

COUMAPHOS

EXPLANATION

Coumaphos was first evaluated by the JMPR in 1968 when a temporary ADI was recommended. The temporary ADI was withdrawn by the 1980 JMPR, and the temporary MRLs were converted to Guideline Levels. Countries were requested to provide data on current CAP to the JMPR.

Information was provided on the current registration status from the manufacturer, The Netherlands and Australia.

USE PATTERN

Information was provided on the authorized or otherwise recommended uses of coumaphos. Coumaphos controls a range of pests on all domestic animals and is used in bee-keeping (Table 1).

The compound is registered and used in 32 countries. It is used as a dip, spray, soap, bath, liquid, powder, dust and oral feed premix. The ai content in the formulation ranges between 0.5 and 50 %. Coumaphos is used against ticks, fleas, lice, mange, keds, flies, fly-larvae in wounds, acarians, ectoparasites, worms, scabies, grubs and varroa mites. The dosage varies widely depending on the type of application (Table 2).

Table 1. Pests of animals controlled by coumaphos (registered uses)

Animal	Pests
Cattle, Goats, Horses	Acarians, ectoparasites, fleas, flies, fly-larvae in wounds, fly maggots, grubs, keds, lice, mange, mites, scabies, ticks, worms
Pigs	Acarians, ectoparasites, fleas, flies, fly-larvae in wounds, grubs, keds, lice, mange, mites, scabies, ticks, worms
Poultry	Acarians, ectoparasites, flies, fleas, fly-larvae in wounds, lice, keds, mites, ticks, worms
Rabbits	Acarians, fleas, lice, ticks
Sheep	Ectoparasites, flies, fly-larvae in wounds, fly maggots, grubs, keds, lice, mites, scabies, ticks, worms
All domestic animals	Ectoparasites, fleas, flies, fly-larvae in wounds, fly maggots, keds, lice, mange, mites, ticks, worms
Bees	Varroa mites

Table 2. Coumaphos - registered use rates and patterns

Application	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against	as			
domestic animals	ticks, sucking and biting lice, sheep keds, fleas, mange mites, biting and sucking flies, fly-larvae in wounds	liquid	20	0.02%	Costa Rica Dom. Rep. El Salvador Guatemala
domestic animals	ticks, fleas, sheep keds, biting and sucking flies, fly-larvae in wounds, mange	powder	50	0.05%	Costa Rica Dom. Rep. El Salvador Guatemala
domestic animals	biting and sucking lice	powder	50	0.025%	Costa Rica, Dom. Rep., El Salvador, Guatemala
domestic animals	ticks	spray/bath	50	0.025 - 0.07%	India
domestic animals	Lice	spray/bath	50	0.025%	India
domestic animals	mange mites	spray/bath	50	0.01 - 0.15%	India
domestic animals	ticks, sucking and biting lice, fleas, depluming mites, fly-larvae in wounds, mange mites, biting and sucking flies	powder	50	0.1%	Indonesia
domestic animals	ticks, sucking and biting flies, sheep keds, fleas, mange mites, biting and sucking lice, fly-larvae in wounds	liquid	20	0.022%	Nicaragua
domestic animals	ticks, fleas, sheep keds, biting and sucking flies, fly-larvae in wounds, mange	powder	50	0.05%	Nicaragua

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
domestic animals	biting and sucking lice	powder	50	0.025%			Nicaragua
domestic animals	ticks, sucking and biting lice		50	-			Pakistan
domestic animals	ticks and other ectoparasites	spray	50	0.1%			Philippines
domestic animals	ticks, lice, fleas, worms of sheep, horseflies, grub of fly and acarids of mange	bath, spray	50	0.1%			Spain
domestic animals cattle	all ectoparasites mange	bath, spray dip	50 20	0.1% F* 0.04% NF* 0.08%	2 treatments 10 - 12 days interval	2 milkings (F* = 1st filling) (NF*= 2nd filling)	Taiwan Argentina
cattle	lice	dip	20	F* 0.0133% NF* 0.0266%	2 treatments 14 - 21 days interval	2 milkings	Argentina
cattle	ticks	dip	20	F* 0.03% NF* 0.06%	7 - 9 days interval	2 milkings	Argentina
cattle	mange	spray	20	0.06%	7 - 9 days interval	3 milkings	Argentina
cattle	lice	spray	20	0.02%	7 - 9 days interval	3 milkings	Argentina
cattle	cattle ticks, lice	liquid dip and spray	16	0.025%	1 application	3 days	Australia
cattle	cattle ticks, lice	wettable powder	50	0.046%	1 application	3 days	Australia
cattle	ticks	liquid	16	0.0213- 0.04%			Brazil
cattle	ticks, fleas, lice, flies	bath	50	0.05%			Brazil

