



Hand-jetting sheep for lice control

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Jetting long wool sheep to reduce louse infestations is only a stopgap measure to minimise wool damage until shearing. Lice numbers will be reduced, but the infestation will not be eradicated.

A thorough off-shears, or short wool treatment will need to be applied post-shearing to eradicate lice. Moreover, jetting woolly sheep can cause high insecticide residues in the wool at shearing. Because lice are likely to be present all over the sheep, treatment must target more areas than simply the back. Jetting fluid needs to penetrate to skin level around the neck and sides of infested sheep.

Hand-jetting is relatively slow, hard work requiring good quality, comfortable protective clothing, access to water, a race, and suitable jetting equipment. A consequence of the laborious nature of the work and the frequent problem of badly designed facilities is that often sheep are not properly treated. Furthermore, thoroughness of jetting diminishes as the operator tires. Producers unwilling to hand-jet properly should choose one of the backline treatments registered for long wool application. (See the [Products Tool](#) for a list of long wool lice backline products as well as products registered for jetting for lice control).

Occupational health and safety

Producers should protect themselves by wearing the appropriate protective equipment when preparing jetting fluid and when jetting sheep. Unless the race is only one sheep wide, to properly jet sheep the operator should be in the race with the sheep. Waterproof long pants, steel capped gumboots and long sleeve-waterproof gauntlets over overalls should be worn.

When preparing the jetting fluid a respirator and face shield may be required for protection from fumes and splash; check the product label for details. At the end of jetting, this equipment should be washed, dried and stored ready for next time. Soap, water and a towel should be available to wash pesticide splashes, and a clean set of clothes should be ready for the operator to change into if contaminated with pesticide or at the end of jetting.

Equipment

Jetting is best done in a concrete-floored race with adequate drainage to prevent puddles and mud forming. Trees or a roof covering to shade the operator will provide more comfortable conditions in hot weather. The jetting pump should be located away from the sheep so that its noise during operation does not bother the sheep or inhibit filling the race.

The pump should be checked before use to ensure it is operating efficiently and adequate fuel should be available. The pump must be capable of delivering 700 kPa (100 psi) at the handpiece while still returning enough jetting fluid via the recirculating hose to provide sufficient mixing in the sump. When the jetting fluid has been mixed, the pump should be started and the handpieces held below the surface of the fluid in the sump in the 'on' position for about five minutes. This will provide thorough mixing and ensure the hoses are full of jetting fluid, not just water. If two operators are jetting in side-by-side races, the pump must be able to deliver 700 kPa at each handpiece and still provide recirculation.

Installation of an inexpensive pressure gauge fitted in-line at the handpiece provides a convenient way of monitoring pressure at the handpiece. It is impossible to see a gauge at the pump while jetting sheep in the race and the reading may bear no resemblance to the pressure at the handpiece anyway.



There should be sufficient length of hose attached to the jetting wand to comfortably reach from one end of the race to the other.

Operation

Either a sickle-shaped wand (Figure 1) or the Dutjet® wand (Figure 2) may be used, although the Dutjet is preferred for ease of use and effectiveness.

The Dutjet wand has a metal shroud covering the T-shaped delivery tube. The tube has three big bore jets. The shroud has an angled back edge that opens the staple as the wand is drawn along the back of the sheep. This places the jets directly over the opening in the wool so that fluid is directed onto the skin.

Irrespective of the wand chosen, the intention is to achieve thorough wetting of the woolly areas of the sheep where lice reside. With the sickle-shaped wand, three overlapping passes along the backline and blows along either side of the throat are recommended. The nozzles must be held in the fleece to ensure penetration to skin level. If using a Dutjet, the wand must be drawn along the back of the sheep at a rate such that fluid pools at the trailing edge of the shroud. Any faster than this does not provide a thorough treatment, but any slower will result in the excess fluid running over the outside of the wool and being wasted. When sufficient wash has been applied, it will run down on the skin and just start to drip from the underbelly of the sheep. There is no need to push the Dutjet as firmly into the fleece as with a sickle-shaped wand; slight downwards pressure is sufficient. Again, blows either side of the throat are recommended. Aim to apply a minimum of 0.5 litre of jetting fluid per month of wool growth to adult sheep. Calculate this volume and time how long it takes to jet this volume into a graduated container. This is the minimum time that should be spent treating the backline of each sheep.



Figure 1. Sickle-shaped jetting wand.

Source: NSW DPI

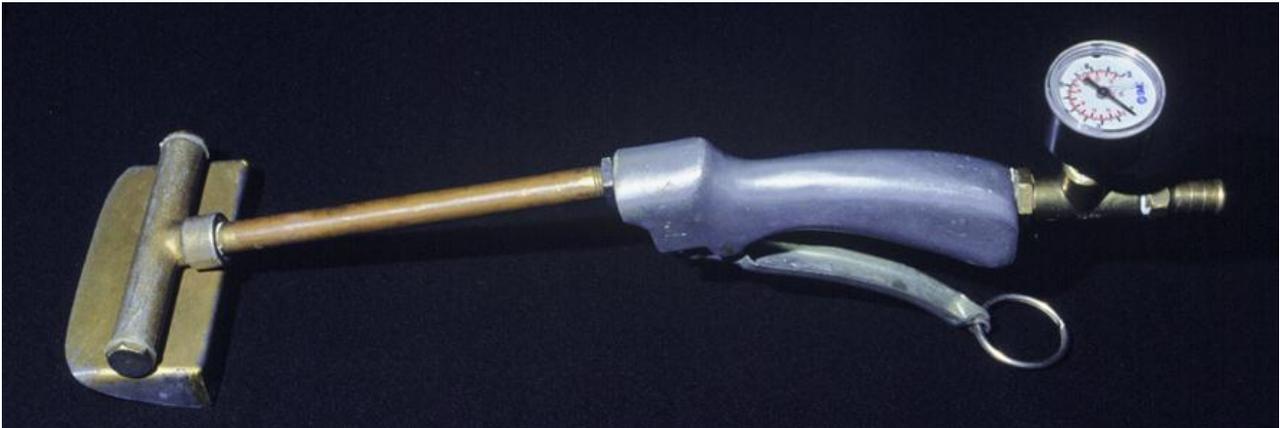


Figure 2. Dutjet® wand (showing pressure gauge at handpiece).
Source: NSW DPI

[Click here to watch the video.](#)

Figure 3: Hand-jetting video
Source: NSW DPI

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