Dose Rate

1mL for each 50kg liveweight.

Pack Sizes

Available in 200mL, 500mL and 1000mL packs. IVACLOR Injection for Cattle is packaged in a convenient, collapsible self-contained delivery system.

WEIGHT RANGE (kg)	DOSE VOLUME (ml)	DOSES PER PACK 200ml	DOSES PER PACK 500ml	DOSES PER PACK 1L
Up to 100	2	100	250	500
101-150	3	66	166	332
151-200	4	50	125	250
201-250	5	40	100	200
251-300	6	33	83	166
301-350	7	28	71	142
351-400	8	25	62	124
401-450	9	22	55	110
451-500	10	20	50	100
501-550	11	18	45	90
551-600	12	16	41	82
601-650	13	15	38	76

Animals weighing in excess of 650kg should receive an extra 1mL per 50kg body weight over 650kg.

QUICK CHECK LIST	IVACLOR
Number of worm species controlled	15
Persistent worm control	Yes
Control of cattle tick	Yes
Meat WHP (days)	28
Milk WHP	NIL
ESI (days) Export Slaughter Interval	42
Labelled as a Poison	No
Protective clothing required when using	No
Weather Tolerance	Efficacy in injected cattle not affected by weather.
Safety in cattle	Wide safety Margin.

IVACLOR Injection for Cattle provides:	
✔	Sustained Activity
✔	Worm control
✔	Adult Fluke control
✔	Nil Milk Withholding
✔	External parasite control including Sucking Lice, Cattle Tick, and Mange Mites
✔	Convenient low volume injection

References

1 Walsh *et al* (1995). The effect of ivermectin treatment of late pregnant dairy cows in south-west Victoria on subsequent milk production and reproductive performance. *Australian Veterinary Journal* 72:201-207

2 Loyacano, SF *et al.* (2002). Effect of gastrointestinal nematode and liver fluke infections on weight gain and reproductive performance of beef heifers. *Veterinary Parasitology* 107(3): 227-234.

3 Rolfe, PF et al. Liver Fluke in dairy cattle. NSW Agriculture. Agnote DAI/32.

Ancare Australia Pty Limited

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Ancare technical helpline

1800 001 973

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Broad Spectrum Antiparasitic Injection for Cattle

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Broad Spectrum Antiparasitic Injection for Cattle

Power & flexibility in one

IVERMECTIN 10 mg/mL and CLORSULON 100 mg/mL

For the treatment and control of ivermectin and clorsulon sensitive strains of internal and external parasites of cattle, including adult liver flukes.

Ancare

IVACLOR Injection for Cattle

Controlling worms, liver fluke and external parasites throughout the year is the key to maximise the health and productivity of your beef and dairy cattle. IVACLOR Injection for Cattle provides flexibility and broad-spectrum parasite control in one convenient product. You only have to look at the IVACLOR Injection for Cattle label for confirmation of its broad spectrum of parasite control. Nil milk and 28-day meat withholding periods give producers the flexibility to use IVACLOR Injection for Cattle at any time.

What do you look for on the label?

IVACLOR Injection for Cattle details the following areas of benefit:

15 species of worms	Yes
Adult Fluke control	Yes
Lungworm	Yes
Bunostomum sp (Cattle hookworm)	Yes
Eye worm	Yes
Persistent efficacy against worms	Yes
Lice	Yes
Mange mites	Yes
Cattle tick	Yes
Screw worm fly* (14 day persistent efficacy)	Yes
Nil Milk Withholding period	Yes
Convenient low volume injection	Yes
Wide safety margin	Yes

* Not reported in Australia but present in Papua New Guinea

Lung worms

Eye worms

Screw worm

Gastronintestinal round worm

Modes of Action

IVACLOR Injection for Cattle contains the active ingredients ivermectin and clorsulon.

Ivermectin is a highly effective, broad-spectrum antiparasitic agent. It is a chemically modified member of a family of naturally occurring compounds known as the avermectins. The avermectin family of compounds kill the major parasitic roundworms and ectoparasites such as mites, lice and cattle ticks. The mode of action of avermectins is unique to this class of antiparasitic agents. Ivermectin acts selectively in parasite nerve and muscle cells resulting in paralysis and death of the parasite.