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
cattle	fly maggots	spray	3	-		7 days	Canada
cattle	haematopinus- linognatus bovicola	spray/wash	50	0.05%	8 days interval	10 days	Columbia
cattle	ticks (amblyomma c)	spray/wash	50	0.05%	8 days interval	10 days	Columbia
cattle	ticks (boophilus microplus)	spray/wash	50	0.05%	21 days interval	10 days	Columbia
cattle	fleas, lice, acarians	powder	50	0.1%	twice, 8 days interval	15 days milk: none	France
cattle	ticks	powder	50	0.3%	twice, 8 days interval	15 days milk: none	France
cattle	flies, biting and sucking lice	powder	1	25-50 g per animal		7 days milk: none	Germany, Fed.Rep.
cattle	ticks, fleas, biting and sucking lice, skeep keds, biting and sucking flies, fly-larvae in wounds, mange mites	powder	50	0.05%		7 days milk: 1 day	Germany, Fed.Rep.
cattle	sucking and biting	spray	30	0.25%		1 month	Italy
cattle	ticks, lice, stable flies, horn flies	spray	50	0.25% 3.0 l/head		2 days	Japan
cattle	ticks	dip	50	0.025-0.05%		2 days	Japan
cattle	flies, lice, ticks, malophaga, larvae in wounds		50	0.1%		7 days	Yugoslavia
cattle	mites and ticks	dip, wash, spray	50	0.1%			Korea
cattle	ticks	dip, wash, spray	50	0.05%		21 days	Malaysia

Table 2 (continued)

Application			% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against	as					
cattle	all ectoparasites	powder	1	30-50 g/ animal	1 application		Portugal
cattle	all ectoparasites	wettable pwd.	50	0.05%	1 appliction		Portugal
cattle	ticks	powder	50	0.05%		21 days	Singapore
cattle	all ectoparasites	bath, spray	50	0.1%			Thailand
cattle	ticks	dip	20	0.03%	2 - 3 times	7 days	Uruguay
cattle	mange	dip	20	0.02%	twice	7 days	Uruguay
cattle	lice	liquid	20	0.0133%	twice		Uruguay
cattle	ticks, mange, lice	powder	45	0.045%		7 days	Uruguay
cattle	lice	powder	1	-	14 days interval	0	UK
cattle	ectoparasites	dip, spray	50	0.025-0.05%		meat: 3 weeks milk: spray after milking	UK
cattle	scabies, horn flies, lice, ticks, screwworms	dip	42	0.6%	1 application		USA
cattle	scabies, horn flies, lice, ticks, screwworms	spray	42	0.5%			USA
cattle	screwworms and fly maggots on livestock, ear ticks on beef- and dairy cows	spray/foam	3	-			USA
cattle	grubs	pour-on	4	0.03%	1 application	milk: 14 days	USA
cattle	treatment of wounds infested with screwworms and treatment of ear ticks	duster	5	-			USA

Table 2 (continued)

