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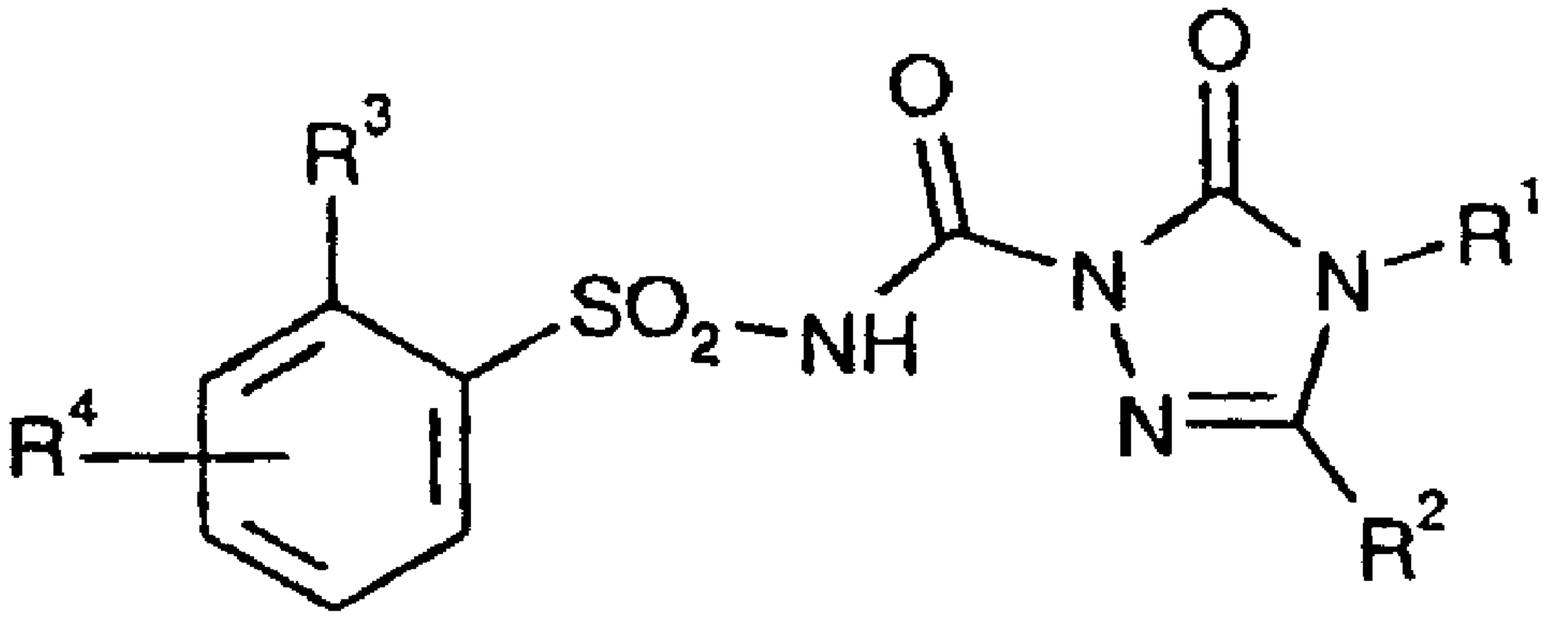
(54) Title: SELECTIVE HERBICIDES BASED ON ARYLSULPHONYLAMINOCARBONYLTRIAZOLINONES



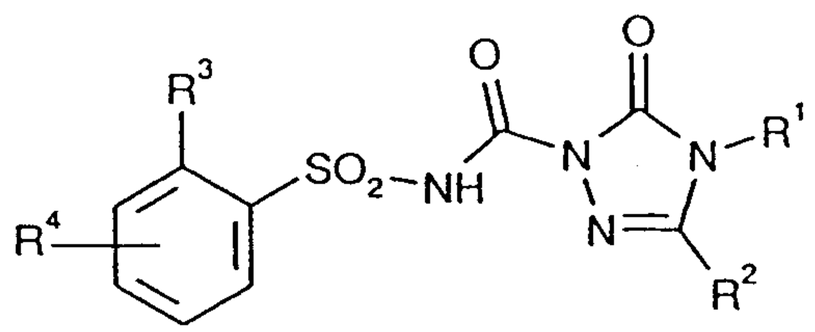
(I)

(57) Abrégé/Abstract:
The novel herbicidally active compound combinations comprising (a) an arylsulphonylaminocarbonyltriazolinone of the formula (I) (see formula I) (in which R^1, R^2, R^3 and R^4 are each as defined in the description) and/or a salt of a compound of the formula (1) (= "active compound of Group 1") and (b) one or more compounds from a second group of certain known herbicides (= "active compound of Group 2") exhibit at certain weight ratios synergistic effects and can be employed as selective herbicides in various crops of useful plants; typical examples are active compound combinations from the Na salts of the compounds of the formula (I) where $R^1 = CH_3$, $R^2 = OC_3H_7$, $R^3 = COOCH_3$ and $R^4 = H$(I-1) or where $R^1 = CH_3$, $R^2 = OCH_3$, $R^3 = OCF_3$ and $R^4 = H$(I-2) as active compound of Group 1.

28976-339D

Abstract

The novel herbicidally active compound combinations comprising (a) an arylsulphonylaminocarbonyltriazolinone of the formula (I)



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(in which R^1, R^2, R^3 and R^4 are each as defined in the description) and/or a salt of a compound of the formula (I) (= "active compound of Group 1") and (b) one or more compounds from a second group of certain known herbicides (= "active compound of Group 2") exhibit at certain weight ratios synergistic effects and can be employed as selective herbicides in various crops of useful plants;

typical examples are active compound combinations from the Na salts of the compounds of the formula (I) where $R^1 = CH_3$, $R^2 = OC_3H_7$, $R^3 = COOCH_3$ and $R^4 = H$ (I-1) or where $R^1 = CH_3$, $R^2 = OCH_3$, $R^3 = OCF_3$ and $R^4 = H$ (I-2) as active compound of Group 1.

28976-339D

Selective herbicides based on arylsulphonylaminocarbonyltriazolinones

This application is a divisional application of copending application 2,266,587, filed September 10, 1997.

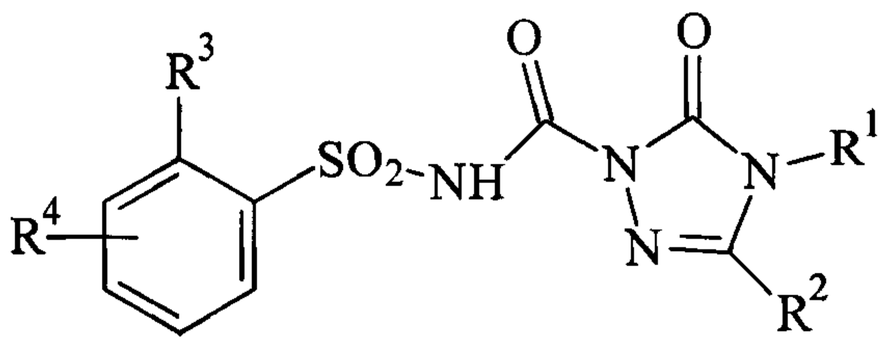
The invention relates to novel herbicidal synergistic active compound combinations comprising, on the one hand, known arylsulphonylaminocarbonyltriazolinones and, on the other hand, known herbicidally active compounds, which can be used particularly successfully for selectively controlling weeds in a variety of crops of useful plants.

Sulphonylaminocarbonyltriazolinones, which are herbicides having a broad spectrum of action, are the subject of a series of patent applications (cf. EP 341489, EP 422469, EP 425948, EP 431291, EP 507171, EP 534266, WO 96/11188, DE 19508118). However, the known sulphonylaminocarbonyltriazolinones have a number of gaps in their action.

Summary of Invention

The present invention provides a synergistic herbicidal composition, comprising: a combination of active compounds:

(a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I) or a salt thereof:



(I)

wherein:

R^1 represents: (i) H, hydroxyl, amino or alkylideneamino, or (ii) alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylamino, dialkylamino, cycloalkyl, cycloalkylalkyl, cycloalkylamino, aryl or arylalkyl, each of which is optionally substituted,

R^2 represents: (i) H, hydroxyl, mercapto, amino, cyano or a halogen atom, or (ii) alkyl, alkoxy, alkylthio, alkylamino, dialkylamino, alkenyl, alkinyl, alkenyloxy, alkinyloxy, alkenylthio, alkinylthio, alkenylamino, alkinylamino, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, cycloalkylalkyl, aryl, aryloxy, arylthio, arylamino or arylalkyl, each of which is optionally substituted,

R^3 represents: (i) nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted, and

R^4 represents: (i) H, nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted; and

(b) one or more of the following compounds:

N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(N-methyl-N-methylsulphonyl-sulphamoyl)-urea (amidosulfuron), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-chloro-phenylsulphonyl)-urea (chlorsulfuron), N-(4,6-dimethoxy-1,3,5-triazin-2-yl)-N'-(2-(2-methoxy-ethoxy)-phenylsulphonyl)-urea (cinosulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-chloro-4-methoxy-carbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (clopyrasulfuron-methyl, halosulfuron, NC-319), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-cyclopropylcarbonyl-phenylsulphonyl)-urea (cyclosulfamuron, AC-322140), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE459), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE-459), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethoxy-phenoxysulphonyl)-urea (ethoxysulfuron, HOE-095404), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-chloro-imidazo[1,2-a]-pyridin-3-yl-sulphonyl)-urea (imazosulfuron), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (metsulfuron-methyl), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-dimethylcarbamoyl-pyridin-2-yl-sulphonyl)-urea (nicosulfuron), N-(4,6-dimethyl-pyrimidin-2-yl)-N'-(2-oxetan-3-yl-oxycarbonyl-phenylsulphonyl)-urea (oxasulfuron), N-(4,6-bis-difluoromethoxy-pyrimidin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (primisulfuron-methyl), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-(3,3,3-trifluoro-propyl)-phenylsulphonyl)-urea (prosulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(4-ethoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (pyrazosulfuron-ethyl), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-

(3-ethylsulphonyl-pyridin-2-yl-sulphonyl)-urea (rimsulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethylsulphonyl-imidazo[1,2-a]pyridine-3-sulphonamide (sulfosulfuron, MON-37500), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-thien-3-yl-sulphonyl)-urea (thifensulfuron-methyl), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-[2-(2-chloro-ethoxy)-phenylsulphonyl]-urea (triasulfuron), or N-methyl-N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (tribenuron-methyl),

wherein from 0.01 to 1000 parts by weight of (b) are used per part by weight of (a).

The present invention further provides a method for controlling weeds, comprising allowing to act on the weeds or their habitat the composition as described herein.

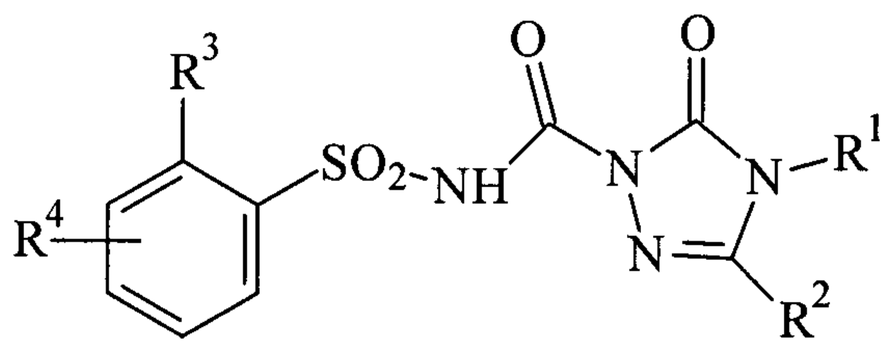
The present invention further provides use of the composition as described herein, for controlling weeds.

