

Quality assurance

- It is essential to check all pigs before they are sent to slaughter to make sure they have been given both doses of Improvac® successfully. Two weeks after the second injection, pigs that have been successfully vaccinated will be calmer, less prone to fighting or mounting and easy to handle, just like barrows or female pigs. They will also have significantly smaller (on average about half size) testicles compared to unvaccinated boars, although some variation is normal
- Any pigs that show signs of aggression or persistent mounting behaviour or which have large, reddened testicles, may not have received both doses successfully. These animals should be given another injection of Improvac immediately and sent to slaughter 4 weeks later
- Check all vaccinated pigs 2 weeks after the second injection and before sending to slaughter
- Give another dose of Improvac to any that have large, reddened testicles or which show boar-like behaviour (aggression, mounting)
- Keep re-vaccinated animals back for at least 4 weeks and check again before sending to slaughter

Summary

Do...

- ✓ Vaccinate healthy, clean males only
- ✓ Vaccinate just behind the ear
- ✓ Mark vaccinated pigs
- ✓ Repeat injection if in doubt
- ✓ Change needles regularly
- ✓ Inject AWAY from the body



Don't...

- X Don't load or clean injector with needle in place
- X Don't change needles inside the pen
- X Don't vaccinate in the direction of the operator
- X Don't punch the injector into the pig
- X Don't keep the trigger squeezed

Improvac® solution for injection for pigs contains GnRF analogue-protein conjugate, minimum 300 µg/2 ml dose. Also contains 300 mg diethylaminoethyl-dextran and 0.2 mg (max) thiomersal. For use in entire male pigs as an alternative to physical castration for the reduction of boar taint caused by androstenone. Aggressive and sexual (mounting) behaviours are also reduced. Do not use in female pigs or male pigs intended for breeding. Use in male breeding stock may affect subsequent fertility. Only use in healthy animals. Safe to use from 8 weeks of age. Injection site swellings are very commonly observed. Local reactions gradually resolve, but may persist for >42 days. Transient increase in rectal temperature may be seen for 24 hrs. Anaphylactoid type reactions have been observed very rarely. In a small number of animals, death occurred following the reaction, but most animals recovered without treatment and don't react to subsequent vaccinations. A 2x dose in 8 week old piglets very commonly resulted in palpable injection site reactions, decreasing in size over 2 weeks. Transient increase in body temperature may occur for 24 hrs after vaccination. Accidental self-injection may produce similar effects in people to those seen in pigs; temporary reduction in sexual hormones and reproductive functions in men and women and an adverse effect on pregnancy. Risk of effects is greater after a second or subsequent accidental injection. Take special care to avoid accidental self-injection and needle stick injury when administering. Only use with a safety vaccinator with a dual safety system; a needle guard and mechanism to prevent accidental operation of the trigger. Not to be administered by pregnant women or those who may be pregnant. In case of eye contact, rinse immediately with copious amounts of water. In case of skin contact, wash immediately with soap and water. In the event of accidental self-injection, wash area thoroughly with clean running water. Seek prompt medical advice and take the package leaflet with you. Do not administer the product in the future. For full user warnings, see SPC or datasheet. Withdrawal period: zero days. Store and transport refrigerated. Do not freeze. Protect from light. After first broaching, container may be returned to the fridge then broached once more during the next 28 days, then discarded immediately after use. Do not mix with any other veterinary medicinal product; no information is available on safety/efficacy when used with any other product. A decision to use this vaccine before or after any other product must be made on a case by case basis. Dispose of unused product/waste materials in accordance with local requirements. Keep out of the reach and sight of children. For animal treatment only. For further information, please contact your veterinary surgeon or Zoetis UK Ltd, Tadworth, Surrey, KT20 7NS, POM.V@zoetis.com, Zoetis, 9 Riverwalk, National Digital Park, Citywest Business Campus, Dublin 24, POM@zoetis.com Use medicines responsibly (www.noah.co.uk/responsible). www.zoetis.co.uk. Customer support: 0845 300 8034

