.

High concentrations of potassium in feed on offer, environmental conditions, pasture composition and specific animal classes (high producing lactating cattle), can lead to Magnesium dietary imbalances (hypomagnesia – grass tetany). Understanding soil test potassium values and keeping individual fertiliser applications <60kgK/ha and annual applications <120kgK/ha, assists in reducing grass tetany risks.

Incitec Pivot Fertilisers (a business of Incitec Pivot Ltd ABN 42 004 080 264)

28 Freshwater Place

Southbank Vic 3006

Freecall 1800 009 832

www.incitecpivolfertilisers.com.au