

LIST OF PROHIBITED AGROCHEMICALS

– LEGACY – Minasul Sustainable Coffee Protocol



Protocolo
Minasul de
Sustentabilidade

LEGACY - the Minasul Sustainability Protocol is a common language that guides the coffee sector in promoting the prosperity of farmers, improving social welfare and environmental conservation.

Highly hazardous pesticides are those known to be associated with serious risks to human health or the environment. LEGACY adopts internationally recognized classification criteria, such as the **Globally Harmonized System (GHS)**, the lists of the **World Health Organization (WHO)**, the **US Environmental Protection Agency (EPA)** and other international agreements and conventions.

With the aim of reducing health risks for farmers and workers, as well as mitigating environmental impacts, **LEGACY** establishes specific criteria through **Criterion 5.5 where the use of agrochemicals must respect all technical/agronomic and environmental safety assumptions. Highly toxic or internationally banned active ingredients should not be used.** This includes two reference lists: one of **banned agrochemicals**, which should not be used, and another of **agrochemicals to be phased out**, recommending their reduction and replacement.

Pesticides on the Prohibited List are not used:

-  Listed in the Stockholm Convention;
-  Rotterdam Convention or Montreal Protocol;
-  or that meet the criteria of the Conventions and are recommended for inclusion by the Chemical Review Committee of the respective Conventions.
-  In one of the three most acutely toxic types
-  classifications by ingestion, skin contact or inhalation or known carcinogens.

The use of pesticides on the phase-out list is reduced through the use of Integrated Pesticide Management and eliminated by 2030 if possible

-  This includes pesticides that are classified by national and international regulatory agencies in the categories of:
-  Chronic hazard, including probable carcinogens, known endocrine disruptors, bioaccumulation, persistence, reproductive toxins or mutagens.
-  Highly toxic environmental hazards for bees, high toxicity for aquatic organisms, etc. or two or more of these known factors.

Observations on the banned list:

1. Acute toxicity:

"Extremely hazardous", WHO class 1a, according to the World Health Organization Recommended classification of pesticides by hazard; "Highly hazardous" WHO class 1b according to the WHO Recommended classification of pesticides by hazard; "Fatal if inhaled" Hazard statement H330 according to the Globally Harmonized System (GHS) for the classification and labelling of chemical products.

2. Known carcinogens: The classifications of greatest concern, equivalent to "known carcinogen", according to the US Environmental Protection

Agency (EPA), the International Agency for Research on Cancer (IARC) and the Globally Harmonized System (GHS).

Notes on the phase-out list:

3. Cancer hazard: The second classification of greatest concern, equivalent to "probable or likely carcinogen", according to the US Environmental Protection Agency (EPA), the International Agency for Research on Cancer (IARC) and the Globally Harmonized System GHS).

4. Chronic health hazard: Known mutagenic substances, according to the Globally Harmonized System (GHS). They are known to cause mutations in human germ cells (eggs or sperm) that can be inherited by children. Known or presumed substances toxic to human reproduction, according to the Globally Harmonized System. These substances can adversely affect human reproduction. Endocrine disruptors, according to the GHS and EU classifications. These substances can disrupt hormone signaling systems in humans, with effects on normal development, growth, reproduction and metabolism, as well as being linked to cancers of the reproductive organs.

5. Environmental risks: Very persistent in water, soil or sediments, according to the Stockholm Convention.

Convention. Very bioaccumulative, according to the Stockholm Convention. These substances accumulate in the food chain, affecting top-level predators, including humans. Highly toxic to aquatic organisms,

according to the toxicity limit data for water fleas used by the US Environmental Protection Agency. Highly toxic to bees, according to the US Environmental Protection Agency's toxicity limit data. Please note that to qualify

On the GCP phase-out list for environmental risk, a pesticide must meet two of the three criteria of persistence, bioaccumulation and toxicity and/or be highly toxic to bees.

6. Emergency use derogations will be permitted under the GCP Equivalence Mechanism, subject to controls that may include: need for use, availability of alternatives and identification efforts, specific time limitations for the validity of the derogation, etc.

