

3-7 Facial Eczema - Zinc treatment, recipes and dose rates

Zinc Oxide drenching

Long term dosing gives the best protection and should be started 2-3 weeks before the spore growth danger period for maximum protection. It is 80-90% effective. Crisis dosing (treating previously non-treated animals with higher rates of Zinc during danger periods only) offers less protection. It is 60% effective.

Stabilisers increase the ease of mixing and drenching and allow the mixing of more concentrated drenches. Less volume of drench is then needed per dose. Consult your vet or rural supplies agent about stabiliser products and mixing rates for their use with zinc oxide products.

Drench recipes and dose rates

Unstabilised drench:

Sprinkle 10kg zinc oxide powder into 25 litres water, leave to wet and then stir until lump-free. This produces about 27 litres of drench.

Long term daily dosing = 7ml/100kg liveweight (2.6gm ZnO/100kgLW)
Crisis daily dosing = 10ml/100kg liveweight (4gm ZnO/100kgLW)
3 day to weekly intervals long term dosing (dry stock only)
 = 10ml/100kg liveweight x No. of days between drenches.

Stabilised drench:

Long term dosing rates are 1 kg of zinc oxide will dose 100 cows (400 kg liveweight) for one day. Example: Where two litres of "stabiliser" are added to 10 litres of water then sprinkle 10kg zinc oxide powder on the water, leave to settle then stir to a smooth creamy paste. This produces about 14 litres of drench.

Long term daily dosing = 3.6ml/100kg liveweight
Crisis daily dosing = 5ml/100kg liveweight
3 day to weekly intervals long term dosing (dry stock only)
 = 5ml/100kg liveweight x No. of days between drenches.

Drenching dose rates - Ready Reckoner

			Unstabilised				Stabilised			
			Long term			Crisis	Long term			Crisis
Dose interval (days)			1	3	7 #	1	1	3	7 #	1
Weight (kg)			Dose Volume (ml)				Dose Volume (ml)			
Cows	J	350	25	105	*	35	13	53	128	18
	JxF	400	28	120	*	40	14	60	140	20
	F	450	32	135	*	45	16	68	158	23
Heifers (18-21 mths)	J	290	20	87	*	29	10	44	102	15
	JxF	340	24	102	*	34	12	51	119	17
	F	380	27	114	*	38	14	57	133	19
Calves (6-9 mths)	J	130	9	39	91	13	5	20	46	7
	JxF	140	10	42	98	14	5	21	49	7
	F	160	11	48	112	16	6	24	56	8
* Not recommended					# Dry cattle only					

Zinc Sulphate water treatment: There are two forms of Zinc Sulphate available; Zinc Sulphate heptahydrate (normally a coarse greenish crystal), and Zinc Sulphate monohydrate (normally a white powder or fine crystal). Monohydrate is the more concentrated form and is used at 2/3 the dose rate of heptahydrate.

Zinc Sulphate dose rate (grams per day) required in drinking - Ready Reckoner

	Cows			Heifers (18-21 mnths)			Calves (6-9 mnths)		
	J	JxF	F	J	JxF	F	J	JxF	F
Weight (kg)	350	400	450	290	340	380	130	140	160
Heptahydrate 8g/100kg liveweight	28	32	36	23	27	30	10	11	13
Monohydrate 5.5g/100kg liveweight	19	22	25	16	19	21	7	8	9

Floating in-trough dispensers: Calculate amount of Zinc Sulphate to be added to the trough daily (use above table) eg.

100 Friesian cows x 36 grams/day = 3,600 grams of heptahydrate/day.

Refill the dispenser twice daily with half the daily amount (ie. 1,800 grams or 1.8kg) at each visit to the trough.

In-line dispensers: Use the above table to calculate daily dispenser requirements for ALL stock on the farm and then set the dispenser to deliver that amount eg.

200 Jersey cows x 28 grams/day	= 5,600
50 Jersey heifers x 23g/day	= 850
53 Jersey calves x 10g/day	= 530
TOTAL = 6,980g	= 7 kg heptahydrate/day

Direct addition to supply tank: Do not use this method if the supply tank also supplies the house water.

Calculate daily requirements for all stock on the farm (see in-line dispenser example).

Add the daily Zinc Sulphate requirement to the supply tank at the same time each day. Dissolve the Zinc Sulphate in water before adding to the tank.

If the supply tank is regularly refilled e.g. by pump on time switch, add Zinc just after filling.

Direct addition of Zinc Sulphate to the water trough without using a dispenser is not recommended.