Joint statement from the National Office of Animal Health (NOAH) and the Veterinary Medicines Directorate (VMD) on the use of flukicides in dairy cattle

Flukicides are anthelmintic veterinary medicines that are active against parasites from the trematode class. The most common parasite in this class is the liver fluke (*Fasciola hepatica*).

Vets, Suitably Qualified Persons (SQPs) and farmers are generally required to follow the instructions on the product labels; however, the prescribing decision rests with the vet, pharmacist or SQP. When prescribing, it is important to be aware of withdrawal period requirements specified on the labels and farmers should follow the advice given by the vet or the SQP.

Below is a summary of the different flukicides (including combination products that also contain anthelmintics) that are authorised for sale on the UK market and their permitted use in dairy cattle.

Vets, SQPs and farmers are encouraged to discuss any queries they have about the use of a flukicide in dairy animals with the technical department of the Marketing Authorisation Holder (the company that markets the product) or with the UK regulatory authority, the Veterinary Medicines Directorate (http://www.gov.uk/vmd).

As with any product, care should be taken to accurately follow the dosing and administration instructions. It is very important that those prescribing flukicides continue to clearly advise farmers that those veterinary medicines must be used in accordance with their marketing authorisations, and that farmers administering those products should follow the prescriber's instructions precisely. Any flukicide residue detected in milk sampled under the UK's Residues Surveillance Plan, which is above its maximum residue level (i.e. a non-compliant result), will be investigated.

For the latest information refer to the VMD's product information database or the NOAH online compendium:

https://www.gov.uk/check-animal-medicine-licensed

https://www.noahcompendium.co.uk/

Please note that this table refers to milk withdrawal periods and use in cows producing milk for human consumption only and does not refer to meat withdrawal periods, or use in non-dairy animals or in other milk-producing species.

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Key - Red = Do not use at this stage of production; Amber = Use is permitted but is restricted (see table for exact restrictions); Green = Use allowed (follow authorised milk withdrawal period during lactation and also when used in non-lactating animals).

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Active ingredient - Strength	Route of administration	Authorised for use during LACTATION in DAIRY cattle producing milk for human consumption?	Authorised for use in the DRY PERIOD in pregnant DAIRY cattle producing milk for human consumption?	Authorised for use in PREGNANT MAIDEN DAIRY HEIFERS intended to produce milk for human consumption?	Authorised products (Marketing Authorisation Holder)
Closantel 12.5% 125 mg/ml (in combination with ivermectin)	S/C injection	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	Restrictions apply. Do not use during the last trimester of pregnancy in heifers which are intended to produce milk for human consumption.	Closamectin Solution for Injection for Cattle and Sheep (Norbrook Laboratories Limited) Closiver 5 mg/ml/125 mg/ml Solution for Injection for Cattle and Sheep (Norbrook Laboratories Limited)
Closantel 20% 200 mg/ml (in combination with ivermectin)	Pour on	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	Restrictions apply. Do not use during the second half of pregnancy in heifers which are intended to produce milk for human consumption.	Closamectin 5 mg/ml + 200 mg/ml Pour-On Solution for Cattle (Norbrook Laboratories Limited) Closiver 5 mg/ml + 200 mg/ml Pour-On Solution for Cattle (Norbrook Laboratories Limited) Norofas Pour-On Solution for Cattle (Norbrook Laboratories Limited)
Closantel 5% 50 mg/ml	S/C injection	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	Restrictions apply. Do not use during the last trimester of pregnancy in heifers which are intended to produce milk for human consumption.	Santiola 50 mg/ml Solution for Injection for Cattle and Sheep (Krka d.d.)

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Nitroxynil 34% 340 mg/ml	S/C injection	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	No. Not authorised for use in cattle producing milk for human consumption, including during the dry period.	Restrictions apply. Do not use during the last trimester of pregnancy in heifers which are intended to produce milk for human consumption.	Trodax 34% w/v Solution for Injection (Boehringer Ingelheim Animal Health UK Ltd)
Triclabendazole 24% 240 mg/ml	Oral	No. The product is not authorised for use in lactating animals producing milk for human consumption	Restrictions apply. Not intended for use within 48 days of calving. Milk for human consumption may only be taken from 48 hours after calving. Should a cow calve earlier than 48 days after the last treatment, milk for human consumption may only be taken from 50 days after the last treatment.	Restrictions apply. Not intended for use within 48 days of calving. Milk for human consumption may only be taken from 48 hours after calving. Not intended for use within 48 days of calving. Should a cow calve earlier than 48 days after the last treatment, milk for human consumption may only be taken from 50 days after the last treatment.	Fasinex 240, 24% w/v Oral Suspension for Cattle (Elanco Europe Ltd)

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Triclabendazole 10% 100 mg/ml	Oral	No. The product is not authorised for use in lactating animals producing milk for human consumption	Restrictions apply. Milk for human consumption may only be taken from 48 hours after calving. Not intended for use within 45 days of calving. Should a cow calve earlier than 45 days after the last treatment, milk for human consumption may only be taken from 45 days + 48 hours (47 days) after the last treatment.	Restrictions apply. Milk for human consumption may only be taken from 48 hours after calving. Not intended for use within 45 days of calving. Should a cow calve earlier than 45 days after the last treatment, milk for human consumption may only be taken from 45 days + 48 hours (47 days) after the last treatment.	Endofluke 100 mg/ml Oral Suspension (Bimeda Animal Health Limited)
		No. The product is not authorised for use in lactating animals producing milk for human consumption	Restrictions apply. Not intended for use within 41 days of calving. Milk for human consumption may only be taken from 84 hours after calving. If calving occurs before 41 days after treatment, milk for human consumption may only be taken after 41 days plus 84 hours after the treatment.	Restrictions apply. Not intended for use within 41 days of calving. Milk for human consumption may only be taken from 84 hours after calving. If calving occurs before 41 days after treatment, milk for human consumption may only be taken after 41 days plus 84 hours after the treatment.	Tribex 10% Oral Suspension for Cattle (Chanelle Animal Health Ltd) Triclacert 10% Oral Suspension for Cattle (Chanelle Animal Health Ltd)