The present invention further provides a process for preparing a herbicidal composition, comprising mixing the composition as described herein, with an extender, a surfactant or a mixture thereof.

Surprisingly, it has now been found that a number of known active compounds from the series of the arylsulphonylaminocarbonyltriazolinones, when used together with known herbicidally active compounds from various substance classes, exhibit pronounced synergistic effects with regard to the activity against weeds and can be used particularly advantageously as broad-spectrum combination preparations for the selective control of weeds in crops of useful plants, such as, for example, wheat.

The invention accordingly provides selective herbicidal compositions, characterized by an effective content of a combination of active compounds comprising

(a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I)



(I)

in which

R^1 represents hydrogen, hydroxyl, amino, alkylideneamino or represents alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylamino, dialkylamino, cycloalkyl, cycloalkylalkyl, cycloalkylamino, aryl or arylalkyl, each of which is optionally substituted,

R^2 represents hydrogen, hydroxyl, mercapto, amino, cyano, halogen or represents alkyl, alkoxy, alkylthio, alkylamino, dialkylamino, alkenyl, alkinyl, alkenyloxy, alkinyloxy, alkenylthio, alkinylthio, alkenylamino, alkinylamino, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, cycloalkylalkyl, aryl, aryloxy, arylthio, arylamino or arylalkyl, each of which is optionally substituted,

R^3 represents nitro, cyano, halogen or represents alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted, and

R^4 represents hydrogen, nitro, cyano, halogen or represents alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted,

and/or a salt of a compound of the formula (I)

("active compounds of Group 1")

and

(b) one or more compounds from a second group of herbicides comprising the active compounds listed below:

2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methyl-phenyl)-acetamide (acetochlor), 2-chloro-6-nitro-3-phenoxy-aniline (aclonifen), 2-chloro-N-(methoxymethyl)-N-(2,6-diethyl-phenyl)-acetamide (alachlor), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(N-methyl-N-methylsulphonyl-sulphamoyl)-urea (amidosulfuron), 6-chloro-4-ethylamino-2-isopropylamino-1,3,5-triazine (atrazine), 4-chloro-2-oxo-3(2H)-benzothiazolylacetic acid (benazolin), ethyl N-benzoyl-N-(3,4-dichloro-phenyl)-DL-alaninate (benzoylprop-ethyl), 3-i-propyl-1H-2,1,3-benzothiadiazin-4(3H)-one (bentazon), methyl 5-(2,4-dichloro-phenoxy)-2-nitro-benzoate (bifenox), 2-bromo-3,3-dimethyl-

N-(1-methyl-1-phenyl-ethyl)-butanamide (bromobutide), 3,5-dibromo-4-hydroxy-benzaldehyde O-(2,4-dinitro-phenyl)-oxime (bromofenoxim), 3,5-dibromo-4-hydroxy-benzonitrile (bromoxynil), N-butoxymethyl-2-chloro-N-(2,6-diethyl-phenyl)-acetamide (butachlor), S-ethyl bis-(2-methyl-propyl)-thiocarbamate (butylate), 2-(4-chloro-2-fluoro-5-(2-chloro-2-ethoxycarbonyl-ethyl)-phenyl)-4-difluoromethyl-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one (carfentrazone-ethyl, F-8426), 2,4-dichloro-1-(3-methoxy-4-nitro-phenoxy)-benzene (chlomethoxyfen), 3-amino-2,5-dichloro-benzoic acid (chloramben), 1,3,5-trichloro-2-(4-nitro-phenoxy)-benzene (chlornitrofen), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-chloro-phenylsulphonyl)-urea (chlor-sulfuron), N'-(3-chloro-4-methylphenyl)-N,N-dimethyl-urea (chlortoluron), N-(4,6-dimethoxy-1,3,5-triazin-2-yl)-N'-(2-(2-methoxy-ethoxy)-phenylsulphonyl)-urea (cinosulfuron), (R)-(2-propinyl)-2-[4-(5-chloro-3-fluoro-pyridin-2-yl-oxy)-phenoxy-propanoate (clodinafop-propargyl), 3,6-dichloro-pyridine-2-carboxylic acid (clopyralid), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-chloro-4-methoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (clopyrasulfuron, halosulfuron, NC-319), methyl-3-chloro-2-[(5-ethoxy-7-fluoro[1,2,4]triazolo[1,5-c]-pyrimidin-2-yl-sulphonyl)-amino]-benzoate (cloransulam-methyl), 2-chloro-4-ethyl-amino-6-(1-cyano-1-methyl-ethylamino)-1,3,5-triazine (cyanazine), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-cyclopropylcarbonyl-phenylsulphonyl)-urea (cyclosulfamuron, AC-322140), 2,4-dichloro-phenoxyacetic acid (2,4-D), 3,6-dichloro-2-methoxy-benzoic acid (dicamba), (R)-2-(2,4-dichloro-phenoxy)-propionic acid (dichlorprop-P), methyl 2-[4-(2,4-dichloro-phenoxy)-phenoxy]-propate (diclofop-methyl), 1,2-dimethyl-3,5-diphenyl-1H-pyrazolium methyl sulphate (difenzoquat), N-(2,4-difluoro-phenyl)-2-(3-trifluoromethyl-phenoxy)-pyridine-3-carboxamide (diflufenican), 2-chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methyl-ethyl)-acetamide (dimethenamide, SAN-582), 2-amino-4-(1-fluoro-1-methyl-ethyl)-6-(1-methyl-2-(3,5-dimethyl-phenoxy)-ethylamino)-1,3,5-triazine (dimexyflam, IDH-1105), N3,N3-diethyl-2,4-dinitro-6-trifluoromethyl-1,3-diamino-benzene (dinitramine), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE459), 6,7-dihydro-dipyrido[1,2-a:2',1'-c]pyrazinediium (diquat), S,S-dimethyl 2-difluoromethyl-4-i-butyl-6-trifluoromethyl-pyridine-3,5-dicarbothioate (dithiopyr), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE-459), S-ethyl dipropylthio-carbamate (EPTC), S-(phenylmethyl) N-ethyl-N-(1,2-dimethyl-propyl)-thiocarbamate (esprocarb), ethyl [2-chloro-5-(4-chloro-5-difluoromethoxy-1-methyl-1H-pyrazol-3-yl)-4-fluoro-phenoxy]-acetate (ET-751), (S)-(2-ethoxy-1-methyl-2-oxoethyl) 2-chloro-5-(2-chloro-4-trifluoromethyl-phenoxy)-benzoate (ethoxyfen), N-(4,6-dimethoxy-

pyrimidin-2-yl)-N'-(2-ethoxy-phenoxysulphonyl)-urea (ethoxysulfuron, HOE-095404), ethyl 2-[4-(6-chloro-benzoxazol-2-yl-oxy)-phenoxy]-propanoate (fenoxaprop-ethyl), isopropyl N-benzoyl-N-(3-chloro-4-fluoro-phenyl)-DL-alaninate (flamprop-isopropyl), isopropyl N-benzoyl-N-(3-chloro-4-fluoro-phenyl)-L-alaninate (flamprop-isopropyl-L), methyl N-benzoyl-N-(3-chloro-4-fluoro-phenoxy)-DL-alaninate (flamprop-methyl), N-(2,6-difluorophenyl)-5-methyl-1,2,4-triazolo[1,5-a]-pyrimidine-2-sulphonamide (flumetsulam, DE-498), pentyl [2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)-phenoxy]-acetate (flumiclorac-pentyl), 2-[4-chloro-2-fluoro-5-[(1-methyl-2-propinyl)-oxy]-phenyl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione (flumipropyn), ethoxycarbonylmethyl 5-(2-chloro-4-trifluoromethyl-phenoxy)-2-nitro-benzoate (fluoroglycofen-ethyl), 1-(4-chloro-3-(2,2,3,3,3-pentafluoro-propoxymethyl)-phenyl)-5-phenyl-1H-1,2,4-triazole-3-carboxamide (flupoxam), 1-isopropyl-2-chloro-5-(3,6-dihydro-3-methyl-2,6-dioxo-4-trifluoromethyl-1(2H)-pyrimidyl)-benzoate (flupropacil), 9-hydroxy-9H-fluorene-9-carboxylic acid (flurenol), 4-amino-3,5-dichloro-6-fluoro-pyridin-2-yl-oxy)-acetic acid (fluroxypyr), 5-methylamin-2-phenyl-4-(3-trifluoromethyl-phenyl)-3(2H)-fuoanone (flurtamone), methyl [(2-chloro-4-fluoro-5-(tetrahydro-3-oxo-1H,3H-[1,3,4]-thiadiazolo-[3,4-a]-pyridazin-1-ylidene)-amino-phenyl]-thioacetate (fluthiacet-methyl, KIH-9201), 2-amino-4-(hydroxymethyl-phosphinyl)-butanoic acid (ammonium salt) (glufosinate-(ammonium)), N-phosphonomethyl-glycine (-isopropylammonium), (glyphosate, -isopropylammonium), methyl 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-4-methyl-benzoate (imazamethabenz-methyl), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-5-methyl-pyridine-3-carboxylic acid (imazamethapyr), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-5-methoxymethyl-pyridine-3-carboxylic acid (imazamox), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-quinoline-3-carboxylic acid (imazaquin), 2-(4,5-dihydro-4-methyl-4-i-propyl-5-oxo-1H-imidazol-2-yl)-5-ethyl-pyridine-3-carboxylic acid (imazethapyr), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-chloro-imidazo[1,2-a]-pyridin-3-yl-sulphonyl)-urea (imazosulfuron), 4-hydroxy-3,5-diiodo-benzonitrile (ioxynil), N,N-dimethyl-N'-(4-isopropyl-phenyl)-urea (isoproturon), N-(3-(1-ethyl-1-methyl-propyl)-isoxazol-5-yl)-2,6-dimethoxy-benzamide (isoxaben), (5-cyclopropyl-isoxazol-4-yl)-(2-methylsulphonyl-4-trifluoromethyl-phenyl)-methanone (isoxaflutole, RPA-201772), 2-[2-[4-[3,5-dichloro-2-pyridinyl)-oxy]-phenoxy]-1-oxo-propyl]-isoxazolidine (isoxapyrifop), N'-(3,4-dichloro-phenyl)-N-methoxy-N-methylurea (linuron), (4-chloro-2-methyl-phenoxy)-acetic acid (MCPA), 2-(4-chloro-2-methyl-phenoxy)-propionic acid (mecoprop), 2-chloro-N-(2,6-dimethyl-phenyl)-N-(1H-pyrazol-1-yl-methyl)-acetamide (metazachlor), N'-(4-(3,4-dihydro-