No.	Name of the pesticide's active ingredient	CAS number	POP	PIC	Montreal Protocol	See note	WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS+ carc (simA, simB)	Relevant for coffee
1	Aldicarb	116-06-3		yes			yes		yes				yes
2	Aluminum phosphide	20859-73-8							yes				yes
3	Carbofuran	1563-66-2		yes		yes		yes	yes				yes
4	Chlorothalonil	1897-45-6							yes				yes
5	Endosulfan	115-29-7	yes	yes					yes				yes
6	Methyl bromide	74-83-9			yes								yes
7	Paraquat dichloride	1910-42-5		yes		CF			yes				yes
8	Terbufos	13071-79-9					yes						yes
9	Triazophos	24017-47-8						yes					yes
10	Acrolein	107-02-8						yes	yes				
11	Alachlor	15972-60-8		yes									
12	alpha-BHC; alpha-HCH	319-84-6; 319-85-7	yes										
13	Alpha-chlorohydrin	96-24-2						yes					
14	Anthracene oil	90640-80-5										yes	
15	Arsenic and its com-pounds	7778-39-4								yes	yes	yes	
16	Azinphos-ethyl	2642-71-9						yes					
17	Azinphos-methyl	86-50-0		yes				yes	yes				
18	Azocyclotin	41083-11-8							yes				
19	Benomyl	17804-35-2		yes		yes							
20	Beta-cyfluthrin	1820573-27-0						yes	yes				
21	beta-HCH; beta-BCH	319-85-7	yes										
22	Biphenyl; Diphenyl	92-52-4										yes	
23	Blasticidin-S	2079-00-7						yes					
24	Brodifacoum	56073-10-0					yes		yes				

No.	Name of the pesticide's active ingredient	CAS number	POP	PIC	Montreal Protocol	See note	WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS+ carc (simA, simB)	Relevant to coffee
25	Bromadiolone	28772-56-7					yes		yes				
26	Bromethalin	63333-35-7					yes						
27	Bromophos-ethyl	4824-78-6						yes					
28	Bromoxynil	1689-84-5							yes				
29	Butocarboxim	34681-10-2						yes					
30	Butoxycarboxim	34681-23-7						yes					

67	lene dichloride;1,2-dibromoeth	107-06-2		yes								yes	
68	Ethylene oxide	75-21-8		yes							yes	yes	
69	Famphur	52-85-7						yes					
70	Fenamiphos	22224-92-6						yes	yes				
71	Fenbutatin-oxide	13356-08-6							yes				
72	Fenchlorazole-ethyl	103112-35-2										yes	

No.	Name of the pesticide's active ingredient	CAS number	POP	PIC	Montreal Protocol	See note	WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS+ carc (simA, simB)	Relevant for coffee
73	Fenhexamid	126833-17-8							yes				
74	Fenpropathrin	39515-41-8							yes				
75	Fenthion	55-38-9		yes		CF							
76	ntin acetate;Triphenyltin acetate	900-95-8							yes				
77	in hydroxide;Triphenyltin hydrox	76-87-9							yes				
78	Ferbam	14484-64-1							yes				
79	Flocoumafen	90035-08-8					yes		yes				
80	Fluazinam	79622-59-6							yes				
81	Flucythrinate	70124-77-5						yes					
82	Fluoroacetamide	640-19-7		yes				yes					
83	Flusulfamide	106917-52-6							yes				
84	Fluvalinate	69409-94-5							yes				
85	Folpet	133-07-3							yes				
86	Formaldehyde	50-00-0									yes		
87	Formetanate	22259-30-9						yes	yes				
88	Furathiocarb	65907-30-4						yes	yes				
89	Heptenophos	23560-59-0						yes					
90	nzene / ben-zene hexachloride	118-74-1	yes	yes			yes					yes	
91	exane;mix of isomers (beta-HC	608-73-1		yes									
92	Hydrogen cyanide**	74-90-8					yes		yes				
93	Isoxathion	18854-01-8						yes					
94	Lindane	58-89-9	yes	yes							yes		
95	Magnesium phosphide	12057-74-8							yes				
96	Mecarbam	2595-54-2						yes					