Application			% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against	as					
cattle	grubs, horn flies, face flies, lice, ticks	spray	11.6	0.39-2.34%			USA
cattle	grubs, screwworms, scabies, horn flies, lice, ticks, fleeceworms, keds	spray or dip	25	0.1-1.6%			USA
cattle	screwworms, ear ticks, northern fowl mites, lice, poultry red mite, ticks, flies	dust		light dusting		do not use on USA lactating dairy animals within 14 days of freshening	USA
cattle	lice, horn flies, aid in reducing face flies	dust (bags)	5				USA
cattle	gastrointestinal roundworms	feed premix (oral)	0.2	63 g per 100 kg of bw	6 days interval		USA
cattle	horn flies, face flies, lice	dust	1	28.3-56.6g per animal for direct application or 200 g on bedding for every 10 sq.m.			USA
cattle	gastrointestinal roundworms	feed premix (oral)	11.2	0.045%	6 days interval		USA
cattle		11	0.32	62 g/100kg bw	6 days interval		USA
cattle	ticks	bath/dip	50	0.125%		milk: 1 day tissue: 25 days	Venezuela
cattle	ticks	bath/dip	20	0.05%		milk: 1 day tissue: 15 days	Venezuela
cattle	flies	dust	1	-			

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
goat	fleas, lice, acarians	powder	50	0.1%	Twice, 8 days interval	15 days milk: none	France
goat	ticks	powder	50	0.3%	Twice, 8 days interval	15 days milk: none	France
goat	ticks, fleas, biting and sucking lice, sheep keds, biting and sucking flies, fly-larvae in wounds, mange mites	powder	50	0.05%		15 days milk: 8 days	Germany, Fed. Rep.
goat	flies, lice, ticks, malophaga, larvae in wounds		50	0.1%		7 days	Yugoslavia
goat	mites and ticks	dip, wash, spray	50	0.1%			Korea
goat	all ectoparasites	wettable powder	50	0.05%	1 application		Portugal
goat	ectoparasites fleeceworms, keds	dip, spray	50	0.025-0.05%		meat: 3 weeks milk: spray after milking	UK
goat	screwworms, ear ticks, northern fowl mites, lice, poultry red mites, ticks, flies	dust	5	light dusting		do not use on lactating dairy animals within 14 days of freshening	USA
goat	screwworms and fly maggots on livestock	spray/foam	3				USA
goat	treatment of wounds infested with screwworms and treatment of ear ticks	duster	5				USA

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
goat	grubs, screwworms, scabies, horn flies, lice, ticks, fleeceworms, keds	spray or dip	25	0.1-1.6%		15 days	USA
goat	ticks	bath/dip	50	0.125%		milk: 1 day tissues: 25 days	Venezuela
goat	ticks	bath/dip	20	0.05%		milk: 1 day tissues: 15 days	Venezuela
horse	lice	dip	20	F* 0.0133% NF* 0.0266%	2 treatments 14 - 21 days interval		Argentina
horse	lice	spray	20	0.02%	2 treatments 14 - 21 days interval		Argentina
horse	cattle ticks, lice	liquid dip and spray	16	0.025%	1 application	3 days	Australia
horse	cattle ticks, lice	wettable powder	50	0.046%	1 application	3 days	Australia
horse	lice, sandflies	wash	5	0.025%		20 days	Australia
horse	fly maggots	spray	3	-		7 days	Canada
horse	fleas, lice, acarians	powder	50	0.1 %	Twice, 8 days interval	15 days	France
horse	ticks	powder	50	0.3%	Twice, 8 days interval	15 days	France
horse	ticks, fleas, biting and sucking lice, sheep keds, biting and sucking flies, fly-larvae in wounds, mange mites	powder	so	0.05%		7 days	Germany, Fed. Rep.
horse	sucking and biting	spray	3 0	0.25%		1 month	Italy
horse	stable flies, horn flies	spray	50	0.25% 3.0 l/head		2 days	Japan

Table 2 (continued)

on	Application		% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
	against	as					
horse	flies, lice, ticks, malophaga, larvae in wounds		50	0.1%		7 days	Yugoslavia
horse	all ectoparasites	powder	1	30-50 g/ animal	1 application		Portugal
horse	all ectoparasites	wettable powder	50	0.05%	1 application		Portugal
horse	lice	liquid	20	0.0133%	2 applications		Uruguay
horse	scabies, horn flies, lice, ticks, screwworms	dip	42	0.6%	1 application		USA
horse	scabies, horn flies, lice, ticks, screwworms	spray	42	0.5%			USA
horse	screwworms and fly maggots on livestock	spray/foam	3	-			USA
horse	treatment of wounds infested with screwworms and treatment of ear ticks	duster	5				USA
horse	grubs, horn flies, face flies, lice, ticks	spray	11.6	0.39-2.34%			USA
horse	grubs, screwworms, scabies, horn flies, lice, ticks, fleeceworms, keds	spray or dip	25	0.1-1.6%			USA
horse	screwworms, ear ticks, northern fowl mites, lice, poultry red mites, ticks, flies	dust	5	light dusting			USA
horse	horn flies, lice	dust	1	28.3-56.6g per animal			USA

