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Vet Education Transfer Services Ltd

Track design to prevent Lameness

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Why have good tracks?

- Tracks and lameness – studies show tracks have a significant impact on lameness incidence. Tracks is where foot wear occurs so we need to minimise this with good tracks.
- Stock needs to be moved efficiently– shortest distance, least wear and tear
- Cost effective in time loss due to lack of efficiency, lameness.
- Less maintenance needed – sheds water, well drained, dries well (not shaded)

If we have tracks that have good, easy stock movement/ good cow flow, the cows will be happy, they will soon tell you if they like the tracks.

What is the Ideal Track?

- short - less than 1 km long.
- wide - recommended widths for tracks.

<120 cows	- 5m
120 - 250	- 5.5m
250 - 350	- 6.0m
350 - 450	- 6.5m
450+	- 7.0m+
- level.
- straight.
- even width track - no congestion points.
- crowned surface of 3-5%.
- non-abrasive top surface of fine material.
- drained on outside of fence (paddock side).
- widens out before shed.

Disclaimer: All reasonable efforts have been made to ensure the accuracy of the material in this article, however, the use of this information is at one's own risk and VETSL disclaims all responsibility for losses, costs, damages etc incurred as a result of the use of the information contained in this article.

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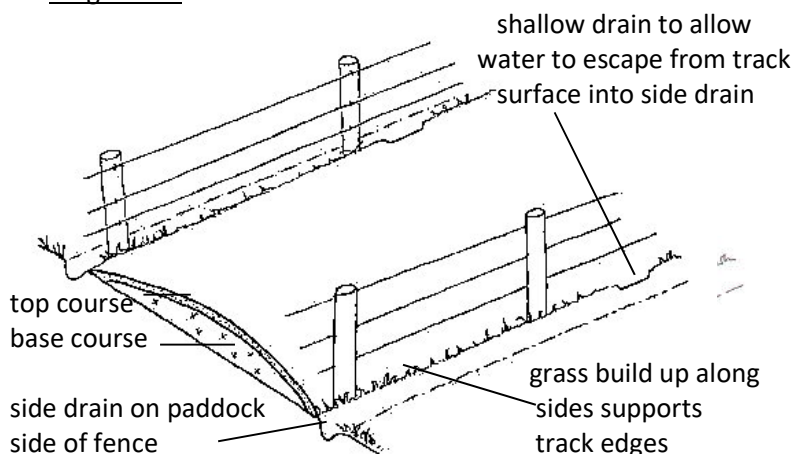
Construction of farm tracks to prevent lameness

Basic principles:

- No need to remove grass and topsoil.
- Construct a sound base above the level of the paddock.
- Provide adequate compaction.
- "Crown" the track.
- Provide a suitable non-damaging top layer.
- Construct drains.
- Transition material before the shed.

The top surface of the track serves two purposes, firstly it provides a suitable surface for the cows to walk on, and secondly it prevents water soaking into the base. The crowning is also to help the track shed water. Drains are needed to get the water away and prevent it soaking back under the base. Basically the drier the track can be kept, the easier it is to maintain.

Diagram 11 : Track Construction



Constructing the base

- coarse material with a clay content of 15 - 30% is needed to provide a base that will support the top walking surface without moving, wetting or breaking up.
- build it up well above the level of the surrounding ground.
- compaction is essential - 150 mm layers between compactions with a vibrating roller at slow speed.

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Constructing the top walking course

- finer material for the cows to walk on.
- 15 - 30% clay content if top course is used.
- minimum of 50 mm (ideally 100 mm compacted to 75mm).
- crown to maximum of 3 - 5 %.
- firm compaction with a vibrating roller is essential.
- depending on geography and topography the following materials can be used:
 - pit metal fines.
 - top course gravels.
 - Lime fines "gap 6".
 - pumice.

Construction of drains

- drains must be on the outside of the track fence so that cows don't walk in them.
- grass build up along the edges of the track is good as it helps hold the edges together, but short sections are scooped out to allow water to flow into the side drains at regular intervals. Take a spade on a rainy day to decide the best places to scoop out in order to prevent water pooling or flowing along the edge of the track. Don't cut these drains too deep or the water rushes out too quickly. Rather, cut through the grass verge at the level of the track surface and bring the grass verge sod back onto the track to act like a dam wall to direct the water out and off the track surface and so reduce surface damage. With this method the drain remains effective for much longer compared to tossing the grass verge out into the paddock.

Transition Material

Every track should have a transition material (such as lime fines, soft lime, zeolite, yellow shale fines) on the top surface for the last section immediately before the concrete milking yard. This material absorbs gravel carried on muddy feet and so reduces the amount of damaging material being carried onto the yard.

Maintenance of Tracks

- Always start improving the tracks from closest to the shed, where the cows travel most often and are bunched up.
- Lameness is seldom caused by one problem section of the track. Identify the sections where cow flow is poor.

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