No.	Name of the pesticide's active ingredient	CAS number	POP	PIC	Montreal Protocol	See note	WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS+ carc (simA, simB)	Relevant for coffee
97	Mercury and its com-pounds	7439-97-6		yes					yes				
98	Methamidophos	10265-92-6		yes		yes		yes	yes				
99	Methidathion	950-37-8						yes					
100	Methiocarb	2032-65-7						yes					
101	Methomyl	16752-77-5						yes					
102	Mevinphos	7786-34-7					yes						
103	Monocrotophos	6923-22-4		yes				yes	yes				
104	Nicotine	54-11-5						yes	yes				
105	Omethoate	1113-02-6						yes					
106	Oxamyl	23135-22-0					yes		yes				
107	Oxydemeton-methyl	301-12-2						yes					
108	Paraffin oils; mineral oils	64741-88-4										yes	
109	Parathion	56-38-2		yes			yes						
110	Parathion-methyl	298-00-0		yes		yes	yes		yes				
111	PCP; Pentachlorophenol	87-86-5		yes				yes	yes				
112	Phorate	298-02-2		yes			yes						
113	Phosphamidon	13171-21-6		yes		yes	yes						
114	Phosphine	7803-51-2							yes				
115	Potasan	299-45-6							yes				
116	Propetamphos	31218-83-4						yes					
117	Propylene oxide, Oxirane	75-56-9										yes	
118	Pyrazoxon	108-34-9							yes				
119	Pyrimidifen	105779-78-0							yes				
120	Sodium cyanide	143-33-9						yes					

No.	Name of the pesticide's active ingredient	CAS number	POP	PIC	Montreal Protocol	See note	WHO Ia	WHO Ib	H330	EPA carc	IARC carc	GHS+ carc (simA, simB)	Relevant for coffee
121	Sodium fluoroacetate(1080)	62-74-8					yes		yes				
122	Spirodiclofen	148477-71-8										yes	
123	Strychnine	57-24-9						yes					
124	Sulfluramid	4151-50-2	yes	yes									
125	Sulfotep	3689-24-5					yes						

126	Tau-fluvalinate	102851-06-9							yes				
127	TCMTB	21564-17-0							yes				
128	Tebupyrimphos	96182-53-5					yes						
129	Tefluthrin	79538-32-2						yes	yes				
130	Thiofanox	39196-18-4						yes					
131	Thiometon	640-15-3						yes					
132	Formulations with benomyl and c	137-26-8		yes		yes							
133	Tolylfluanid	731-27-1							yes				
134	Trichlorfon	52-68-6		yes									
135	Vamidothion	2275-23-2						yes					
136	Warfarin	81-81-2						yes	yes				
137	Zinc phosphide	1314-84-7						yes					
138	Ziram	137-30-4							yes				
139	Z-Phosphamidon	23783-98-4					yes						

GHS+: This list uses the GHS of the European Union and Japan (Globally Harmonized System of Classification and Labelling of Chemicals).

X: Annex III of the Rotterdam Convention includes certain specific formulations.

CF: The formulations have been approved by the Chemical Review Committee (CRC) of the Rotterdam Convention as meeting the criteria for inclusion and are recommended for listing, but have not yet been formally included.

C PIC: The material meets the criteria of the Rotterdam Convention and is recommended for inclusion by the Chemical Review Committee of the Convention, but has not yet been listed.

C POP: The material meets the criteria of the Stockholm Convention and is recommended for inclusion by the Chemical Review Committee of the Convention, but has not yet been listed.

* Although sulfluramid is not specifically listed under the Stockholm Convention, it is considered listed by the Conference of the Parties to the Stockholm Convention (COP) because it is derived from and degrades into substances that are listed (PFOS and its salts).

** This list uses the same classification for hydrogen cyanide as for calcium cyanide. According to the WHO (2019) calcium cyanide reacts with moisture to produce hydrogen cyanide gas. Hydrogen cyanide is fatal if ingested, in contact with the skin or if inhaled. In liquid form, this substance is also fatal if swallowed or in contact with the skin.

No.	Name of the pesticide's active ingredient	CAS number		EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 G R2	GHS C2 G R2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly toxic	Relevant for coffee	Disposal
1	Abamectin	71751-41-2						yes	yes	yes				yes	2030
2	Boric acid	10043-35-3				yes		yes	yes					yes	2030
3	Copper (II) hydroxide	20427-59-2								yes				yes	2030
4	Chlorpyrifos	2921-88-2				yes							yes	yes	2030
5	Disquat dibromide	85-00-7								yes				yes	2030
6	Fenpyroximate	134098-61-6								yes				yes	2030
7	Glufosinate-ammonium	77182-82-2				yes								yes	2030
8	Imidacloprid	138261-41-3											yes	yes	2030
9	Lambda-cyhalothrin	91465-08-6								yes				yes	2030
10	Tebuconazole	107534-96-3								yes				yes	2030
11	Zeta-Cypermethrin	1315501-18-8						yes	yes					yes	2030
12	Borax; Borate salts	1303-96-4				yes								no	2030
13	1,3-dichloropropene	542-75-6	yes											no	2030
14	2,4-D	94-75-7						yes	yes					no	2030
15	Acephate	30560-19-1											yes	no	2030
16	Acetochlor	34256-82-1						yes	yes					no	2030
17	Acifluorfen, sodium	62476-59-9	yes											no	2030
18	Acrinathrin	101007-06-1											yes	no	2030
19	Alanycarb	83130-01-2											yes	no	2030