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
pig	mange	dip	20	F* 0.04% NF* 0.08%	2 treatments 10 - 12 days interval	(F* = 1st filling) (NF*= 2nd filling)	Argentina
pig	lice	dip	20	F* 0.0133% NF* 0.0266%	2 treatments 14 - 21 days interval		Argentina
pig	mange	spray	20	0.06%	2 treatments 10 - 12 days interval		Argentina
pig	lice	spray	20	0.02%	2 treatments 14-21 days interval		Argentina
pig	fleas, lice, acarians	powder	50	0.1%	Twice, 8 days interval	15 days	France
pig	ticks	powder	50	0.3%	Twice, 8 days interval	15 days	France
pig	flies, biting and sucking lice	powder	1	25-50g per animal		7 days	Germany, Fed. Rep.
pig	ticks, fleas, biting and sucking lice, sheep keds, biting and sucking flies, fly-larvae in wounds, mange mites	powder	50	0.05%		7 days	Germany, Fed. Rep.
pig	lice	spray	50	0.25% 1.0 l/head		2 days	Japan
pig	flies, lice, ticks, malophaga, larvae in wounds		50	0.1%		7 days	Yugoslavia
pig	all ectoparasites	wettable powder	50	0.05%	1 application		Portugal
pig	all actoparasites	wettable powder	50	0.025%			Portugal
pig	mange	dip	20	0.02%	2 applications	7 days	Uruguay

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
pig	lice	liquid	20	0.0133%	2 applications		Uruguay
pig	lice	powder	1	-	14 days interval	0	UK
pig	screwworms and fly maggots on livestock	spray/foam	3				USA
pig	screwworms, ear ticks, northern fowl mites, lice, poultry red mite, ticks, flies	dust	5	light dusting			USA
pig	treatment of wounds infested with screwworms and treatment of ear ticks	duster	5				USA
pig	grubs, horn flies, face flies, lice, ticks	spray	11.6	0.39-2.34%			USA
pig	grubs, screwworms, scabies, horn flies, lice, ticks, fleeceworms, keds	spray or dip	25	0.1-1.6%			USA
pig	horn flies, face flies, lice	dust	1	28.3-56.6g per animal treatment for direct application or 200 g on bedding for every 10 sq.m.	10 days interval		USA
pig	ticks	bath/dip	50	0.125%		25 days	Venezuela
pig	ticks	bath/dip	20	0.05%		15 days	Venezuela
poultry	fleas, lice, acarians	powder	50	0.1%	Twice, 8 days interval	15 days	France

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
poultry	ticks	powder	50	0.3%	Twice, 8 days interval	15 days	France
poultry	fly maggots	spray/bath	50	0.2%			India
poultry	red mites, northern fowl mites, biting lice	spray	50	0.25% 50 ml/head		2 days	Japan
poultry	flies, lice, ticks, malophaga, larvae in wounds		50	0.1%		7 days	Yugoslavia
poultry	all ectoparasites	wettable powder	50	0.05%	1 application		Portugal
poultry	screwworms, car ticks, northern fowl mites, lice, poultry red mites, ticks, flies	dust	5	light dusting			USA
poultry	keds, fleeceworms, northern fowl mites, lice	dust	0.5				USA
poultry	capillary worm	fed premix (oral)	2	0.18%	10 - 14 days		USA
laying chicken	common roundworm	feed premix (oral)	2	0.135%	14 days		USA
poultry	ticks	bath/dip	50	0.125%		25 days	Venezuela
poultry	ticks	bath/dip	20	0.05%		15 days	Venezuela
rabbit	fleas, lice, acarians	powder	50	0.1%	Twice, 8 days interval	15 days	France
rabbit	ticks	powder	50	0.3%	Twice, 8 days interval	15 days	France
sheep	malophagus ovinus	dip	20	F* 0.0133% NF* 0.0266%	2 treatments 10 - 12 days interval	7 days	Argentina
sheep	lice, keds, blowflies	dip	50	0.025%	1 annual application	7 days	Australia