2-methoxy-2,4,4-trimethyl-2H-1-benzopyran-7-yl-oxy)-phenyl)-N-methoxy-N-methyl-urea (metobenzuron, UMP-488), N'-(4-bromo-phenyl)-N-methoxy-N-methylurea (metobromuron), 2-chloro-N-(2-ethyl-6-methyl-phenyl)-N-(2-methoxy-1-methyl-ethyl)-acetamide (metolachlor), N-(2,6-dichloro-3-methyl-phenyl)-5,7-dimethoxy-1,2,4-triazolo[1,5-a]-pyrimidine-2-sulphonamide (metosulam, DE-511), N'-(3-chloro-4-methoxy-phenyl)-N,N-dimethyl-urea (metoxuron), 4-amino-6-tert-butyl-3-methylthio-1,2,4-triazin-5-(4H)-one (metribuzin), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (metsulfuron-methyl), 2-(2-naphthyloxy)-N-phenyl-propanamide (naproanilide), N-butyl-N'-(3,4-dichloro-phenyl)-N-methyl-urea (neburon), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-dimethylcarbamoyl-pyridin-2-yl-sulphonyl)-urea (nicosulfuron), S-(2-chlorobenzyl)-N,N-diethyl-thiocarbamate (orbencarb), N-(4,6-dimethyl-pyrimidin-2-yl)-N'-(2-oxetan-3-yl-oxycarbonyl-phenylsulphonyl)-urea (oxasulfuron), 1,1'-dimethyl-4,4'-bipyridinium (paraquat), 1-amino-N-(1-ethyl-propyl)-3,4-dimethyl-2,6-dinitro-benzene (pendimethalin), N-(4,6-bis-difluoromethoxy-pyrimidin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (primisulfuron-methyl), S-phenylmethyl N,N-dipropyl-thiocarbamate (prosulfocarb), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-(3,3,3-trifluoro-propyl)-phenylsulphonyl)-urea (prosulfuron), 2-chloro-N-(2,6-diethyl-phenyl)-N-(2-propoxy-ethyl)-acetamide (pretilachlor), 2-chloro-N-isopropyl-N-phenyl-acetamide (propachlor), O-(6-chloro-3-phenyl-pyridazin-4-yl) S-octyl thiocarbonate (pyridate), 4-(2,4-dichloro-benzoyl)-1,3-dimethyl-5-(4-methyl-phenylsulphonyloxy)-pyrazole (pyrazolate), 4-(2,4-dichloro-benzoyl-1,3-dimethyl-5-(phenylcarbonylmethoxy)-pyrazole (pyrazoxyfen), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(4-ethoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (pyrazosulfuron-ethyl), 7-chloro-3-methyl-quinoline-8-carboxylic acid (quinmerac), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-ethylsulphonyl-pyridin-2-yl-sulphonyl)-urea (rimsulfuron), 6-chloro-2,4-bis-ethylamino-1,3,5-triazine (simazin), 2-(2-chloro-4-methylsulphonyl-benzoyl)-cyclohexane-1,3-dione (sulcotrione), 2-(2,4-dichloro-5-methylsulphonylamino-phenyl)-4-difluoromethyl-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one (sulfentrazone, F-6285), N-phosphonomethyl-glycine-trimethylsulphonium (sulfosate), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethylsulphonyl-imidazo[1,2-a]pyridine-3-sulphonamide (sulfosulfuron, MON-37500), 6-chloro-4-ethylamino-2-tert-butylamino-1,3,5-triazine (terbuthylazine), 2-tert-butylamino-4-ethylamino-6-methylthio-1,3,5-triazine (terbutryn), 2-chloro-N-(2,6-dimethyl-phenyl)-N-(3-methoxy-2-thienyl-methyl)-acetamide (thenylchlor), 6-(6,7-dihydro-6,6-dimethyl-3H,5H-pyrrolo[2,1-c]-1,2,4-thiadiazol-3-ylidenamino)-7-fluoro-4-(2-propinyl)-2H-1,4-benzoxazin-3(4H)-one (thidiazimin), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-

N'-(2-methoxycarbonyl-thien-3-yl-sulphonyl)-urea (thifensulfuron-methyl), 2-(ethoximino-propyl)-3-hydroxy-5-(2,4,6-trimethyl-phenyl)-2-cyclohexen-1-one (tralkoxydim), S-(2,3,3-trichloro-2-propenyl) diisopropylcarbamothioate (triallate), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-[2-(2-chloro-ethoxy)-phenylsulphonyl]-urea (triasulfuron), N-methyl-N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (tribenuron-methyl), 2-(3,5-dichloro-phenyl)-2-(2,2,2-trichloro-ethyl)-oxirane (tridiphane), 1-amino-2,6-dinitro-N,N-dipropyl-4-trifluoromethyl-benzene (trifluralin) -("active compounds of Group 2"),

where generally from 0.01 to 1000 parts by weight of an active compound of Group 2 are used per part by weight of an active compound of Group 1 (i.e. of the formula (I)).

Of particular interest are selective herbicidal compositions according to the invention which are characterized by a content of an active compound combination comprising

(a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I)

in which

R^1 represents hydrogen, hydroxyl, amino, C_2-C_6-alkylideneamino, represents in each case optionally cyano-, halogen- or C_1-C_4-alkoxy-substituted alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylamino or dialkylamino having in each case up to 6 carbon atoms, represents in each case optionally cyano, halogen- or C_1-C_4-alkyl-substituted cycloalkyl, cycloalkylalkyl or cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups and, if appropriate, 1 to 4 carbon atoms in the alkyl moiety, or represents in each case optionally cyano-, nitro-, halogen-, C_1-C_4-alkyl-, C_1-C_4-halogenoalkyl-, C_1-C_4-alkoxy- or C_1-C_4-halogenoalkoxy-substituted phenyl or phenyl-C_1-C_4-alkyl,

R^2 represents hydrogen, hydroxyl, mercapto, amino, cyano, halogen, represents in each case optionally cyano-, halogen- or C_1-C_4-alkoxy-substituted alkyl, alkoxy, alkylthio, alkylamino, dialkylamino, alkenyl, alkinyl, alkenyloxy, alkinyloxy, alkenylthio, alkinylthio, alkenylamino or alkinylamino having in each case up to 6 carbon atoms, represents in each case optionally cyano-, halogen- or C_1-C_4-alkyl-substituted cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino or cycloalkylalkyl having in each case 3 to 6 carbon atoms in the cycloalkyl groups

and, if appropriate, 1 to 4 carbon atoms in the alkyl moiety, or represents in each case optionally cyano-, nitro-, halogen-, C_1-C_4-alkyl-, C_1-C_4-halogenoalkyl-, C_1-C_4-alkoxy- or C_1-C_4-halogenoalkoxy-substituted phenyl, phenoxy, phenylthio, phenylamino or phenyl-C_1-C_4-alkyl,

R^3 represents nitro, cyano, halogen, represents in each case optionally cyano-, halogen- or C_1-C_4-alkoxy-substituted alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio having in each case up to 6 carbon atoms, represents in each case optionally cyano-, halogen- or C_1-C_4-alkyl-substituted cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups, or represents in each case optionally cyano-, nitro-, halogen-, C_1-C_4-alkyl-, C_1-C_4-halogenoalkyl-, C_1-C_4-alkoxy- or C_1-C_4-halogenoalkoxy-substituted phenyl, phenoxy, phenylthio, phenylsulphinyl, phenylsulphonyl or phenylamino and,

R^4 represents hydrogen, nitro, cyano, halogen, represents in each case optionally cyano-, halogen-, or C_1-C_4-alkoxy-substituted alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy or alkinylthio having in each case up to 6 carbon atoms, represents in each case optionally cyano-, halogen- or C_1-C_4-alkyl-substituted cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups, or represents in each case optionally cyano-, nitro-, halogen-, C_1-C_4-alkyl-, C_1-C_4-halogenoalkyl-, C_1-C_4-alkoxy- or C_1-C_4-halogenoalkoxy-substituted phenyl, phenoxy, phenylthio, phenylsulphinyl, phenylsulphonyl or phenylamino,

and/or a salt of a compound of the formula (I)

("active compounds of Group 1")

and

(b) one to three compounds from a second group of herbicides which comprises the active compounds listed below:

2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methyl-phenyl)-acetamide (acetochlor), 2-chloro-6-nitro-3-phenoxy-aniline (aclonifen), 2-chloro-N-(methoxymethyl)-N-(2,6-diethyl-phenyl)-acetamide (alachlor), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(N-methyl-N-methylsulphonyl-sulphamoyl)-urea (amidosulfuron), 6-chloro-4-ethylamino-2-isopropylamino-1,3,5-triazine (atrazine), ethyl N-benzoyl-N-(3,4-dichloro-phenyl)-DL-alaninate (benzoylprop-ethyl), 3-i-propyl-1H-2,1,3-benzothiadiazin-4(3H)-one (bentazon), methyl 5-(2,4-dichloro-phenoxy)-2-nitro-benzoate (bifenox), 2-bromo-3,3-dimethyl-N-(1-methyl-1-phenyl-ethyl)-butanamide (bromobutide), 3,5-dibromo-4-hydroxy-benzaldehyde O-(2,4-dinitro-phenyl)-oxime (bromofenoxim), 3,5-dibromo-4-hydroxy-benzonitrile (bromoxynil), N-butoxymethyl-2-chloro-N-(2,6-diethyl-phenyl)-acetamide (butachlor), S-ethyl bis-(2-methyl-propyl)-thiocarbamate (butylate), 2-(4-chloro-2-fluoro-5-(2-chloro-2-ethoxycarbonyl-ethyl)-phenyl)-4-difluoromethyl-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one (carfentrazone-ethyl, F-8426), 2,4-dichloro-1-(3-methoxy-4-nitro-phenoxy)-benzene (chlomethoxyfen), 3-amino-2,5-dichloro-benzoic acid (chloramben), 1,3,5-trichloro-2-(4-nitro-phenoxy)-benzene (chlornitrofen), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-chloro-phenylsulphonyl)-urea (chlorsulfuron), N'-(3-chloro-4-methylphenyl)-N,N-dimethyl-urea (chlortoluron), N-(4,6-dimethoxy-1,3,5-triazin-2-yl)-N'-(2-(2-methoxy-ethoxy)-phenyl-sulphonyl)-urea (cinosulfuron), (R)-(2-propinyl)-2-[4-(5-chloro-3-fluoro-pyridin-2-yl-oxy)-phenoxy-propanoate (clodinafop-propargyl), 3,6-dichloro-pyridine-2-carboxylic acid (clopyralid), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-chloro-4-methoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (clopyrasulfuron, halosulfuron, NC-319), methyl-3-chloro-2-[(5-ethoxy-7-fluoro[1,2,4]triazolo[1,5-c]pyrimidin-2-yl-sulphonyl)-amino]-benzoate (cloransulam-methyl), 2-chloro-4-ethylamino-6-(1-cyano-1-methyl-ethylamino)-1,3,5-triazine (cyanazine), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-cyclopropylcarbonyl-phenylsulphonyl)-urea (cyclosulfamuron, AC-322140), 3,6-dichloro-2-methoxy-benzoic acid (dicamba), (R)-2-(2,4-dichloro-phenoxy)-propionic acid (dichlorprop-P), methyl 2-[4-(2,4-dichlorophenoxy)-phenoxy]-propate (diclofop-methyl), 1,2-dimethyl-3,5-diphenyl-1H-pyrazolium methyl sulphate (difenzoquat), N-(2,4-difluoro-phenyl)-2-(3-trifluoromethyl-phenoxy)-pyridine-3-carboxamide (diflufenican), 2-chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methyl-ethyl)-acetamide (dimethenamide, SAN-582), 2,4-dichlorophenoxyacetic acid (2,4-D), 2-amino-4-(1-fluoro-1-methyl-ethyl)-6-(1-methyl-2-(3,5-dimethyl-phenoxy)-ethylamino)-1,3,5-triazine (dimexyflam, IDH-1105), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE459), 6,7-dihydro-dipyrido[1,2-a:2',1'-c]pyrazinediium (diquat), S,S-dimethyl 2-difluoromethyl-

