Abstract: The present invention relates to hydroxynonyl-heterocycle derivatives, their process of preparation, intermediate compounds for their preparation, their use as fungicide active agents, particularly in the form of fungicide compositions, and methods for the control of phytopathogenic fungi, notably of plants, using these compounds or compositions.
The present invention relates to aryloxyalkyl-heterocycle derivatives, their process of preparation, their use as fungicide active agents, particularly in the form of fungicide compositions, and methods for the control of phytopathogenic fungi, notably of plants, using these compounds or compositions.

In Japanese patent application n°2005-41793, there are disclosed certain naphtyl derivatives of the following chemical structure:

![Chemical Structure](image)

wherein Q can be selected in a list of 7 various heterocycle groups substituted by various carbonylamino derivatives and A can be selected in a list of 7 various 5-membered heterocycle groups. The compounds disclosed in these two documents do not prove to provide a comparable utility than the compounds according to the invention.

It is always of high-interest in agriculture to use novel pesticide compounds in order to avoid or to control the development of resistant strains to the active ingredients. It is also of high-interest to use novel compounds being more active than those already known, with the aim of decreasing the amounts of active compound to be used, whilst at the same time maintaining effectiveness at least equivalent to the already known compounds. We have now found a new family of compounds which possess the above mentioned effects or advantages.

Accordingly, the present invention provides aryloxyalkyl-heterocycle derivatives of formula (I)

![Formula Image](image)

