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Crossings for Channels and Drains in the Ord River Area

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On farms irrigated by surface methods it is essential to provide crossings over channels and drains. These crossings must be wide and strong enough to take the biggest farm machinery.

Channel Crossings

On the Ord River scheme several types have been tried with varying degrees of success.

1. Drum Culverts in Channels

For these structures heavy duty 44 gallon oil or bitumen drums are used. The heavy duty 44 gallon drums are the most successful.

The drums are spot welded together and anchored in place. Earth should be rammed round the sides to provide an effective seal and the drums should be covered with a layer of soil at least two feet deep. Failure to use enough soil will cause the collapse of the drums.

2. Iron Pipe Culvert

A proprietary line of iron pipe culvert is available. It is similar to the drum culvert and has the same defects.

Sections of curved corrugated galvanised steel sheeting are bolted together. They are galvanised and longer lasting but dearer than the drum culvert.

To be really efficient these culverts need concrete approaches and to prevent collapse under the weight of machinery must be covered with at least two feet of soil.
Concrete box culverts are the most efficient. There is a factory at Kununurra which produces this type of culvert.

3. Concrete Box Culverts

Concrete box culverts are factory produced and are available in various sizes with sections about four feet long. There is a factory at Kununurra.

The sections are heavy and a crane is needed to handle them. For efficiency the culverts need concrete approaches and should be covered with a layer of soil.

The culvert is most efficient and everlasting. A concrete box culvert two feet square will carry most farm plows.

4. Bridge Type Culverts

Several farmers have installed bridges made of steel beams or heavy piping with a decking of steel tubes. The bridge is laid across the channel and can be moved for channel cleaning. This type of structure is good and can be prefabricated in the farm workshop. Its use will depend largely on the availability of a supply of cheap material.

Drain Crossings

The problem of drain crossings is somewhat different. The drains are generally flat and wide and carry large volumes of water and the installation of a culvert is difficult and expensive.

Stone crossings have been found effective. These crossings require a good layer of stone and gravel. The materials should be well compacted.

Due to the high cost, concrete pipes have not been used for crossings.
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