

Dust Depression Strategies

Over the last number of years and in particular during the summer months, the debate surrounding surface type for a motocross facility becomes debatable and many views are put forward on how to achieve dust depression.

To understand what the problems are, Fort Lytton mx club delegate examined what are the critical elements on how a track surface works and to the credit of the track committee, obtained the only ERA 65 by a motocross club in Australia by being so diligent.

There are five areas that must be understood and managed efficiently to ensure the end result is a safe riding surface. They are:

1. Dirt Quality
2. Drainage
3. Watering
4. Track equipment
5. Cambers

1 - Dirt QUALITY

Sand and a combination of clay @ 2 to 1 has been identified as the most appropriate type for use. The function of sand is to hold the moisture and clay is to hold shape. This is particular important as a rider negotiates the corners and jumps.

Having a quality soil combination insure rider's safety with clear vision and the track surface stays consistent.

The challenge has been to source the perfect clean mix which contains sufficient clay content to mix with the sand.



2 - DRAINAGE

A track that is working correctly will drain all excess water off the track surface to a designated holding pond. When a track is watered or has endured heavy rain, the sand will hold the water then and the clay will hold the shape of the obstacle. When the track has reached saturation point the excess water will then drain from the top of the track to the appropriate side.

The cambers on the straight and bends allow for this flow off. Therefore, it is important that the in-field laneways are prepared to allow for this water to exit the track.

- WATERING

The watering of a track is conducted by using a sprinkler system and/or a water truck. The Fort Lytton Mx Club has experience using both techniques (sprinkler and water truck) during its tender at Lytton.

The requirement is that the surface is uniformly watered and is able to soak through the surface. A sprinkler system achieves both objectives as well the option to turn sections off if soil is becoming over saturated.



Water activated through a sprinkler system will be pumped to zones and controlled by valves located on the pump. This method will ensure that all sections of the track are watered evenly and the system is in full control by the operator from the pump.



Water which was dumped from a truck or water trailer had a tendency to run off the track and not penetrate the surface (dust developed quicker) due to high volume run off and this was a environmental concern (wast of water)

4 – EQUIPMENT

A quality surface requires certain maintenance procedures to be conducted on a daily and weekly basis to achieve particular results.

(a) Track should be contoured : - A trailing grader blade is being employed to ensure the track surface is contoured from side to side and around the circumference of the track. The blade is shaped and sits on two wheels. The blade can be moved sideways and tilted to the required position by the operator from the tractor.



If the blade is set at track level and pulled around the track it will shave off any humps and fill any hollows. It ensures your cambers are shaped appropriately and will therefore assist with water fall direction.

The blade can also be used to 'turnover' the track surface and cut a new base to ensure the drainage and contours are sufficient to promote a proper drained and moist riding surface. This activity would generally occur once a week.

(b)The 'pan' needs to be broken: - Due to racing activity and tractor work, the surface will compact and become firm. A track exhibiting a hard pan needs to be broken. The use of a power harrow has been adopted by most motocross facilities around the world.



The power harrow has the advantage of breaking the hard surface and mixing the clay that may have settled. This will allow water to be absorbed into the sand again to achieve dust depression. The Fort Lytton Mx Club have performed this activity during its tenure at Lytton and by doing so has not received any dust complaints from neighbouring business.

5 – CAMBERS

The purpose of a camber is to ensure excess water can drain from the track surface and assist with flow to the holding pond.

All motocross facilities need to insure water is available 12 months of the year and cambers on and off the track, is one technique used to insure water is not wasted.

Conclusion

There is no doubt; dust depression is a critical factor for the acceptance of a motocross facility. By acknowledging the elements which contribute to dust, proper planning is needed to implement the dust depression strategies.

The Fort Lytton Mx club has taken steps to minimise dust at their previous facility with great successes. As their record states, no dust complaints.

Fort Lytton Mx club has existing equipment to help achieve dust depression. Ie water pump, piping, machinery. The existing equipment will save money and time to apply for grants and insure continued dust control targets are meet on a daily basis .

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Behalf of Fort Lytton Mx club

Track/site Amenities and Buildings



Track amenities required for a motocross facility.

Note- * Fort Lytton Mx club able to relocate

Spectator

- Fencing to split spectators and riders*
- Spectator rest rooms
- Grand stands for spectator viewing
- Canteen

Machinery

- Water pump and fittings *
- Machinery *
- Maintenance shed
- Slasher/ mower*
- Bike wash bay

Participants

- Starting gates*

- Finish line structure
- Rider shower and toilets*
- Score and announce tower during race event*
- First aid facility
- Administration / office