Clorsulon is a flukicide that is highly effective against adult fluke. Clorsulon is rapidly absorbed into the blood stream. It then binds with red blood cells and plasma in blood, which is ingested by liver flukes (*Fasciola hepatica*). The flukes are killed by clorsulon because of inhibition of enzymes in the glycolytic pathway, which is their primary source of energy.

Strategic treatment

IVACLOR Injection for Cattle is a convenient and time saving "one-shot" treatment for roundworms, lice, lungworm, eyeworm, mange mites and of course, adult liver fluke. IVACLOR Injection for Cattle will also control cattle tick in those areas where ticks are a problem. Due to local climatic variations in parasite epidemiology you should consult your local veterinarian with respect to the best timing for your treatment with IVACLOR Injection for Cattle. However, the following strategic control programs can serve as a guide:

1. IVACLOR in summer - A summer treatment with IVACLOR is indicated where high worm burdens derived from spring pasture, particularly the inhibited stage of *Ostertagia*, are an issue.

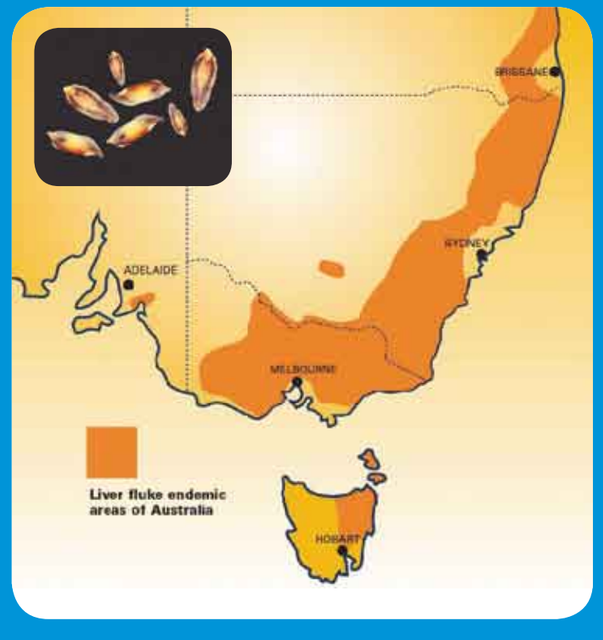
2. IVACLOR in autumn – Removes all existing adult liver fluke, plus intestinal parasites including *Ostertagia* and *Cooperia*, as well as sucking lice. In winter, minimal fluke pick up occurs as snail activity declines.

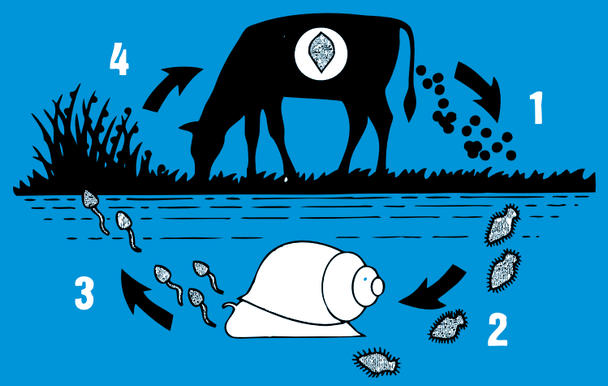
3. IVACLOR in spring – Any adult fluke present will be killed, preventing contamination of the host snails as they re-emerge at the end of winter. Removal of intestinal worms and external parasites allows cattle to take full advantage of spring feed.

4. IVACLOR in late lactation – IVACLOR can be used at any stage of lactation, however, a treatment at drying off removes all adult liver fluke from the bile ducts as well as intestinal parasites, which helps to prevent production loss and ongoing pasture contamination. Parasite control during the dry period has been shown to result in increased milk production and reduced calving to conception intervals[1].

Depending on their date of birth, calves may require additional treatments through the year if parasites are a problem.

Liver fluke





1. Adult liver fluke lay thousands of eggs which are passed in the dung.

2. The fluke larvae hatch from these eggs and find a snail of the Lymnaea species (mud snail). The larvae develop, multiply, then leave the snail. Up to 4000 larvae leave the snail for every one entering.

3. The larvae attach to grass and encyst. These cysts can survive for months in this state until swallowed by grazing cattle.

4. Inside the cattle, the young fluke migrate to the liver and enter the bile ducts where they mature and produce more eggs.

