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M R. Gardiner

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INOCULATION ABSCESSSES CAN DOWNGRADE CARCASSES

By M. R. GARDINER, Chief, Animal Division

THE presence of inoculation abscesses in meat is one of the lesser known causes of downgrading or rejection of carcasses, but these abscesses have caused increasing concern in recent years. They have obvious importance in export carcasses.

These blemishes, which seriously downgrade the carcass, mostly result from faulty inoculation or vaccination techniques and can easily be avoided.

Inoculation problems in sheep have been with us since pulpy kidney vaccines became popular—and indeed essential—on many West Australian farms.

With the recent introduction of other injectable veterinary drugs such as certain anthelmintics, selenium and vitamins, their magnitude has increased.

In cattle, injectable anthelmintics and recently the non-agglutinogenic brucellosis vaccine 45/20 have created new problems.

It is difficult to understand why many farmers carry out mass inoculations for years without regard for hygienic practices. It is obvious that there is little difference in tissue reactions to infection in their animals and in humans and the consequences of a dirty needle or infected vaccine can be disastrous in both.

Perhaps because they appear to get away with it most of the time in terms of loss of sheep or cattle they fail to appreciate the damage they cause to the carcass. The high cost of labour requires
a fast, efficient operation at vaccinating time but it is false economy to emphasise speed at the expense of producing a poor quality product.

A technique so bad that sheep die from tetanus or malignant oedema or suffer extensive tissue damage can only be condemned.

Whatever the reasons, it is more important than ever that all farmers realise that vaccinations and inoculations must be carried out carefully and with due regard to the rules of disinfection if the stigma of carcass abscesses is to be avoided.

A survey of inoculation procedures used by farmers in this State was made recently. It was found that few were entirely free from faults. Some of the most common were:

- The use of dull or jagged needles which bruise and tear the tissues, predisposing them to infection.
- The use of dirty, infected needles and syringes.

- The use of too long a needle, depositing the inoculum into the muscle rather than under the skin.
- Vaccinating in dusty yards.
- Vaccinating wet sheep.
- Breaking a needle under the skin and leaving it in.
- The "bayonet charge" method—the use of any part of the animal that presents itself as an injection site.*

An amazing variety of sites was reported, including the upper hindquarter, the inner thigh while prostrate in the Cranmore cradle, the bare areas of the foreleg or groin, behind the shoulder, the skin of the face, and the top of the neck, or shoulder region.

* As described by A. S. Williams, Veterinary Surgeon, Department of Agriculture, Geraldton.

The ideal site for injection is near the base of the ears. Any blemish caused by vaccination at this site is easily trimmed away.
The site which ideally should be used for any vaccination or inoculation is in the region of the poll in the area at the base of the ears. If any blemish occurs as a result of the vaccination, it is relatively easy to trim it away at this site.

This site, high up in the neck, may be very difficult for the vaccination of unruly cattle. In these animals a position around the middle of the neck may be chosen.

Reaction abscesses resulting from the use of a vaccine usually become walled off but remain as permanent scars or cysts in the meat. The photograph shows a bad example.

Occasionally pathogenic organisms colonising the skin of dirty, dusty or wet sheep are carried under the skin when the needle is thrust in. Large areas of damaged tissue may be caused in this way.

A needle which becomes contaminated by careless handling between inoculations or by penetrating a “cheesy gland” abscess is positively dangerous to the sheep that follow, and must be changed. A dirty, infected needle invariably soon contaminates the syringe and its contents, compounding the injury.

Saving unused vaccine in a pack for the next day often results in contamination of the remaining fluid.

It is essential that sterilised equipment be used throughout the vaccination period.

Syringes and needles are sterilised by boiling and a number of clean needles should be available in a covered pan or dish. Needles should be changed frequently—say every 50th or 100th sheep—and the dirty needles dropped into methylated spirits. They may be re-used after 20 or 30 minutes in the disinfectant but care should be taken in fitting them onto the syringe to avoid contamination with dirt or dust on the hands.

Needles must be kept sharp and any that become blunt or bent at the tip should be discarded at once. Needles must not be too long; ¾ in. for sheep and ½ in. for cattle are the right lengths for subcutaneous injections. Longer needles often place the inoculum into the muscle tissue.

If an abscess does form from a subcutaneous inoculation, at least it can be trimmed from the carcass with relative ease.

Good inoculation technique is not hard to master but it does require thought and care.

The recommendations given above should almost eliminate inoculation abscesses. They are not “counsels of perfection” and can be carried out by any farmer interested in producing a high-class carcass, one that can stand up to the present-day demand for a quality product.