No.	Name of the pesticide's active ingredient	CAS number	EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 G R2	GHS C2 G R2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly t	Relevant for coffee	Disposal
20	Amisulbrom	348635-87-0								yes	yes		no	2030
21	Amitrole	61-82-5						yes					no	2030
22	Anthraquinone	84-65-1	yes		yes								no	2030
23	Azafenidin	68049-83-2			yes								no	2030
24	Azamethiphos	35575-96-3										yes	no	2030
25	Bendiocarb	22781-23-3										yes	no	2030
26	Benfuracarb	82560-54-1										yes	no	2030
27	Bensulide	741-58-2										yes	no	2030
28	Benthiavalicarb-isopropyl	177406-68-7	yes										no	2030
29	Bifenthrin	82657-04-3					yes	yes				yes	no	2030
30	Bioresmethrin	28434-01-7			yes							yes	no	2030
31	Bromoxynil heptanoate	56634-95-8			yes				yes		yes		no	2030
32	Bromoxynil octanoate	1689-99-2			yes				yes		yes		no	2030
33	Butachlor	23184-66-9	yes										no	2030
34	Butocarboxim	34681-10-2										yes	no	2030
35	Captan	133-06-2	yes				yes	yes					no	2030
36	Carbetamide	16118-49-3			yes								no	2030
37	Chinomethionat; Oxythioquino	2439-01-2	yes										no	2030
38	Chlorfenapyr	122453-73-0										yes	no	2030

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No.	Name of the pesticide's active ingredient	CAS number	TABC	EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 G R2	GHS C2 G R2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly t	Relevant for coffee	Disposal
96	Meptyldinocap	131-72-6			yes									no	2030
97	Metam-potassium	137-41-7	yes											no	2030
98	Metam-sodium	137-42-8	yes				yes	yes						no	2030
99	Methabenzthiazuron	18691-97-9										yes		no	2030
100	Metiram	9006-42-2	yes				yes	yes						no	2030
101	Metribuzin	21087-64-9					yes	yes						no	2030
102	Milbemectin	51596-10-2										yes		no	2030
103	Molinate	2212-67-1					yes	yes						no	2030
104	MON 4660; AD 67	71526-07-3	yes											no	2030
105	Naled	300-76-5										yes		no	2030
106	Nitenpyram	150824-47-8										yes		no	2030
107	Nitrobenzene	98-95-3			yes		yes	yes						no	2030
108	Noviflumuron	121451-02-3	yes											no	2030
109	Oryzalin	19044-88-3	yes											no	2030
110	Oxadiazon	19666-30-9	yes											no	2030
111	Pendimethalin	40487-42-1							yes	yes				no	2030
112	Phenthoate	2597-03-7										yes		no	2030
113	Phosmet	732-11-6										yes		no	2030
114	Pirimicarb	23103-98-2	yes							yes	yes			no	2030

No.	Name of the pesticide's active ingredient	CAS number	TABC	EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 G R2	GHS C2 G R2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly t	Relevant for coffee	Disposal
115	Pirimiphos-methyl	29232-93-7										yes	no	2030	
116	Prallethrin	23031-36-9										yes	no	2030	
117	Procymidone	32809-16-8		yes			yes	yes					no	2030	
118	Profoxydim	139001-49-3					yes	yes					no	2030	
119	Propachlor	1918-16-7		yes									no	2030	
120	Propineb	12071-83-9		yes									no	2030	
121	Propoxur	114-26-1		yes								yes	no	2030	
122	Prothiophos	34643-46-4							yes		yes		no	2030	
123	Pymetrozine	123312-89-0		yes									no	2030	
124	Pyraclufos	77458-01-6										yes	no	2030	
125	Pyraflufen-ethyl	129630-19-9		yes									no	2030	
126	Pyrazachlor	6814-58-0		yes									no	2030	
127	Pyrazophos	13457-18-6										yes	no	2030	
128	Pyrethrins, Pyrethrum extract	8003-34-7										yes	no	2030	
129	Pyridaben	96489-71-3										yes	no	2030	
130	Pyridalyl	179101-81-6							yes	yes	yes		no	2030	
131	Pyridiphenthion	119-12-0										yes	no	2030	
132	Quinalphos	13593-03-8					yes	yes				yes	no	2030	
133	Quinoclamine	2797-51-5										yes	no	2030	

