

# Dewormer SAFETY



Most dewormers (anthelmintics) have wide safety margins. The dosage that can be given to an animal before adverse effects are seen is usually much higher than the dosage recommended for use. However, that does not mean that there are not risks with dewormers, especially when labeled directions are not followed.

DEWORMER (ANTHELMINTIC)	LABEL RESTRICTIONS	SAFETY INDEX
Fenbendazole (SafeGuard®)	None	500
Albendazole (Valbazen®)	Not in first 45 days of pregnancy	20
Ivermectin (Ivomec® drench)	Not to be used in other species	30
Moxidectin (Cydectin® oral drench)	only for sheep $\geq$ 4 months	5
Levamisole (Prohibit®, Leva-Med®)	None	4-6
Morantel Tartrate (Rumatel®)	None	~20

The safety (or therapeutic) dose is the ratio between the dose that causes adverse effects and the dosage that produces the desired antiparasitic effect. These are for sheep. Source: product labels and parasitapedia.net

## Pregnant females

Most dewormers are generally safe to give to pregnant females except for albendazole (Valbazen®), which should not be given during the first 45 days of pregnancy or for 45 days after removal of males. There is anecdotal evidence of levamisole causing late term abortions in goats. There is no evidence that levamisole is detrimental to pregnant ewes.

## Goats, specifically

Overall, fewer safety studies have been conducted with goats. On one hand, goats require higher dosages of dewormers than sheep (usually 1.5-2x), due to their higher rates of metabolism. On the other hand, they are more sensitive to higher dosages, especially kids.



## Using levamisole safely

Of all the dewormers, levamisole (Prohibit®, LevaMed®) has the narrowest margin of safety, especially if it is injected. The safety index ranges from 4 to 6. Toxic levels may be reached at 4x (some claim even at 2x). A 10x dose will cause death. In addition, since the powder can be dissolved in different amounts of water, dosing errors are not uncommon. Care must be taken to give the proper dosage, according to the dilution of the powder. For example, if a 52-g packet of levamisole drench powder is diluted in two quarts of water, the dosage is 8 ml per 50 lbs. (for sheep). If that same packet is mixed with only one quart of water, the dosage is 4 ml per 50 lbs. Mixing the powder in a larger volume of water can provide a wider margin of safety, especially when dosing smaller (lighter) animals. Animals should not be fasted before receiving levamisole.