4-i-butyl-6-trifluoromethyl-pyridine-3,5-dicarbothioate (dithiopyr), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE-459), S-ethyl dipropylthiocarbamate (EPTC), S-(phenylmethyl) N-ethyl-N-(1,2-dimethyl-propyl)-thiocarbamate (esprocarb), ethyl [2-chloro-5-(4-chloro-5-difluoromethoxy-1-methyl-1H-pyrazol-3-yl)-4-fluoro-phenoxy]-acetate (ET-751), (S)-(2-ethoxy-1-methyl-2-oxoethyl) 2-chloro-5-(2-chloro-4-trifluoromethyl-phenoxy)-benzoate (ethoxyfen), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethoxy-phenoxysulphonyl)-urea (ethoxysulfuron, HOE-095404), ethyl 2-[4-(6-chloro-benzoxazol-2-yl-oxy)-phenoxy]-propanoate (fenoxaprop-ethyl), isopropyl N-benzoyl-N-(3-chloro-4-fluoro-phenyl)-DL-alaninate (flamprop-isopropyl), isopropyl N-benzoyl-N-(3-chloro-4-fluoro-phenyl)-L-alaninate (flamprop-isopropyl-L), methyl N-benzoyl-N-(3-chloro-4-fluoro-phenoxy)-DL-alaninate (flamprop-methyl), pentyl [2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)-phenoxy]-acetate (flumiclorac-pentyl), ethoxycarbonylmethyl 5-(2-chloro-4-trifluoromethyl-phenoxy)-2-nitro-benzoate (fluoroglycofen-ethyl), 1-(4-chloro-3-(2,2,3,3,3-pentafluoro-propoxymethyl)-phenyl)-5-phenyl-1H-1,2,4-triazole-3-carboxamide (flupoxam), 1-isopropyl-2-chloro-5-(3,6-dihydro-3-methyl-2,6-dioxo-4-trifluoromethyl-1(2H)-pyrimidyl)-benzoate (flupropacil), 9-hydroxy-9H-fluorene-9-carboxylic acid (flurenol), (4-amino-3,5-dichloro-6-fluoro-pyridin-2-yl-oxy)-acetic acid (fluroxypyr), N-(2,6-difluoro-phenyl)-5-methyl-1,2,4-triazolo[1,5-a]-pyrimidine-2-sulphonamide (flumetsulam, DE-498), methyl [(2-chloro-4-fluoro-5-(tetrahydro-3-oxo-1H,3H-[1,3,4]-thiadiazolo-[3,4-a]-pyridazin-1-ylidene)-amino-phenyl]-thioacetate (fluthiacet-methyl, KIH-9201), 2-amino-4-(hydroxymethylphosphinyl)-butanoic acid (ammonium salt) (glufosinate-(ammonium)), N-phosphonomethyl-glycine (isopropylammonium), (glyphosate, -isopropylammonium), methyl-2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-4-methyl-benzoate (imazamethabenz-methyl), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-5-methyl-pyridine-3-carboxylic acid (imazamethapyr), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-5-methoxymethyl-pyridine-3-carboxylic acid (imazamox), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-quinoline-3-carboxylic acid (imazaquin), 2-(4,5-dihydro-4-methyl-4-i-propyl-5-oxo-1H-imidazol-2-yl)-5-ethyl-pyridine-3-carboxylic acid (imazethapyr), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-chloro-imidazo[1,2-a]-pyridin-3-yl-sulphonyl)-urea (imazosulfuron), 4-hydroxy-3,5-diiodo-benzonitrile (ioxynil), N,N-dimethyl-N'-(4-isopropyl-phenyl)-urea (isoproturon), N-(3-(1-ethyl-1-methyl-propyl)-isoxazol-5-yl)-2,6-dimethoxy-benzamide (isoxaben), (5-cyclopropyl-isoxazol-4-yl)-(2-methylsulphonyl-4-trifluoromethyl-phenyl)-methanone (isoxaflutole,

RPA-201772), N'-(3,4-dichloro-phenyl)-N-methoxy-N-methylurea (linuron), (4-chloro-2-methyl-phenoxy)-acetic acid (MCPA), 2-(4-chloro-2-methyl-phenoxy)-propionic acid (mecoprop), 2-chloro-N-(2,6-dimethyl-phenyl)-N-(1H-pyrazol-1-yl-methyl)-acetamide (metazachlor), N'-(4-(3,4-dihydro-2-methoxy-2,4,4-trimethyl-2H-1-benzopyran-7-yl-oxy)-phenyl)-N-methoxy-N-methyl-urea (metobenzuron, UMP-488), N'-(4-bromo-phenyl)-N-methoxy-N-methylurea (metobromuron), 2-chloro-N-(2-ethyl-6-methyl-phenyl)-N-(2-methoxy-1-methyl-ethyl)-acetamide (metolachlor), N-(2,6-dichloro-3-methyl-phenyl)-5,7-dimethoxy-1,2,4-triazolo[1,5-a]-pyrimidine-2-sulphonamide (metosulam, DE-511), N'-(3-chloro-4-methoxy-phenyl)-N,N-dimethyl-urea (metoxuron), 4-amino-6-tert-butyl-3-methylthio-1,2,4-triazin-5-(4H)-one (metribuzin), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (metsulfuron-methyl), 2-(2-naphthyloxy)-N-phenyl-propanamide (naproanilide), N-butyl-N'-(3,4-dichloro-phenyl)-N-methyl-urea (neburon), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-dimethyl-carbamoyl-pyridin-2-yl-sulphonyl)-urea (nicosulfuron), N-(4,6-dimethyl-pyrimidin-2-yl)-N'-(2-oxetan-3-yl-oxycarbonyl-phenyl-sulphonyl)-urea (oxasulfuron), 1,1'-dimethyl-4,4'-bipyridinium (paraquat), 1-amino-N-(1-ethyl-propyl)-3,4-dimethyl-2,6-dinitro-benzene (pendimethalin), N-(4,6-bis-difluoromethoxy-pyrimidin-2-yl)-N'-(2-methoxy-carbonyl-phenylsulphonyl)-urea (primisulfuron-methyl), S-phenylmethyl N,N-dipropyl-thiocarbamate (prosulfocarb), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-(3,3,3-trifluoro-propyl)-phenylsulphonyl)-urea (prosulfuron), 2-chloro-N-(2,6-diethyl-phenyl)-N-(2-propoxy-ethyl)-acetamide (pretilachlor), 2-chloro-N-isopropyl-N-phenyl-acetamide (propachlor), O-(6-chloro-3-phenyl-pyridazin-4-yl) S-octyl thiocarbonate (pyridate), 4-(2,4-dichloro-benzoyl)-1,3-dimethyl-5-(4-methyl-phenylsulphonyloxy)-pyrazole (pyrazolate), 4-(2,4-dichloro-benzoyl-1,3-dimethyl-5-(phenylcarbonylmethoxy)-pyrazole (pyrazoxyfen), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(4-ethoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (pyrazosulfuron-ethyl), 7-chloro-3-methyl-quinoline-8-carboxylic acid (quinmerac), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-ethylsulphonyl-pyridin-2-yl-sulphonyl)-urea (rimsulfuron), 6-chloro-2,4-bis-ethylamino-1,3,5-triazine (simazin), 2-(2-chloro-4-methylsulphonyl-benzoyl)-cyclohexane-1,3-dione (sulcotrione), 2-(2,4-dichloro-5-methylsulphonylamino-phenyl)-4-difluoromethyl-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one (sulfentrazone, F-6285), N-phosphonomethyl-glycine-trimethyl-sulphonium (sulfosate), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethylsulphonyl-imidazo[1,2-a]pyridine-3-sulphonamide (sulfosulfuron, MON-37500), 6-chloro-4-ethylamino-2-tert-butylamino-1,3,5-triazine (terbuthylazine), 2-tert-butylamino-4-ethylamino-6-methylthio-1,3,5-triazine (terbutryn), 2-chloro-N-(2,6-dimethyl-phenyl)-N-(3-methoxy-2-thienyl-methyl)-acetamide (thenylchlor), 6-(6,7-dihydro-6,6-dimethyl-

3H,5H-pyrrolo[2,1-c]-1,2,4-thiadiazol-3-ylidenamino)-7-fluoro-4-(2-propinyl)-2H-1,4-benzoxazin-3(4H)-one (thidiazimin), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-thien-3-yl-sulphonyl)-urea (thifensulfuron-methyl), 2-(ethoximino-propyl)-3-hydroxy-5-(2,4,6-trimethyl-phenyl)-2-cyclohexen-1-one (tralkoxydim), S-(2,3,3-trichloro-2-propenyl) diisopropylcarbamothioate (triallate), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-[2-(2-chloro-ethoxy)-phenylsulphonyl]-urea (triasulfuron), N-methyl-N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenyl-sulphonyl)-urea (tribenuron-methyl), 2-(3,5-dichloro-phenyl)-2-(2,2,2-trichloro-ethyl)-oxirane (tridiphane), 1-amino-2,6-dinitro-N,N-dipropyl-4-trifluoromethyl-benzene (trifluralin) -("active compounds of Group 2").

Of very particular interest are the selective herbicidal compositions according to the invention which are characterized by a content of an active compound combination comprising

(a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I),

in which

R^1 represents hydrogen, amino, represents in each case optionally cyano-, fluorine-, chlorine-, methoxy- or ethoxy-substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, ethenyl, propenyl, butenyl, ethinyl, propinyl, butinyl, methoxy, ethoxy, n- or i-propoxy, n-, i-, s- or t-butoxy, propenyloxy, butenyloxy, methylamino, ethylamino, n- or i-propylamino, n-, i-, s- or t-butylamino, dimethylamino or diethylamino, represents in each case optionally cyano-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-substituted cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, cyclopropylamino, cyclobutylamino, cyclopentylamino or cyclohexylamino, or represents in each case optionally cyano-, nitro-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-, n-, i-, s- or t-butyl-, trifluoromethyl-, methoxy-, ethoxy-, difluoromethoxy- or trifluoromethoxy-substituted phenyl or benzyl,

R^2 represents hydrogen, hydroxyl, mercapto, amino, cyano, fluorine, chlorine, bromine, represents in each case optionally cyano-, fluorine-, chlorine-, methoxy- or ethoxy-substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, methoxy,

ethoxy, n- or i-propoxy, n-, i-, s- or t-butoxy, methylthio, ethylthio, n- or i-propylthio, n-, i-, s- or t-butylthio, methylamino, ethylamino, n- or i-propylamino, n-, i-, s- or t-butylamino, dimethylamino, diethylamino, ethenyl, propenyl, butenyl, ethinyl, propinyl, butinyl, propenyloxy, butenyloxy, propinyloxy, butinyloxy, propenylthio, butenylthio, propinylthio, butinylthio, propenylamino, butenylamino, propinylamino or butinylamino, represents in each case optionally cyano-, fluorine-, chorine-, bromine-, methyl-, ethyl-, n- or i-propyl-substituted cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, cyclopropylamino, cyclobutylamino, cyclopentylamino, cyclohexylamino, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl or cyclohexylmethyl, or represents in each case optionally cyano-, nitro-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-, n-, i-, s- or t-butyl-, trifluoromethyl-, methoxy-, ethoxy-, difluoromethoxy- or trifluoromethoxy-substituted phenyl, phenoxy, phenylthio, phenylamino or benzyl,

R^3 represents nitro, cyano, fluorine, chlorine, bromine, represents in each case optionally cyano-, fluorine-, chlorine-, methoxy- or ethoxy-substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, acetyl, propionyl, n- or i-butyroyl, methoxy, ethoxy, n- or i-propoxy, n-, i-, s- or t-butoxy, methoxycarbonyl ethoxycarbonyl, n- or i-propoxycarbonyl, methylthio, ethylthio, n- or i-propylthio, n-, i-, s- or t-butylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, methylamino, ethylamino, n- or i-propylamino, n-, i-, s- or t-butylamino, ethenyl, propenyl, butenyl, propenyloxy, butenyloxy, propenylthio, butenylthio, propenylamino, butenylamino, ethynyl, propynyl, butynyl, propinyloxy, butinyloxy, propinylthio or butinylthio, represents in each case optionally cyano-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-substituted cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, cyclopropylamino, cyclobutylamino, cyclopentylamino or cyclohexylamino, or represents in each case optionally cyano-, nitro-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-, n-, i-, s- or t-butyl-, trifluoromethyl-, methoxy-, ethoxy-, n- or i-propoxy-, n-, i-, s- or t-butoxy-, difluoromethoxy- or

trifluoromethoxy-substituted phenyl, phenoxy, phenylthio, phenylsulphinyl, phenylsulphonyl or phenylamino,
and