Table 2 (continued)

Application		as	% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against						
sheep	malophagus ovinus	spray	20	0.02%	2 treatments 10 - 12 days interval		Argentina
sheep	ticks, fleas, biting and sucking lice, sheep keds, biting and sucking flies, fly-larvae in wounds, mange mites	powder	50	0.05%		15 days milk: 8 days	Germany, Fed. Rep.
sheep	lice	bath		0.15%			Italy
sheep	flies, lice, ticks, malophaga, larvae in wounds		so	0.1%		7 days	Yugoslavia
sheep	keds	dip, wash, spray	50	0.05%			Korea
sheep	all ectoparasites	bath, spray	50	0.1%			Thailand
sheep	ticks, blowflies, lice, keds	dip	50	0.025-0.05%		meat: 3 weeks milk: not stated	UK
sheep	screwworms and fly maggots on livestock	spray/foam	3				USA
sheep	treatment of wounds infested with screwworms and treatment of ear ticks	duster	5				USA
sheep	grubs, screwworms, scabies, horn flies, lice, ticks, fleeceworms, keds	spray or dip	25	0.1-1.6%		15 days	USA
sheep	screwworms, ear ticks, northern fowl mites, lice, poultry red mites, ticks, flies	dust	5		light dusting	do not use on lactating dairy animals within 14 days of freshening	USA

Table 2 (continued)

Application			% ai in the formulation	Dosage (formulation)	No. of applications and interval between	Withholding period (edible tissues)	Country
on	against	as					
sheep	keds, fleeceworms, northern fowl mites, lice	dust	0.5	approx. 28.3-56.6g per animal		sheep: 15 days	USA
sheep	ticks	bath/dip	50	0.125%		milk: 1 day tissue: 25 days	Venezuela
sheep	ticks	bath/dip	20	0.05%		milk: 1 day tissue: 15 days	Venezuela
bee-keeping	varroa mites	EC	3.2%	16-32 mg ai per bee colony	if necessary	no application when carrying honey	Netherlands

NATIONAL MAXIMUM RESIDUE LIMITS

The following national MRLs were reported to the Meeting.

Country	Commodity	MRL (mg/kg) *)
Netherlands	Eggs (poultry)	0.5
		0.02
	Meat of cattle	1
	Other meat	0.5
	Other commodities	0.05
Germany, Fed. Rep.	Meat, meat products and fat of cattle and poultry	1
	Meat, meat products and fat of pig, sheep and goat	0.5
	Milks	0.5
	Milk products	0.5
	Eggs (without shell)	0.05
	Egg products	0.05
	Other commodities	0.01

*) Sum of coumaphos and its oxygen analogue

APPRAISAL

Coumaphos was first evaluated by the JMPR in 1968 when a temporary ADI was recommended. The temporary ADI was withdrawn by the 1980 JMPR and the temporary MRLs were converted to Guideline Levels. Countries were requested to provide data on current GAP to the JMPR.

Information was provided to the Meeting on the current registration status from the manufacturer, The Netherlands and Australia.

The compound is registered and used in 32 countries on all domestic animals and in bee-keeping. It is used as a dip, spray, soap, bath, liquid, powder, dust and oral feed premix. The ai content in the formulation ranges between 0.5 and 50 %. Coumaphos is used against ticks, fleas, lice, mange, keds, flies, fly-larvae in wounds, acarians, ectoparasites, worms, scabies, grubs and varroa mites. The dosage varies over a wide range depending on the type of application. There seems to be no significant change in the use pattern since it was previously reported (1968, 1972 and 1978). The Guideline Levels are therefore still relevant.

REFERENCES

Bayer AG. 1990. Information on the registered uses of coumaphos. Unpublished report 06.06.90 (revised 29.06.90 and 28.08.90)

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Germany, Fed. Rep. 1990. Regulatory Ordinance upon Maximum Residue Limits.