For those landholders with large supplies of surface or underground water, irrigation of dairy pastures offers a way of extending the season and producing higher value milk. Very often however, the extra volumes of water applied over the summer months can trigger some negative effects with regards to soil trafficability. Effective irrigation calls for the application of 4-5 megalitres per hectare over the irrigation season and this represents an additional 4-500 mm of “rain” on top of the typical annual rainfall.

It is not unusual for whole paddocks to become waterlogged under this additional water loading and land drainage needs to be considered as an integral part of an irrigation program. If the land in question comprises a heavy clay sub-soil, it is more than likely that mole drainage will need to be employed to assist water movement to the underground pipe drains. These mole drains are an essential component of the drainage system and require strict adherence to certain parameters for their successful implementation.

Under dryland conditions, the moles are pulled during the summer months whereby the sub-soil can dry and consolidate before the onset of winter rains. Under ideal conditions these moles can last for five years before needing to be re-installed. However under irrigated conditions it is not the aim of the enterprise to let the sub-soil dry out because this would induce pasture loss. As a result there is conflict between the ideal soil moisture level for pasture and the ideal moisture level for mole establishment. Optimum irrigation will keep the soil at Field Capacity which is a moisture level similar to that experienced in mid to late spring.

As a general rule, it is unlikely that the perfect drying conditions required post moling will ever occur under irrigation. Therefore the moles cannot be expected to have the normal life span of around 5 years. The moles are likely to experience unconfined swelling and have poor flow characteristics. It is advisable to place the collectors closer together and plan to re-mole the area atleast every 2 years.

more grass  less mud …  guaranteed

DRAIN TECH PTY LTD

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