R^4 represents hydrogen, nitro, cyano, fluorine, chlorine, bromine, represents in each case optionally cyano-, fluorine-, chlorine- methoxy- or ethoxy-substituted substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, acetyl, propionyl, n- or i-butyroyl, methoxy, ethoxy, n- or i-propoxy, n-, i-, s- or t-butoxy, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl, methylthio, ethylthio, n- or i-propylthio, n-, i-, s- or t-butylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, methylamino, ethylamino, n- or i-propylamino, n-, i-, s- or t-butylamino, ethenyl, propenyl, butenyl, propenyloxy, butenyloxy, propenylthio, butenylthio, propenylamino, butenylamino, ethinyl, propinyl, butinyl, propinyloxy, butinyloxy, propinylthio or butinylthio, represents in each case optionally cyano-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-substituted cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, cyclopropylamino, cyclobutylamino, cyclopentylamino or cyclohexylamino, or represents in each case optionally cyano-, nitro-, fluorine-, chlorine-, bromine-, methyl-, ethyl-, n- or i-propyl-, trifluoromethyl-, methoxy-, ethoxy-, n- or i-propoxy-, n-, i-, s- or t-butoxy-, difluoromethoxy- or trifluoromethoxy-substituted phenyl, phenoxy, phenylthio, phenylsulphinyl, phenylsulphonyl or phenylamino,

and/or a salt of a compound of the formula (I)

("active compounds of Group 1")

and

(b) one or two compounds of a second group of herbicides which comprises the active compounds listed below:

2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methyl-phenyl)-acetamide (acetochlor), 2-chloro-6-nitro-3-phenoxy-aniline (aclonifen), 2-chloro-N-(methoxymethyl)-

N-(2,6-diethyl-phenyl)-acetamide (alachlor), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(N-methyl-N-methylsulphonyl-sulphamoyl)-urea (amidosulfuron), 6-chloro-4-ethylamino-2-isopropylamino-1,3,5-triazine (atrazine), ethyl N-benzoyl-N-(3,4-dichloro-phenyl)-DL-alaninate (benzoylprop-ethyl), 3-i-propyl-1H-2,1,3-benzothiadiazin-4(3H)-one (bentazon), methyl 5-(2,4-dichloro-phenoxy)-2-nitro-benzoate (bifenox), 2-bromo-3,3-dimethyl-N-(1-methyl-1-phenyl-ethyl)-butanamide (bromobutide), 3,5-dibromo-4-hydroxy-benzaldehyde O-(2,4-dinitro-phenyl)-oxime (bromofenoxim), 3,5-dibromo-4-hydroxy-benzonitrile (bromoxynil), N-butoxymethyl-2-chloro-N-(2,6-diethyl-phenyl)-acetamide (butachlor), S-ethyl bis-(2-methyl-propyl)-thiocarbamate (butylate), 2-(4-chloro-2-fluoro-5-(2-chloro-2-ethoxycarbonyl-ethyl)-phenyl)-4-difluoromethyl-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one (carfentrazone-ethyl, F-8426), 2,4-dichloro-1-(3-methoxy-4-nitro-phenoxy)-benzene (chlomethoxyfen), 3-amino-2,5-dichloro-benzoic acid (chloramben), 1,3,5-trichloro-2-(4-nitro-phenoxy)-benzene (chlornitrofen), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-chloro-phenylsulphonyl)-urea (chlorsulfuron), N'-(3-chloro-4-methylphenyl)-N,N-dimethyl-urea (chlortoluron), N-(4,6-dimethoxy-1,3,5-triazin-2-yl)-N'-(2-(2-methoxy-ethoxy)-phenyl-sulphonyl)-urea (cinosulfuron), (R)-(2-propinyl)-2-[4-(5-chloro-3-fluoro-pyridin-2-yl-oxy)-phenoxy-propanoate (clodinafop-propargyl), 3,6-dichloro-pyridine-2-carboxylic acid (clopyralid), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-chloro-4-methoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (clopyrasulfuron, halosulfuron, NC-319), methyl-3-chloro-2-[(5-ethoxy-7-fluoro[1,2,4]triazolo[1,5-c]pyrimidin-2-yl-sulphonyl)-amino]-benzoate (cloransulam-methyl), 2-chloro-4-ethylamino-6-(1-cyano-1-methyl-ethylamino)-1,3,5-triazine (cyanazine), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-cyclo-propylcarbonyl-phenylsulphonyl)-urea (cyclosulfamuron, AC-322140), 3,6-dichloro-2-methoxy-benzoic acid (dicamba), (R)-2-(2,4-dichloro-phenoxy)-propionic acid (dichlorprop-P), methyl-2-[4-(2,4-dichloro-phenoxy)-phenoxy]-propionate (diclofop-methyl), 1,2-dimethyl-3,5-diphenyl-1H-pyrazolium methyl sulphate (difenzoquat), N-(2,4-difluoro-phenyl)-2-(3-trifluoromethyl-phenoxy)-pyridine-3-carboxamide (diflufenican), 2-chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methyl-ethyl)-acetamide (dimethenamide, SAN-582), 2,4-dichlorophenoxyacetic acid (2,4-D), 2-amino-4-(1-fluoro-1-methyl-ethyl)-6-(1-methyl-2-(3,5-dimethyl-phenoxy)-ethylamino)-1,3,5-triazine (dimexyflam, IDH-1105), 6,7-dihydro-dipyrido[1,2-a:2',1'-c]pyrazinediium (diquat), S,S-dimethyl 2-difluoromethyl-4-i-butyl-6-trifluoromethyl-pyridine-3,5-dicarbothioate (dithiopyr), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE-459), S-ethyl dipropylthiocarbamate (EPTC), S-(phenylmethyl) N-ethyl-N-(1,2-dimethyl-

propyl)-thiocarbamate (esprocarb), ethyl [2-chloro-5-(4-chloro-5-difluoromethoxy-1-methyl-1H-pyrazol-3-yl)-4-fluoro-phenoxy]-acetate (ET-751), (S)-(2-ethoxy-1-methyl-2-oxoethyl) 2-chloro-5-(2-chloro-4-trifluoromethyl-phenoxy)-benzoate (ethoxyfen), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethoxy-phenoxysulphonyl)-urea (ethoxysulfuron, HOE-095404), ethyl 2-[4-(6-chloro-benzoxazol-2-yl-oxy)-phenoxy]-propanoate (fenoxaprop-ethyl), isopropyl N-benzoyl-N-(3-chloro-4-fluoro-phenyl)-DL-alaninate (flamprop-isopropyl), isopropyl N-benzoyl-N-(3-chloro-4-fluoro-phenyl)-L-alaninate (flamprop-isopropyl-L), methyl N-benzoyl-N-(3-chloro-4-fluoro-phenoxy)-DL-alaninate (flamprop-methyl), pentyl [2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)-phenoxy]-acetate (flumiclorac-pentyl), ethoxycarbonylmethyl 5-(2-chloro-4-trifluoromethyl-phenoxy)-2-nitro-benzoate (fluoroglycofen-ethyl), 1-(4-chloro-3-(2,2,3,3,3-pentafluoro-propoxymethyl)-phenyl)-5-phenyl-1H-1,2,4-triazole-3-carboxamide (flupoxam), 1-isopropyl-2-chloro-5-(3,6-dihydro-3-methyl-2,6-dioxo-4-trifluoromethyl-1(2H)-pyrimidyl)-benzoate (flupropacil), 9-hydroxy-9H-fluorene-9-carboxylic acid (flurenol), (4-amino-3,5-dichloro-6-fluoro-pyridin-2-yl-oxy)-acetic acid (fluroxypyr), N-(2,6-difluoro-phenyl)-5-methyl-1,2,4-triazolo[1,5-a]-pyrimidine-2-sulphonamide (flumetsulam, DE-498), methyl [(2-chloro-4-fluoro-5-(tetrahydro-3-oxo-1H,3H-[1,3,4]-thiadiazolo-[3,4-a]-pyridazin-1-ylidene)-amino-phenyl]-thioacetate (fluthiacet-methyl, KIH-9201), 2-amino-4-(hydroxymethylphosphinyl)-butanoic acid (ammonium salt) (glufosinate-(ammonium)), N-phosphonomethyl-glycine (isopropylammonium), (glyphosate, -isopropylammonium), methyl-2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-4-methyl-benzoate (imazamethabenz-methyl), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-5-methyl-pyridine-3-carboxylic acid (imazamethapyr), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-5-methoxymethyl-pyridine-3-carboxylic acid (imazamox), 2-(4,5-dihydro-4-methyl-4-isopropyl-5-oxo-1H-imidazol-2-yl)-quinoline-3-carboxylic acid (imazaquin), 2-(4,5-dihydro-4-methyl-4-i-propyl-5-oxo-1H-imidazol-2-yl)-5-ethyl-pyridine-3-carboxylic acid (imazethapyr), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-chloro-imidazo[1,2-a]-pyridin-3-yl-sulphonyl)-urea (imazosulfuron), 4-hydroxy-3,5-diiodo-benzonitrile (ioxynil), N,N-dimethyl-N'-(4-isopropyl-phenyl)-urea (isoproturon), N-(3-(1-ethyl-1-methyl-propyl)-isoxazol-5-yl)-2,6-dimethoxy-benzamide (isoxaben), (5-cyclopropyl-isoxazol-4-yl)-(2-methylsulphonyl-4-trifluoromethyl-phenyl)-methanone (isoxaflutole, RPA-201772), N'-(3,4-dichloro-phenyl)-N-methoxy-N-methylurea (linuron), (4-chloro-2-methyl-phenoxy)-acetic acid (MCPA), 2-(4-chloro-2-methyl-phenoxy)-propionic acid (mecoprop), 2-chloro-N-(2,6-dimethyl-phenyl)-N-(1H-pyrazol-1-yl-methyl)-acetamide (metazachlor), N'-(4-(3,4-dihydro-2-methoxy-