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How to vaccinate pigs using an injector with enhanced safety features



Improvac®

● Read this leaflet

Anyone who administers Improvac® to pigs should first attend one of the Swine Vaccination Device Training workshops approved by Zoetis. This leaflet summarises the contents of the training workshop, including the main things that you need to know and remember in order to vaccinate pigs against boar taint safely and effectively. It should be read in conjunction with the specific instruction manuals provided by the manufacturer of the particular injector you intend to use. This leaflet is not a substitute for attending a training workshop. **NB: women who may be pregnant should not administer Improvac®**

● What is an injector with enhanced safety features?

Injectors with enhanced safety features are designed to minimise the risk of accidental self-injection or injury to individuals who vaccinate pigs against boar taint. These devices have a number of features which reduce the exposure of the operator to the needle whilst making the delivery of an accurate subcutaneous dose of Improvac® both quick and easy. However, it is essential to know how these devices work, and to practice using them correctly under supervision, in order to benefit from the enhanced safety features.

As well as having safety benefits, these devices are also designed to make single-handed use easy and comfortable – so large numbers of pigs can be injected in one session without undue fatigue.

● Preparing the injector

The detailed instructions for preparation vary according to the type of safety injector being used. You should read and familiarise yourself with the instructions provided by the manufacturer of the particular injector you intend to use.

General guidelines are as follows:

- **Never prepare and load the injector with the needle attached**
- **Connect the feed tube and vaccine vial, and load the injector according to the manufacturer's instructions**
- **Attach the needle AFTER the injector has been loaded and only when everything else is ready for vaccination to begin**
- **Have everything you need for each session, such as spare needles, ready on a trolley or similar outside the pen before you start**

● Before injecting

If males and females are kept together and you are not able to separate them, then the females need to be clearly marked to ensure that only males are vaccinated. Remove any sick pigs, making sure that you identify them and record the details so that they can be vaccinated on a later occasion. Finally, make sure that the pigs to be vaccinated are clean and dry.

Pigs should be confined to a small area to stop them moving around and making it difficult to inject them. This can be done in a number of ways, for example using boards, plastic sheeting, or even a corridor. Alternatively pigs may be easy to inject while they are feeding. Whatever method is used, it is important to avoid stressing the animals by restricting their space too much. Having more than one person at each session makes life a lot easier and helps to make sure that no pigs are missed. Keeping groups to a manageable number of pigs also helps.

- **Clearly mark females in mixed groups and inject males only**
- **Remove sick pigs**
- **Ensure pigs are clean and dry**

● Vaccination procedure

First, the needle is attached to the injector. Then the operator can enter the pen so the pigs become accustomed to his or her presence.

Each pig is injected in the correct site (**just behind the ear**) and immediately marked on the back. The injector should be moved around the skin until the right site is found; only then is the trigger squeezed to release the needle guard and the injection given by pushing the injector towards the pig. The correct technique for delivering injections causes much less fatigue.

When vaccinating, always point the injector **AWAY** from the operator – this will greatly reduce the risk of accidental self-injection.

If for any reason you think that the pig was not vaccinated successfully, then give that animal a second dose immediately. It will not harm the pig if it gets two doses; but if one injection is missed then vaccination will not be fully successful.

The details of each vaccination schedule, identification, date, numbers etc should always be recorded immediately.

- **Inject in the correct site, just behind the ear, with the injector at 90 degrees to the skin**
- **Mark each pig as soon as it is successfully vaccinated**
- **Always vaccinate AWAY from the operator**
- **Inject by pulling the trigger and pushing the device against the pig; do not 'punch' the device into the pig**
- **If in doubt, repeat the injection**



After vaccination

- Always clean, disinfect and then rinse the injector with clean water after every use
- If the injector is to be stored before being used again, follow the manufacturer's maintenance advice