No.	Name of the pesticide's active ingredient	CAS number	TABC	EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 G R2	GHS C2 G R2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly t	Relevant to coffee	Disposal
134	Quinolin-8-ol; 8-hydroxy-quinol	148-24-3				yes								no	2030
135	Quinoxifent	124495-18-7								yes		yes		no	2030
136	Quinoxifent-p-terfuryl	119738-06-6						yes						no	2030
137	Resmethrin	10453-86-8		yes				yes	yes				yes	no	2030
138	Rotenone	83-79-4											yes	no	2030
139	Silafluofen	105024-66-6				yes							yes	no	2030
140	Simazine	122-34-9						yes	yes					no	2030
141	Spinetoram	187166-15-0											yes	no	2030
142	Sulfoxaflo	946578-00-3											yes	no	2030
143	Temephos	3383-96-8											yes	no	2030
144	Tepraloxydim	149979-41-9						yes	yes					no	2030
145	Terrazole; Etridiazole	2593-15-9		yes										no	2030
146	Tetrachlorvinphos	22248-79-9		yes									yes	no	2030
147	Tetramethrin	7696-12-0											yes	no	2030
148	Thiabendazole	148-79-8		yes		yes								no	2030
149	Thiacloprid	111988-49-9		yes		yes								no	2030
150	Thiodicarb	59669-26-0		yes									yes	no	2030
151	Thiophanate-methyl	23564-05-8		yes										no	2030
152	Thiourea	62-56-6						yes	yes					no	2030

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No.	Name of the pesticide's active ingredient	CAS number	IARC	EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 G R2	GHS C2 G R2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly t	Relevant for coffee	Disposal
172	Deltamethrin	52918-63-5					yes	yes				yes	yes	2030	
173	Diazinon	333-41-5	yes									yes	yes	2030	
174	Dimethoate	60-51-5										1	yes	2030	
175	Diuron	330-54-1		1									yes	2030	
176	Epoxiconazole	133855-98-8		1	1		1	1					yes	2030	
177	Esfenvalerate	66230-04-4										1	yes	2030	
178	Etofenprox; Ethofenprox	80844-07-1								1	1	1	yes	2030	
179	Fenitrothion	122-14-5					1	1				1	yes	2030	
180	Fipronil	120068-37-3										1	yes	2030	
181	Flupyradifurone	951659-40-8										1	yes	2030	
182	Glufosinate-ammonium	77182-82-2			1								yes	2030	
183	Glyphosate	1071-83-6	1										yes	2030	
184	Indoxacarb	173584-44-6										1	yes	2030	
185	Lufenuron	103055-07-8							1	1	1		yes	2030	
186	Malathion	121-75-5	1									1	yes	2030	
187	Mancozeb			1	1	1	1	1					yes	2030	
188	Metaflumizone	139968-49-3							1	1		1	yes	2030	
189	Permethrin	52645-53-1		1								1	yes	2030	
190	Profenofos	41198-08-7										1	yes	2030	

No.	Name of the pesticide's active ingredient	CAS number	IARC	EPA	GHS mutagen (1A, 1B)	GHS reproductive Toxin (1A, 1B)	EU Endocrine disrupting Chemical	GHS C2 GR2	GHS C2 GR2	Very bioaccumulative	Very persistent in water, soil or sediment	Very toxic to aquatic organisms	Hazard to ecosystem services, EPA Highly t	Relevant for coffee	Disposal
191	Propargitis	2312-35-8	1						1		1			yes	2030
192	Propiconazole	60207-90-1			1									yes	2030
193	Spinosad	168316-95-8										1		yes	2030
194	Tetraconazole	112281-77-3					1	1						yes	2030
195	Thiamethoxam	153719-23-4										1		yes	2030
196	Triadimenol	55219-65-3			1									yes	2030
197	Chlorpyrifos-methyl	5598-13-0			1							1		no	2030
198	Clothianidin	210880-92-5										1		no	2030
199	Flumioxazin	103361-09-7			1									no	2030
200	Oxyfluorfen	42874-03-3	1											no	2030

Version	Author	Date	Reviewed by	Approved by	Date of approval
1.0	Laura Prada	09/May/25	Frederico Caldeira	Frederico Caldeira	12/05/2025