2,4,4-trimethyl-2H-1-benzopyran-7-yl-oxy)-phenyl)-N-methoxy-N-methyl-urea (metobenzuron, UMP-488), N'-(4-bromo-phenyl)-N-methoxy-N-methylurea (metobromuron), 2-chloro-N-(2-ethyl-6-methyl-phenyl)-N-(2-methoxy-1-methyl-ethyl)-acetamide (metolachlor), N-(2,6-dichloro-3-methyl-phenyl)-5,7-dimethoxy-1,2,4-triazolo[1,5-a]-pyrimidine-2-sulphonamide (metosulam, DE-511), N'-(3-chloro-4-methoxy-phenyl)-N,N-dimethyl-urea (metoxuron), 4-amino-6-tert-butyl-3-methylthio-1,2,4-triazin-5-(4H)-one (metribuzin), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (metsulfuron-methyl), 2-(2-naphthyloxy)-N-phenyl-propanamide (naproanilide), N-butyl-N'-(3,4-dichloro-phenyl)-N-methyl-urea (neburon), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-dimethylcarbamoyl-pyridin-2-yl-sulphonyl)-urea (nicosulfuron), N-(4,6-dimethyl-pyrimidin-2-yl)-N'-(2-oxetan-3-yl-oxycarbonyl-phenylsulphonyl)-urea (oxasulfuron), 1,1'-dimethyl-4,4'-bipyridinium (paraquat), 1-amino-N-(1-ethyl-propyl)-3,4-dimethyl-2,6-dinitro-benzene (pendimethalin), N-(4,6-bis-difluoromethoxy-pyrimidin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (primisulfuron-methyl), S-phenylmethyl N,N-dipropyl-thiocarbamate (prosulfocarb), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-(3,3,3-trifluoro-propyl)-phenylsulphonyl)-urea (prosulfuron), 2-chloro-N-(2,6-diethyl-phenyl)-N-(2-propoxy-ethyl)-acetamide (pretilachlor), 2-chloro-N-isopropyl-N-phenyl-acetamide (propachlor), O-(6-chloro-3-phenyl-pyridazin-4-yl) S-octyl thiocarbonate (pyridate), 4-(2,4-dichloro-benzoyl)-1,3-dimethyl-5-(4-methyl-phenylsulphonyloxy)-pyrazole (pyrazolate), 4-(2,4-dichloro-benzoyl-1,3-dimethyl-5-(phenylcarbonylmethoxy)-pyrazole (pyrazoxyfen), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(4-ethoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (pyrazosulfuron-ethyl), 7-chloro-3-methyl-quinoline-8-carboxylic acid (quinmerac), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-ethylsulphonyl-pyridin-2-yl-sulphonyl)-urea (rimsulfuron), 6-chloro-2,4-bis-ethylamino-1,3,5-triazine (simazin), 2-(2-chloro-4-methylsulphonyl-benzoyl)-cyclohexane-1,3-dione (sulcotrione), 2-(2,4-dichloro-5-methylsulphonylamino-phenyl)-4-difluoromethyl-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one (sulfentrazone, F-6285), N-phosphonomethyl-glycine-trimethylsulphonium (sulfosate), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethylsulphonyl-imidazo[1,2-a]pyridine-3-sulphonamide (sulfosulfuron, MON-37500), 6-chloro-4-ethylamino-2-tert-butylamino-1,3,5-triazine (terbuthylazine), 2-tert-butylamino-4-ethylamino-6-methylthio-1,3,5-triazine (terbutryn), 2-chloro-N-(2,6-dimethyl-phenyl)-N-(3-methoxy-2-thienyl-methyl)-acetamide (thenylchlor), 6-(6,7-dihydro-6,6-dimethyl-3H,5H-pyrrolo[2,1-c]-1,2,4-thiadiazol-3-ylidenamino)-7-fluoro-4-(2-propinyl)-2H-1,4-benzoxazin-3(4H)-one (thidiazimin), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-thien-3-yl-sulphonyl)-

urea (thifensulfuron-methyl), 2-(ethoximino-propyl)-3-hydroxy-5-(2,4,6-trimethyl-phenyl)-2-cyclohexen-1-one (tralkoxydim), S-(2,3,3-trichloro-2-propenyl) diisopropylcarbamothioate (triallate), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-[2-(2-chloro-ethoxy)-phenylsulphonyl]-urea (triasulfuron), N-methyl-N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (tribenuron-methyl), 2-(3,5-dichloro-phenyl)-2-(2,2,2-trichloro-ethyl)-oxirane (tridiphane), 1-amino-2,6-dinitro-N,N-dipropyl-4-trifluoromethyl-benzene (trifluralin) -("active compounds of Group 2").

Instead of the pure active compounds of the formula (I), it is also possible to employ salts of the compounds of the formula (I) with metals and/or with basic nitrogen compounds in the active compound combinations according to the invention.

Here, preference is given to salts of the compounds of the formula (I) with alkali metals, such as, for example, lithium, sodium, potassium, rubidium or caesium, very particularly with sodium or potassium, with alkaline earth metals, such as, for example, magnesium, calcium or barium, very particularly with calcium, or with earth metals, such as, for example, aluminium.

Furthermore, preference is given to salts of the compounds of the formula (I) with ammonia, with C_1-C_6-alkyl-amines, such as, for example, with methylamine, ethylamine, n- or i-propylamine, n-, i-, s- or t-butylamine, n-, i-, s- or t-pentylamine, with di-(C_1-C_6-alkyl)-amines, such as, for example, dimethylamine, diethylamine, dipropylamine, diisopropylamine, dibutylamine, diisobuylamine, di-s-butylamine, dipentylamine, diisopentylamine, di-s-pentylamine and dihexylamine, with tri-(C_1-C_4-alkyl)-amines, such as, for example, trimethylamine, triethylamine, tripropylamine, tributylamine and N-ethyl-diisopropylamine, with C_3-C_6-cycloalkyl-amines, such as, for example, cyclopentylamine or cyclohexylamine, with di-(C_3-C_6-cycloalkyl)-amines, such as, for example, dicyclopentylamine or dicyclohexylamine, with N-C_1-C_4-alkyl-C_3-C_6-cycloalkylamines, such as, for example, N-methyl-cyclopentylamine, N-ethyl-cyclopentylamine, N-methyl-cyclohexylamine or N-ethyl-cyclohexylamine, with N,N-di-(C_1-C_4-alkyl)-C_3-C_6-cycloalkyl-amines, such as, for example, N,N-dimethyl-cyclopentylamine, N,N-diethyl-cyclopentylamine, N,N-dimethyl-cyclohexylamine or N,N-diethyl-cyclohexylamine, with N-C_1-C_4-alkyl-di-(C_3-C_6-cycloalkyl)-amines, such as, for example, N-methyl-dicyclopentylamine, N-ethyl-dicyclopentylamine, N-methyl-dicyclohexylamine or N-ethyl-dicyclohexylamine, with phenyl-C_1-C_4-alkyl-amines, such as, for example,

benzylamine, 1-phenyl-ethylamine or 2-phenyl-ethylamine, with N-C_1-C_4-alkyl-phenyl-C_1-C_4-alkyl-amines, such as, for example, N-methyl-benzylamine or N-ethyl-benzylamine, or with N,N-di-(C_1-C_4-alkyl)-phenyl-C_1-C_4-alkyl-amines, such as, for example, N,N-dimethyl-benzylamine or N,N-diethylbenzylamine, or with optionally fused and/or C_1-C_4-alkyl-substituted azines, such as, for example, pyridine, quinoline, 2-methyl-pyridine, 3-methyl-pyridine, 4-methyl-pyridine, 2,4-dimethyl-pyridine, 2,5-dimethyl-pyridine, 2,6-dimethyl-pyridine or 5-ethyl-2-methyl-pyridine.

Basic compounds which may be employed for preparing the salt of the compounds of the formula (I) which can be employed according to the invention which may be mentioned are:

alkali metal or alkaline earth metal acetates, amides, carbonates, bicarbonates, hydrides, hydroxides or alkoxides, such as, for example, sodium acetate, potassium acetate or calcium acetate, lithium amide, sodium amide, potassium amide or calcium amide, sodium carbonate, potassium carbonate or calcium carbonate, sodium bicarbonate, potassium bicarbonate or calcium bicarbonate, lithium hydride, sodium hydride, potassium hydride or calcium hydride, lithium hydroxide, sodium hydroxide, potassium hydroxide or calcium hydroxide, sodium methoxide or potassium methoxide, sodium ethoxide or potassium ethoxide, sodium n- or i-propoxide or potassium n- or i-propoxide, sodium n-, i-, s- or t-butoxide or potassium n-, i-, s- or t-butoxide.

Examples of the compounds of the formula (I) to be used as mixing partners according to the invention which may be mentioned are:

2-(2-chloro-phenylsulphonylaminocarbonyl)-, 2-(2-bromo-phenylsulphonylaminocarbonyl)-, 2-(2-methyl-phenylsulphonylaminocarbonyl)-, 2-(2-ethyl-phenylsulphonylaminocarbonyl)-, 2-(2-n-propyl-phenylsulphonylaminocarbonyl), 2-(2-i-propyl-phenylsulphonylaminocarbonyl), 2-(2-trifluoromethyl-phenylsulphonylaminocarbonyl)-, 2-(2-methoxy-phenylsulphonylaminocarbonyl)-, 2-(2-ethoxy-phenylsulphonylaminocarbonyl)-, 2-(2-n-propoxy-phenylsulphonylaminocarbonyl)-, 2-(2-i-propoxy-phenylsulphonylaminocarbonyl)-, 2-(2-difluoromethoxy-phenylsulphonylaminocarbonyl)-, 2-(2-trifluoromethoxy-phenylsulphonylaminocarbonyl)-, 2-(2-methoxycarbonyl-phenylsulphonylaminocarbonyl)-, 2-(2-ethoxycarbonyl-phenylsulphonylaminocarbonyl)-, 2-(2-n-propoxycarbonyl-phenylsulphonylaminocarbonyl)-, 2-(2-i-propoxycarbonyl-phenylsulphonylaminocarbonyl)- and 2-(2-chloro-6-methyl-phenylsulphonylaminocarbonyl)-4-

methyl-5-methoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methyl-5-ethoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methyl-5-n-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methyl-5-i-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methyl-5-trifluoroethoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methyl-5-methylthio-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methyl-5-ethylthio-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methoxy-5-methyl-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methoxy-5-ethyl-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-methoxy-5-n-propyl-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-cyclopropyl-5-methoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-cyclopropyl-5-ethoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-cyclopropyl-5-n-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one, -4-cyclopropyl-5-i-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one and -4-cyclopropyl-5-trifluoroethoxy-2,4-dihydro-3H-1,2,4-triazol-3-one and also the sodium and potassium salts of these compounds.

Mixing components of the formula (I) which may be particularly emphasized are the compounds 2-(2-methoxycarbonyl-phenylsulphonylaminocarbonyl)-4-methyl-5-n-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one (I-1) and 2-(2-trifluoromethoxy-phenylsulphonylaminocarbonyl)-4-methyl-5-methoxy-2,4-dihydro-3H-1,2,4-triazol-3-one (I-2) and their sodium salts (I-1, Na salt), (I-2, Na salt).

The compounds of the formula (I) are described in the abovementioned patent applications or patent specifications.

Mixing components from the active compounds of Group 2 which may be particularly emphasized are:

amidosulfuron, bentazon, bromoxynil, carfentrazone(-ethyl), clodinafop(-propargyl), clopyralid, chlorsulfuron, chlortoluron, cyclosulfamuron, 2,4-D, diclofop(-methyl), difenzoquat, diflufenican, DPX-KE459, ET-751, ethoxyfen, fenoxaprop(-ethyl), fluoroglycofen(-ethyl), flupropacil, fluroxypyr, isoproturon, mecoprop, metosulam, metribuzin, metsulfuron(-methyl), pendimethalin, prosulfocarb, pyridate, sulfosulfuron, thifensulfuron(-methyl), tralkoxydim, triasulfuron, tribenuron(-methyl) or trifluralin.

From this group, metribuzin is of very particular interest as a mixing component.

Surprisingly, it has now been found that the above-described active compound combinations of the arylsulphonylaminocarbonyltriazolinones of the formula (I) and the

abovementioned active compounds of Group 2, in addition to being very well tolerated by useful plants, have particularly high herbicidal activity and can be used in a variety of crops, in particular in wheat, but additionally also in maize, barley and rice, for the selective control of weeds.

Surprisingly, the herbicidal activity of the active compound combinations according to the invention of compounds of the abovementioned groups 1 and 2 is considerably higher than the sum of the effects of the individual compounds.

This means that there exists not only a complementary action but also an unforeseeable synergistic effect. The novel active compound combinations are tolerated well by a large number of crops, and the novel active compound combinations also effectively control weeds which are otherwise difficult to control. The novel active compound combinations are therefore a valuable addition to the selective herbicides.

The active compound combinations according to the invention can be used, for example, in connection with the following plants:

Dicotyledonous weeds of the genera: Sinapis, Lepidium, Galium, Stellaria, Matricaria, Anthemis, Galinsoga, Chenopodium, Urtica, Senecio, Amaranthus, Portulaca, Xanthium, Convolvulus, Ipomoea, Polygonum, Sesbania, Ambrosia, Cirsium, Carduus, Sonchus, Solanum, Rorippa, Rotala, Lindernia, Lamium, Veronica, Abutilon, Emex, Datura, Viola, Galeopsis, Papaver, Centaurea, Trifolium, Ranunculus and Taraxacum.