Once fluke reach the bile duct, they become avid blood suckers. The loss of red cells and plasma due to bile duct stage fluke accounts for the productivity losses in cattle typical of fluke infection. The loss of blood cells causes depletion of the animals' iron reserves, resulting in anaemia.

The host animal compensates for the loss of red cells by increasing their red cell production, thereby diverting energy that could be used for growth, milk and other productive purposes.

Consequences of Liver Fluke Infection

Liver Damage
- Destroyed and bleeding tissue
- Thickened and even calcified bile ducts

Impaired Grass Conversion
- Beef cattle convert grass to meat less efficiently
- Dairy cattle convert grass to milk less efficiently

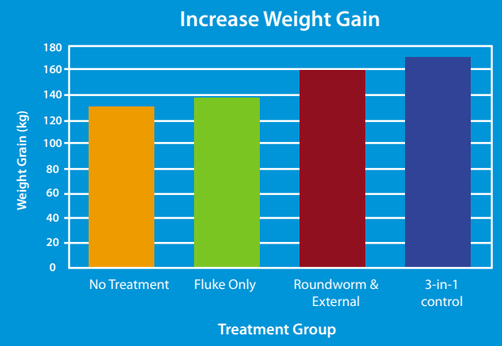
Less Meat, Less Milk
- Beef cattle can grow more slowly, fall short of target weight and can be more susceptible to secondary infections.
- Dairy cattle can become weak, produce less milk and become more susceptible to metabolic stress during pregnancy.

Production benefits

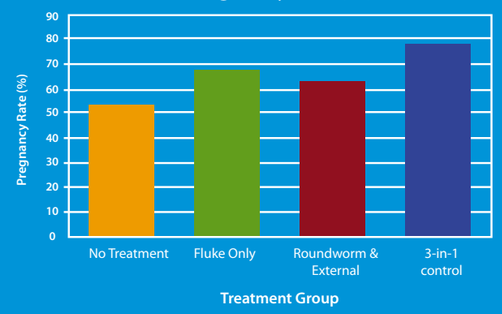
Australian cattle producers need to control a range of cattle parasites that can impact on productivity. Internal parasites such as worms and liver fluke, and external parasites such as lice and cattle tick, can all have a negative impact on beef and dairy production.

Controlling liver fluke as well as worms and external parasites can:
- Increase weight gains
- Increase milk production
- Increase reproductive performance.

A four year trial demonstrated the benefits of 3-in-1 control (liver fluke, worms and external parasites). The trial involved measuring weight gain and reproductive benefit of heifers under different treatment regimes[2].

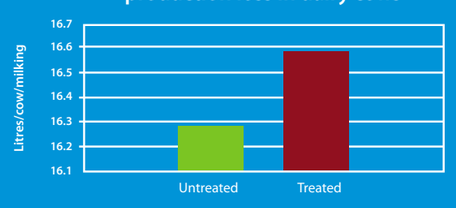


Heifers treated with a 3 in 1 control programme put on an extra 10kg liveweight over and above those treated for roundworms and external parasites only.



Heifers treated with a 3 in 1 control programme had an increase in pregnancy rate of 15% over and above those treated for roundworms and external parasites only.

Australian trials have confirmed productivity benefits from treating fluke under local conditions. Trials conducted on the South Coast of NSW found that fluke treatment resulted in a milk production benefit of 0.6 litre/cow/day or 180 litres/cow over the lactation[3].



Trials on the South Coast of NSW found that fluke treatment resulted in a production benefit of 0.6 Litre/cow/day or 180 Litre/cow over the lactation.

Flexibility - NIL MILK WITHHOLDING

IVACLOR Injection for Cattle has the flexibility to be used anytime for maximum gains. A nil milk withholding period means dairy cows can be treated at any time during lactation to control worms, including inhibited Ostertagia, as well as the adult fluke responsible for reduced milk production. Milking cattle can be treated at strategically important times of the year – not just as dry off. This flexibility is important during dry weather as cattle graze closer to "flukey" areas.

Safety

IVACLOR Injection for Cattle has a wide safety margin for use in all ages and breeds of beef and dairy cattle from young calves to your oldest bulls. IVACLOR Injection for Cattle can be used in pregnant and breeding cattle if normal care is taken in handling.