

Using the pigs' water supply system can be a safe and effective method of delivering medicines including antibiotics, vaccines, anti-parasitics and anti-inflammatories. Oral treatment of pigs via the water supply is now becoming the delivery route of choice in many situations. Some basic understanding of the potential methods, their limitations and applicability can be extremely helpful.

WATER MEDICATION

POSITIVES:

- Good for group treatment, particularly when medication needs to start promptly.
- Sick pigs usually continue to drink, even after appetites have diminished.
- Infections of the G-I tract- high antibiotic levels are usually achieved in the gut following oral delivery.
- Can often be applied strategically to target smaller groups of pigs, compared to feed medication.

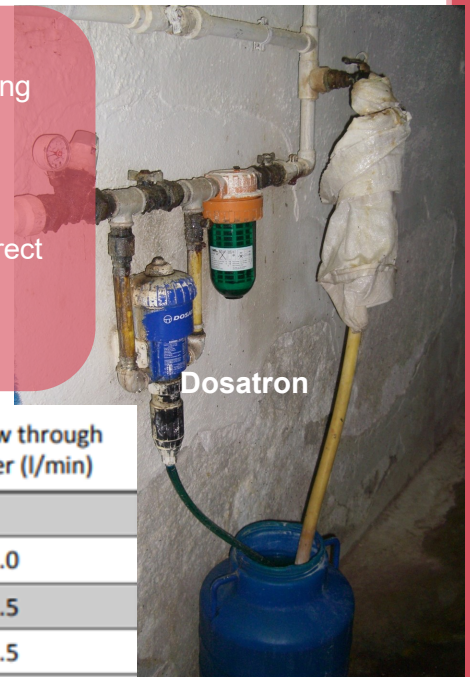
NOT SO GOOD IF:

- ⇒ Water supply is direct to Mains - no 'air gap' check 'Legalities'.
- ⇒ Pigs are 'wet fed' - these pigs have low and variable water intakes.
- ⇒ Water supply leaking - no point medicating slurry!
- ⇒ Supply system such that medication cannot be targeted on just the pigs requiring treatment.
- ⇒ Supply system is old/ badly affected by 'biofilm' which can reduce efficacy.
- ⇒ The pigs are so sick that their water intake is reduced- these pigs need treating by injection.

TO ENSURE SAFE AND EFFECTIVE WATER MEDICATION

WE NEED TO:

- Understand the water delivery system, including any proportional dosing device such as Dosatron or Select Doser (see picture)
- Know the number and weight of pigs to be medicated.
- Know size of the header tank, if using.
- Have appropriate measuring jugs and scales available so that the correct medication is applied.
- Know average daily water intakes - the following can be used as a guide:



Weight of pigs (kg)	Minimum daily requirement (l/head)	Minimum flow through nipple drinker (l/min)
Newly weaned	1.0–1.5	0.3
Up to 20kg	1.5–2.0	0.5–1.0
20 – 40kg	2.0–5.0	1.0–1.5
Finishing pigs up to 100kg	5.0–6.0	1.0–1.5
Sows and gilts pre-service and in-pig	5.0–8.0	2.0
Sows and gilts in lactation	15–30	2.0
Boars	5.0–8.0	2.0

Source: Paragraph 72 of Code of Recommendations for the Welfare of Pigs

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LEGALITIES

The Water Supply (Water Fittings) Regulations 1999 is the relevant legislation covering water fittings. Of particular relevance here is the requirement that systems (such as a header tank with ball valve and air gap) must be present to protect wider supply from potential backflow and contamination.

PROPORTIONAL DOSING DEVICE ADMINISTRATION

- Calculate correct amount of medication required for the pigs to be treated.
- Calculate the volume of stock solution required- this can be using knowledge of the pigs' total daily water intake and percentage inclusion rate for the medicator being used. For example, 1000 X 10kg pigs may be drinking ~1000L per day. Most Dosatron's have a set inclusion of 2% and as such the total stock solution required is 20L.
- The medication required should be thoroughly mixed using a whisk, or preferably mechanical stirrer, to the total stock solution volume.
- Commence medication by connecting water supply through the device and programming to operate if using Select Doser.



HEADER TANK ADMINISTRATION

- As above.
- Dissolve medication in bucket or jug, stirring or using whisk, until fully dissolved.
- Add to header tank and tie up ball valve/ switch off supply so that concentration maintained throughout medication period.

**MAKE SURE THE PIGS
ARE NOT KEPT SHORT OF WATER!**



"Nudge bar" drinker

PITFALLS

- Some compounds can be hard to dissolve, particularly in hard water areas. This is particularly the case for tetracycline powder antibiotics such as doxycycline and especially when it is necessary to produce a very concentrated stock solution for a medication device to draw from at a fixed concentration. Seek vet advice if solubility problems are encountered- additives such as 'Huvesol' may be appropriate in certain situations to enhance solubility.
- Check withdrawal period applicable to that product before commencing administration.
- Make sure you have the correct amount of medication to complete the course before starting.
- Size of the header tank may be inappropriate for medication of the target pigs e.g. it may contain far too much, or too little, water for a day's supply to the pigs. This could result in significant underdosing or, possibly overdosing of individuals. Seek vet advice.

KEY POINTS

- ⇒ Always follow veterinary advice.
- ⇒ Prepare a fresh stock solution at least once daily.
- ⇒ Record all treatments in Meds Records.
- ⇒ Assess response to treatment.



FOR FURTHER INFORMATION

[RUMA Pig Antibiotic Use Good Practice Guide July 2019](#)

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