Dicotyledonous crops of the genera: Gossypium, Glycine, Beta, Daucus, Phaseolus, Pisum, Solanum, Linum, Ipomoea, Vicia, Nicotiana, Lycopersicon, Arachis, Brassica, Lactuca, Cucumis and Cucurbita.

Monocotyledonous weeds of the genera: Echinochloa, Setaria, Panicum, Digitaria, Phleum, Poa, Festuca, Eleusine, Brachiaria, Lolium, Bromus, Avena, Cyperus, Sorghum, Agropyron, Cynodon, Monochoria, Fimbristylis, Sagittaria, Eleocharis, Scirpus, Paspalum, Ischaemum, Sphenoclea, Dactyloctenium, Agrostis, Alopecurus, Apera and Phalaris.

Monocotyledonous crops of the genera: Oryza, Zea, Triticum, Hordeum, Avena, Secale, Sorghum, Panicum, Saccharum, Ananas, Asparagus and Allium.

However, the use of the active compound combinations according to the invention is in no way restricted to these genera, but also extends in the same manner to other plants.

At specific concentration ratios, the synergistic effect of the active compound combinations according to the invention is particularly pronounced. However, the ratios by weight of the active compounds in the active compound combinations can be varied within relatively wide ranges. In general, 0.01 to 1000 parts by weight, preferably 0.05 to 500 parts by weight and particularly preferably 0.1 to 100 parts by weight of active compound of Group 2 are used per part by weight of active compound of the formula (I).

The active compound combinations can be converted into the customary formulations, such as solutions, emulsions, wettable powders, suspensions, powders, dusts, pastes, soluble powders, granules, suspo-emulsion concentrates, natural and synthetic materials impregnated with active compound, and very fine capsules in polymeric substances.

These formulations are produced in a known manner, for example by mixing the active compounds with extenders, that is liquid solvents and/or solid carriers, optionally with the use of surface-active agents, that is emulsifying agents and/or dispersing agents and/or foam-forming agents.

If the extender used is water it is also possible to use, for example, organic solvents as auxiliary solvents. As liquid solvents, there are suitable in the main: aromatics, such as xylene, toluene or alkylnaphthalenes, chlorinated aromatics and chlorinated aliphatic hydrocarbons, such as chlorobenzenes, chloroethylenes or methylene chloride, aliphatic hydrocarbons, such as cyclohexane or paraffins, for example petroleum fractions, mineral and vegetable oils, alcohols, such as butanol or glycol as well as their ethers and esters, ketones, such as acetone, methyl ethyl ketone, methyl isobutyl ketone or cyclohexanone, strongly polar solvents, such as dimethylformamide and dimethyl sulphoxide, as well as water.

As solid carriers there are suitable:

for example ammonium salts and ground natural minerals, such as kaolins, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, and ground synthetic minerals, such as finely divided silica, alumina and silicates, as solid carriers for granules

there are suitable: for example crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, as well as synthetic granules of inorganic and organic meals, and granules of organic material such as sawdust, coconut shells, maize cobs and tobacco stalks; as emulsifying and/or foam-forming agents there are suitable: for example nonionic and anionic emulsifiers, such as polyoxyethylene fatty acid esters, polyoxyethylene fatty alcohol ethers, for example alkylaryl polyglycol ethers, alkylsulphonates, alkyl sulphates, arylsulphonates as well as protein hydrolysates; as dispersing agents there are suitable: for example lignin-sulphite waste liquors and methylcellulose.

Tackifiers such as carboxymethylcellulose and natural and synthetic polymers in the form of powders, granules or latexes, such as gum arabic, polyvinyl alcohol and polyvinyl acetate, as well as natural phospholipids, such as cephalins and lecithins, and synthetic phospholipids, can be used in the formulations. Other possible additives are mineral and vegetable oils.

It is possible to use colorants such as inorganic pigments, for example iron oxide, titanium oxide and Prussian Blue, and organic dyestuffs, such as alizarin dyestuffs, azo dyestuffs and metal phthalocyanine dyestuffs, and trace nutrients such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc.

The formulations in general comprise between 0.1 and 95 per cent by weight, preferably between 0.5 and 90%, of active compounds.

In general, the active compound combinations according to the invention are applied in the form of ready mixes. However, the active compounds which the active compound combinations comprise can also be formulated individually and mixed upon use, i.e. applied in the form of tank mixes.

The novel active compound combinations can be used as such or in the form of their formulations, and furthermore also as mixtures with other known herbicides, ready mixes or tank mixes again being possible. They may also be mixed with other known active compounds, such as fungicides, insecticides, acaricides, nematicides, bird repellents, growth substances, plant nutrients and agents which improve soil structure. For particular application purposes, in particular when applied post-emergence, it may furthermore be advantageous to incorporate, in the formulations, mineral or vegetable oils which are

tolerated by plants (for example the commercial product "Oleo DuPont 11E") or ammonium salts such as, for example, ammonium sulphate or ammonium thiocyanate, as further additives.

The novel active compound combinations can be used as such, in the form of their formulations or in the use forms prepared therefrom by further dilution, such as ready-to-use solutions, suspensions, emulsions, powders, pastes and granules. They are used in the customary manner, for example by watering, spraying, atomizing, dusting or scattering.

The active compound combinations according to the invention can be applied before and after the plants have emerged, that is to say pre-emergence and post-emergence. They can also be incorporated into the soil before sowing.

The good herbicidal activity of the novel active compound combinations can be seen from the examples which follow. While the individual active compounds show weak points regarding the herbicidal activity, the combinations, without exception, display a very good activity against weeds, which exceeds a simple additive effect.

A synergistic effect in herbicides is always present when the herbicidal activity of the active compound combination exceeds the activity of the active compounds when applied individually.

The expected activity for a given combination of two herbicides can be calculated as follows (cf. COLBY, S.R.: "Calculating synergistic and antagonistic responses of herbicide combinations", Weeds 15, pages 20 - 22, 1967):

If X = % damage caused by herbicide A (active compound of the formula I) at application rate of p kg/ha

and Y = % damage caused by herbicide B (active compound of the formula II) at application rate of q kg/ha

and E = the expected damage of herbicides A and B at application rates of p and q kg/ha,

then E = $X + Y - (X * Y/100)$.

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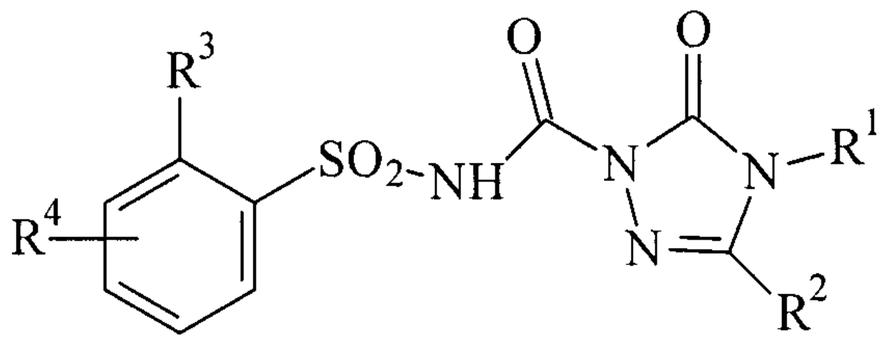
If the actual damage exceeds the calculated figure, the activity of the combination is superadditive, i.e. it shows a synergistic effect.

In one specific aspect, the invention provides a synergistic herbicidal composition, comprising: a combination of active compounds: (a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I) or a salt thereof:



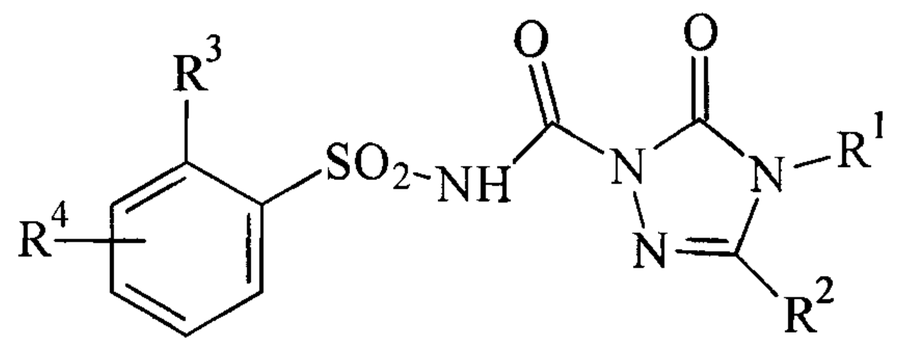
(I)

wherein: R^1 represents: (i) H, hydroxyl, amino or alkylideneamino, or (ii) alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylamino, dialkylamino, cycloalkyl, cycloalkylalkyl, cycloalkylamino, aryl or arylalkyl, each of which is optionally substituted, R^2 represents: (i) H, hydroxyl, mercapto, amino, cyano or a halogen atom, or (ii) alkyl, alkoxy, alkylthio, alkylamino, dialkylamino, alkenyl, alkinyl, alkenyloxy, alkinyloxy, alkenylthio, alkinylthio, alkenylamino, alkinylamino, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, cycloalkylalkyl, aryl, aryloxy, arylthio, arylamino or arylalkyl, each of which is optionally substituted, R^3 represents: (i) nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted, and R^4 represents: (i) H, nitro, cyano or a halogen atom or (ii) alkyl, alkylcarbonyl,

alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted; and (b) 4-amino-6-tert-butyl-3-methylthio-1,2,4-triazin-5-(4H)-one (metribuzin), wherein from 0.01 to 1000 parts by weight of (b) are used per part by weight of (a).

In one specific aspect, this divisional application provides a synergistic herbicidal composition, comprising: a combination of active compounds:

(a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I) or a salt thereof:



(I)

wherein:

R^1 represents: (i) H, hydroxyl, amino or alkylideneamino, or (ii) alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylamino, dialkylamino, cycloalkyl, cycloalkylalkyl, cycloalkylamino, aryl or arylalkyl, each of which is optionally substituted,

R^2 represents: (i) H, hydroxyl, mercapto, amino, cyano or a halogen atom, or (ii) alkyl, alkoxy, alkylthio, alkylamino, dialkylamino, alkenyl, alkinyl, alkenyloxy, alkinyloxy, alkenylthio, alkinylthio, alkenylamino, alkinylamino, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, cycloalkylalkyl, aryl, aryloxy, arylthio,

arylamino or arylalkyl, each of which is optionally substituted,

R^3 represents: (i) nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted, and

R^4 represents: (i) H, nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted; and

(b) one or more of the following compounds:

N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(N-methyl-N-methylsulphonyl-sulphamoyl)-urea (amidosulfuron), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-chloro-phenylsulphonyl)-urea (chlorsulfuron), N-(4,6-dimethoxy-1,3,5-triazin-2-yl)-N'-(2-(2-methoxy-ethoxy)-phenylsulphonyl)-urea (cinosulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-chloro-4-methoxy-carbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (clopyrasulfuron-methyl, halosulfuron, NC-319), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-cyclopropylcarbonyl-phenylsulphonyl)-urea (cyclosulfamuron, AC-322140), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE459),

the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE-459), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethoxy-phenoxysulphonyl)-urea (ethoxysulfuron, HOE-095404), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-chloro-imidazo[1,2-a]-pyridin-3-yl-sulphonyl)-urea (imazosulfuron), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (metsulfuron-methyl), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-dimethylcarbamoyl-pyridin-2-yl-sulphonyl)-urea (nicosulfuron), N-(4,6-dimethyl-pyrimidin-2-yl)-N'-(2-oxetan-3-yl-oxycarbonyl-phenylsulphonyl)-urea (oxasulfuron), N-(4,6-bis-difluoromethoxy-pyrimidin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (primisulfuron-methyl), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-(3,3,3-trifluoro-propyl)-phenylsulphonyl)-urea (prosulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(4-ethoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (pyrazosulfuron-ethyl), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-ethylsulphonyl-pyridin-2-yl-sulphonyl)-urea (rimsulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethylsulphonyl-imidazo[1,2-a]pyridine-3-sulphonamide (sulfosulfuron, MON-37500), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-thien-3-yl-sulphonyl)-urea (thifensul-furon-methyl), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-[2-(2-chloro-ethoxy)-phenylsulphonyl]-urea (triasulfuron), or N-methyl-N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (tribenuron-methyl),

wherein from 0.01 to 1000 parts by weight of (b) are used per part by weight of (a).