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Triclabendazole 20% 200 mg/ml (in combination with moxidectin)	Pour on	No. Do not use in cattle of any age intended to produce milk for human consumption.	No. Do not use in cattle of any age intended to produce milk for human consumption.	No. Do not use in cattle of any age intended to produce milk for human consumption.	Cydectin TriclaMox 5 mg/ml + 200 mg/ml Pour-on Solution for Cattle (Zoetis UK Limited)
Triclabendazole 12% 120 mg/ml (in combination with levamisole)	Oral	No. Not authorised for use in animals producing milk for human consumption, including during the dry period.	No. Not authorised for use in animals producing milk for human consumption, including during the dry period.	Restrictions apply. Do not use during the last trimester of pregnancy in heifers which are intended to produce milk for human consumption.	Combinex Cattle Oral Suspension (Elanco Europe Ltd)

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Albendazole 2.5/10% 25 mg/ml 100 mg/ml	Oral	Milk withdrawal period of 60 hours applies.	Milk withdrawal period of 60 hours applies.	Milk withdrawal period of 60 hours applies.	Albacert 2.5% SC Oral Suspension (Chanelle Animal Health Ltd) Albenil 25 mg/ml SC Oral Suspension (Virbac Ltd) Albex 10% w/v Oral Suspension (Chanelle Animal Health Ltd) Albex 2.5% w/v SC Oral Suspension (Chanelle Animal Health Ltd) Benzimole 25 mg/ml SC Oral Suspension (Chanelle Pharmaceuticals Manufacturing Ltd) Endospec SC 10% w/v Oral Suspension (Bimeda Animal Health Limited) Endospec SC 2.5% w/v Oral Suspension (Bimeda Animal Health Limited) Ovidrench S & C 10% w/v Oral Suspension (Bimeda Animal Health Limited) Ovidrench S & C 2.5% w/v Oral Suspension for Cattle and Sheep (Bimeda Animal Health Limited) Tramazole 100 mg/ml SC Oral Suspension for Cattle and Sheep (Tulivin Laboratories Ltd) Tramazole 2.5% w/v SC Oral Suspension (Tulivin Laboratories Ltd)

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Oxyclozanide 6% 60 mg/ml (in combination with levamisole)	Oral	No. Do not use in cattle of any age intended to produce milk for human consumption.	No. Do not use in cattle of any age intended to produce milk for human consumption.	No. Do not use in cattle of any age intended to produce milk for human consumption.	Downland Fluke and Worm Oral Suspension (Norbrook Laboratories Limited) Levafas Diamond Oral Suspension (Norbrook Laboratories Limited)
Oxyclozanide 3.4% 34 mg/ml	Oral	Milk withdrawal period of 4.5 days (108 hours) applies.	Milk withdrawal period of 4.5 days (108 hours) applies.	Milk withdrawal period of 4.5 days (108 hours) applies.	Distocur 34 mg/ml Oral Suspension for Cattle and Sheep (Dopharma Research B.V.) Niltrem 34 mg/ml Oral Suspension for Cattle (Chanelle Pharmaceuticals Manufacturing Ltd) Oxyfluke 34 mg/ml Oral Suspension for Cattle and Sheep (Norbrook Laboratories Limited) Rumenil 34 mg/ml Oral Suspension for Cattle (Chanelle Pharmaceuticals Manufacturing Ltd) Zanil Fluke Drench 34 mg/ml Oral Suspension (Intervet UK Ltd)

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Clorsulon 10% 100 mg/ml (in combination with ivermectin)	S/C injection	No. Do not use in cattle producing milk for human consumption. .	Restrictions apply. Do not use in non-lactating dairy cows within 60 days of calving. (i.e. do not use if dry period is less than 60 days)	Restrictions apply. Do not use in pregnant heifers within 60 days of calving.	Animec Super 10 mg/ml / 100 mg/ml Solution for Injection for Cattle (Chanelle Animal Health Ltd) Bimectin Plus, 10/100 mg/ml Solution for Injection for Cattle (Bimeda Animal Health Limited) IVERMECTIN AND CLORSULON 10 mg/ml / 100 mg/ml Solution for Injection for Cattle Virbac (Virbac) Ivomec Super Injection for Cattle (Ivermectin and Clorsulon) (Boehringer Ingelheim Animal Health UK Ltd) Molemec Super Solution for Injection for Cattle (Boehringer Ingelheim Animal Health UK Ltd) Supremadex 10 mg/ml+100 mg/ml Solution for Injection for Cattle (Bimeda Animal Health Limited) Topimec Plus 10/100 mg/ml Solution for Injection for Cattle (Chanelle Animal Health Ltd) Virbamec Super 10 mg/ml, 100 mg/ml Solution for Injection (Virbac)

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