It can be seen from the examples which follow that the observed herbicidal activity of the active compound combinations according to the invention in the weeds exceeds the calculated activity, i.e. that the novel active compound combinations act synergistically.

Example A

Post-emergence test

Solvent: 5 parts by weight of acetone
Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent, the stated amount of emulsifier is added and the concentrate is diluted with water to the desired concentration.

Test plants of a height of 5-15 cm are sprayed with the preparation of active compound such that the particular desired amounts of active compound are applied per unit area. The concentration of the spray liquor is chosen such that the particular desired amounts of active compound are applied in 1000 l of water/ha. After three weeks, the degree of damage to the plants is rated visually in % damage in comparison to the development of the untreated control.

The figures denote:

0% = no effect (like untreated control)
100% = total destruction.

Active compounds, application rates, test plants and results are shown in Table A-1 and A-2 below, the abbreviations used in the table having the following meanings:

(I-1, Na salt) = sodium salt of 2-(2-methoxycarbonyl-phenylsulphonylaminocarbonyl)-4-methyl-5-n-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one (I-1);

(I-2, Na salt) = sodium salt of 2-(2-trifluoromethoxy-phenylsulphonylaminocarbonyl)-4-methyl-5-methoxy-2,4-dihydro-3H-1,2,4-triazol-3-one (I-2);

found = damage or effect (in %) found;

calc. = damage or effect (in %) calculated using Colby's formula.

Table A-1: Post-emergence test / greenhouse

Active compound or active compound combination	Application rate g/ha (active compound)	Test plants damage or effect in %			
		Apera spica-Venti		Bromus secalinus	
		found	calc.	found	calc.
metribuzin - known -	60	20		0	
(I-1, Na salt) - known -	15	70		60	
metribuzin + (I-1, Na salt) - according to the invention -	60 + 15	95	76	80	60

Table A-2: Post-emergence test/greenhouse

Active compound or active compound combination	Application rate g/ha (active compound)	Test plants damage or effect in %			
		Apera spica-Venti		Bromus secalinus	
		found	calc.	found	calc.
metribuzin - known -	60	20		50	
(I-2, Na salt) - known -	15	60		90	
metribuzin + (I-2, Na salt) - according to the invention -	60 + 15	98	68	100	95

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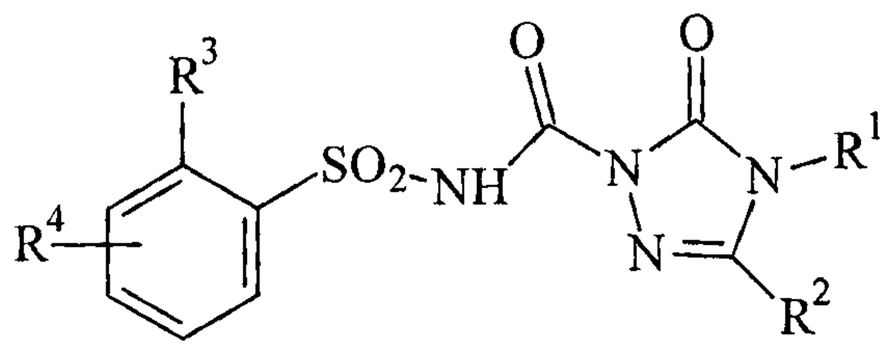
CLAIMS:

1. A synergistic herbicidal composition, comprising: a combination of active compounds:

(a) an arylsulphonylaminocarbonyltriazolinone of the general formula (I) or a salt thereof:



(I)

wherein:

R^1 represents: (i) H, hydroxyl, amino or alkylideneamino, or (ii) alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylamino, dialkylamino, cycloalkyl, cycloalkylalkyl, cycloalkylamino, aryl or arylalkyl, each of which is optionally substituted,

R^2 represents: (i) H, hydroxyl, mercapto, amino, cyano or a halogen atom, or (ii) alkyl, alkoxy, alkylthio, alkylamino, dialkylamino, alkenyl, alkinyl, alkenyloxy, alkinyloxy, alkenylthio, alkinylthio, alkenylamino, alkinylamino, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, cycloalkylalkyl, aryl, aryloxy, arylthio, arylamino or arylalkyl, each of which is optionally substituted,

R^3 represents: (i) nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio,

arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted, and

R^4 represents: (i) H, nitro, cyano or a halogen atom, or (ii) alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, alkenyl, alkenyloxy, alkenylthio, alkenylamino, alkinyl, alkinyloxy, alkinylthio, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylamino, aryl, aryloxy, arylthio, arylsulphinyl, arylsulphonyl or arylamino, each of which is optionally substituted; and

(b) one or more of the following compounds:

N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(N-methyl-N-methylsulphonyl-sulphamoyl)-urea (amidosulfuron), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-chloro-phenylsulphonyl)-urea (chlorsulfuron), N-(4,6-dimethoxy-1,3,5-triazin-2-yl)-N'-(2-(2-methoxy-ethoxy)-phenylsulphonyl)-urea (cinosulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-chloro-4-methoxy-carbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (clopyrasulfuron-methyl, halosulfuron, NC-319), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-cyclopropylcarbonyl-phenylsulphonyl)-urea (cyclosulfamuron, AC-322140), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE459), the sodium salt of N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-methoxycarbonyl-6-trifluoromethyl-pyridin-2-yl-sulphonyl)-urea (DPX-KE-459), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethoxy-phenoxysulphonyl)-urea (ethoxysulfuron, HOE-095404), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-chloro-imidazo[1,2-a]-pyridin-3-yl-sulphonyl)-urea (imazosulfuron), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (metsulfuron-methyl),

N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-dimethylcarbamoyl-pyridin-2-yl-sulphonyl)-urea (nicosulfuron), N-(4,6-dimethyl-pyrimidin-2-yl)-N'-(2-oxetan-3-yl-oxycarbonyl-phenylsulphonyl)-urea (oxasulfuron), N-(4,6-bis-difluoromethoxy-pyrimidin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (primisulfuron-methyl), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-(3,3,3-trifluoro-propyl)-phenylsulphonyl)-urea (prosulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(4-ethoxycarbonyl-1-methyl-pyrazol-5-yl-sulphonyl)-urea (pyrazosulfuron-ethyl), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(3-ethylsulphonyl-pyridin-2-yl-sulphonyl)-urea (rimsulfuron), N-(4,6-dimethoxy-pyrimidin-2-yl)-N'-(2-ethylsulphonyl-imidazo[1,2-a]pyridine-3-sulphonamide (sulfosulfuron, MON-37500), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-thien-3-yl-sulphonyl)-urea (thifensulfuron-methyl), N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-[2-(2-chloro-ethoxy)-phenylsulphonyl]-urea (triasulfuron), or N-methyl-N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-N'-(2-methoxycarbonyl-phenylsulphonyl)-urea (tribenuron-methyl),

wherein from 0.01 to 1000 parts by weight of (b) are used per part by weight of (a).

2. The composition according to claim 1, wherein (a) is 2-(2-methoxycarbonyl-phenylsulphonylaminocarbonyl)-4-methyl-5-n-propoxy-2,4-dihydro-3H-1,2,4-triazol-3-one (I-1) or 2-(2-trifluoromethoxy-phenylsulphonylaminocarbonyl)-4-methyl-5-methoxy-2,4-dihydro-3H-1,2,4-triazol-3-one (I-2) or a sodium salt thereof.

3. The composition according to claim 1 or 2, comprising from 0.05 to 500 parts by weight of (b) per part by weight of (a).

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4. The composition according to claim 3, comprising from 0.1 to 100 parts by weight of (b) per part by weight of (a).

5. A method for controlling weeds, comprising allowing to act on the weeds or their habitat the composition according to any one of claims 1 to 4.

6. Use of the composition according to any one of claims 1 to 4, for controlling weeds.

7. A process for preparing a herbicidal composition, comprising mixing the composition according to any one of claims 1 to 4, with an extender, a surfactant or a mixture thereof.

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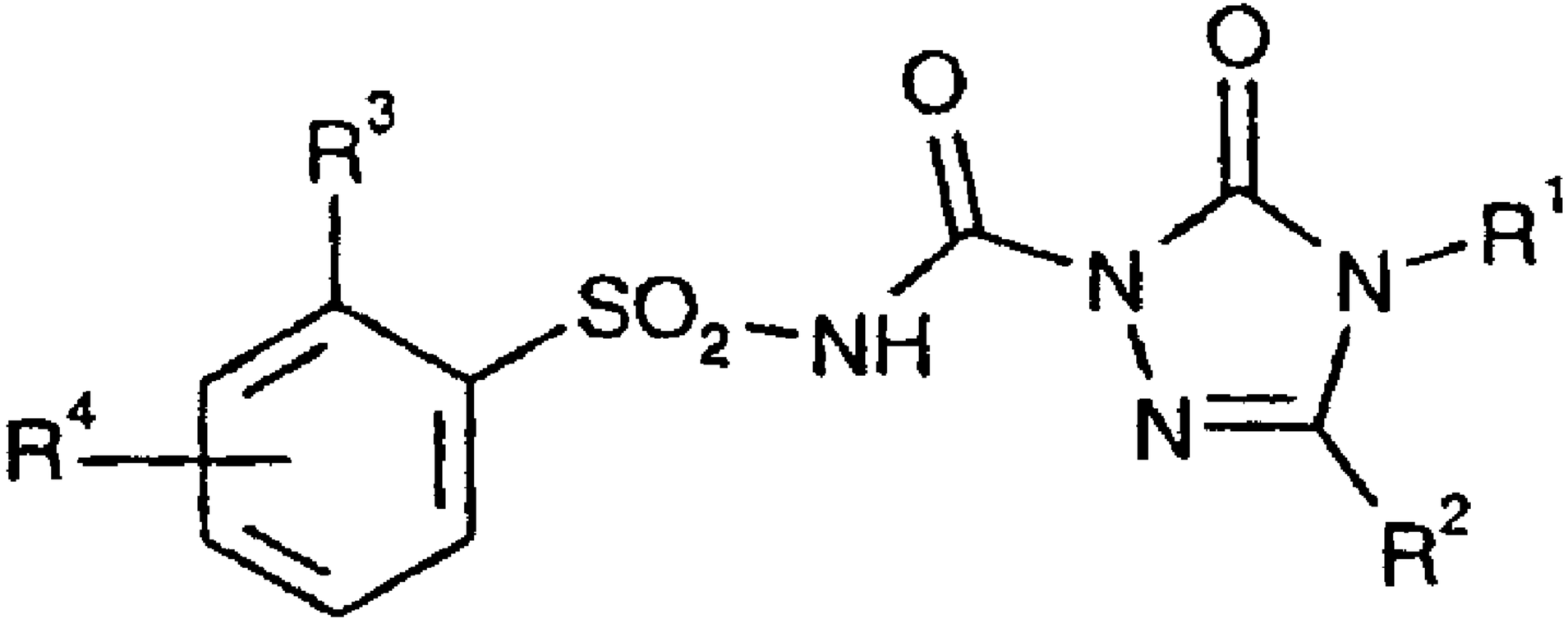

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