wherein

- Q¹ represents N or CY³;
- Q² represents N or CY⁴
- Y¹, Y², Y³ and Y⁴ independently represent a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, hydroxycarbonyl, C₁-C₈-alkoxycarbonyl, an amino group,
a sulphenyl group, a formyl group, a substituted or non-substituted carbaldehyde 0-(C1-C8-alkyl)oxime, a formyloxy group, a formylamino group, a carbamoyl group, a N-hydroxy carbamoyl group, a pentfluoro-\(\lambda^5\)-sulphenyl group, a formylamino group, substituted or non-substituted d-C8-alkoxyamino group, substituted or non-substituted N-C-C8-alkyl-(C-t-C8-alkoxy)-amino group, substituted or non-substituted (C-t-C8-alkylamino)-amino group, substituted or non-substituted (hydroxyimino)-C-C8-alkyloxy, substituted or non-substituted C3-C8-cycloalkyl, substituted or non-substituted tri(d-C8-alkyl)silyl-C3-C8-cycloalkyl, substituted or non-substituted C3-C8-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C3-C8-halogenoalkoxy having 1 to 5 halogen atoms, a C2-C8-alkenyl, substituted or non-substituted C2-C8-alkynyl, substituted or non-substituted C3-C8-halogenoalkyl, substituted or non-substituted C3-C8-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted d-C8-alkylcarbonyl, substituted or non-substituted N-(C1-C8-alkoxy)-d-C8-alkynylidomoyl, substituted or non-substituted N-(C1-C8-alkoxy)-C1-C8-halogenoalkylamido having 1 to 5 halogen atoms, substituted or non-substituted d-C8-alkoxy carbamoyl, substituted or non-substituted N-C-C8-alkyl-C3-C8-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted d-C8-alkylcarbonyloxy, substituted or non-substituted C1-C8-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted C1-C8-halogenoalkylcarbonylamino, substituted or non-substituted C1-C8-halogenoalkylcarbonylamino having 1 to 5 halogen atoms, substituted or non-substituted N-C-C8-alkyl-(C1-C8-halogenoalkylcarbonylamino) having 1 to 5 halogen atoms, substituted or non-substituted N-C-C8-alkyl-(C1-C8-halogenoalkylcarbonylamino) having 1 to 5 halogen atoms, substituted or non-substituted N-C-C8-alkyl-(di-C-C8-halogenoalkylcarbonylamino) having 1 to 5 halogen atoms, substituted or non-substituted N-d-C8-alkyl-(di-C-C8-halogenoalkylcarbonylamino) having 1 to 5 halogen atoms, substituted or non-substituted d-C8-alkylaminocarbonyloxy, substituted or non-substituted di-d-Cs-alkylaminocarbonyloxy,
substituted or non-substituted C-i-Cs-alkylcarbamothioyl, substituted or non-substituted di-Ci-C₆-
alkylcarbamothioyl, substituted or non-substituted N-C-i-Cs-alkyloxy carbamothioyl, substituted or
non-substituted C-i-Cs-alkyloxycarbamothioyl, substituted or non-substituted N-C₁-C₆-alkyl-C₆-C₆-
alkyloxycarbamothioyl, substituted or non-substituted Ci-C₆-alkylthioylynmino, substituted or non-
substituted Ci-C₆-halogenoalkylthioylynmino having 1 to 5 halogen atoms, substituted or non-
substituted (di-C-i-Cs-alkyl-carbamothioyO-oxy, substituted or non-substituted Ci-C₆-alkylsulphinyl,
substituted or non-substituted C-t-C₆-halogenoalkylsulphinyl having 1 to 5 halogen atoms,
substituted or non-substituted C-t-C₆-halogenoalkylsulphonyl, substituted or non-substituted C-t-C₆-
halogenoalkylsulphonyl having 1 to 5 halogen atoms, substituted or non-substituted C-t-C₆-
alkylaminosulfamoyl, substituted or non-substituted di-C-i-Cs-alkylaminosulfamoyl, substituted or
non-substituted (C-i- Ce-alkoxyimino-C-i- Ce-alky, substituted or non-substituted (C-t-C₆-
alkenoxlyimino)-C-t-C₆-alkyl, substituted or non-substituted (C-t-C₆-alkenoxlyimino)-C-t-C₆-alkyl,
substituted or non-substituted (benzoyximino)-C-t-C₆-alkyl, substituted or non-substituted benzoyx,
substituted or non-substituted benzyx sulphenyl, substituted or non-substituted benzylamin,
substituted or non-substituted phenox, substituted or non-substituted phenylsulphin, substituted or
non-substituted phenylamino, substituted or non-substituted aryl, substituted or non-substituted aryl-[C-t-C₆]-alkyl, substituted or non-substituted tri(C-t-C₆-alkyl)-silyloxy, substituted or non-substituted C-t-C₆-alkylsulfenylnimin, substituted or non-substituted C-i-Cs-
halogenoalkylsulphonylnimin having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-
alkylsulphonylnimin, substituted or non-substituted C-i-Cs-halogenoalkylsulphonylnimin having 1 to
5 halogen atoms, substituted or non-substituted C-t-C₆-alkyloxysulphonylnimin, substituted or
non-substituted C-t-C₆-halogenoxysulphonylnimin having 1 to 5 halogen atoms, substituted or non-
substituted tri(C-t-C₆-alkyl)-silyl, substituted or non-substituted (C-t-C₆-alkyldieneamino)ox, sub-
stituted or non-substituted (C-t-C₆-alklydienidamino)ox, substituted or non-substituted
(benzylidieamino)ox, substituted or non-substituted [(arylcnyl)amino]-[C-t-C₆]-alkyl, substituted or
non-substituted [(C-rCs-alky*C-rCs-alkylcarbony*)aminoJHC-rCs]-alkyl, substituted or non-
substituted [(C-rCs-alky*arylcarbony*)aminoJHC-rCs]-alkyl, substituted or non-substituted
[(C-rCs-alkylcarbony*)aminoHC-rCs]-alkyl, substituted or non-substituted heterocycl, substituted or
non-substituted heterocyclxoy, or
• when Y¹ and Y² together with the aromatic cycle to which they are attached do form a
naphtyl, quinoline or isoquinoline, Y³ and Y⁴ are as defined above;
• n represents 1, 2, 3 or 4 ;
• R¹ and R² independently represent a hydrogen atom, a halogen atom, a cyano group,
substituted or non-substituted C-t-C₆-alkyl, substituted or non-substituted C₆-C₆-cycloalkyl,
substituted or non-substituted C-t-C₆-halogenoalkyl having 1 to 5 halogen atoms, substituted or
non-substituted C₆-C₆-halogenocycloalkyl having 1 to 5 halogen atoms, a C₆-C₆-alkenyl,
substituted or non-substituted C₈₋C₉-alkynyl, substituted or non-substituted C₁₋C₈-alkoxy, substituted or non-substituted C₂₋C₈-alkenyloxy, substituted or non-substituted C₃₋C₈-alkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C₃₋C₈-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C₃₋C₈-halogenoalkynylsulphenyl, substituted or non-substituted C₃₋C₈-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkylsulphinyl, substituted or non-substituted C₈₋C₉-alkylsulphinyl, substituted or non-substituted C₁₋C₈-alkylsulphenyl, substituted or non-substituted C₈₋C₉-alkylsulphenyl, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋C₈-alkenylsulphenyl, substituted or non-substituted C₈₋C₉-alkenylsulphenyl having 1 to 5 halogen atoms.

\[ T \] represents a hydrogen or a substituted or non-substituted heterocyclyl group that is selected in the list consisting of T¹ to T¹²:

<table>
<thead>
<tr>
<th>T¹</th>
<th>T²</th>
<th>T³</th>
<th>T⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>T⁵</th>
<th>T⁶</th>
<th>T⁷</th>
<th>T⁸</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>T⁹</th>
<th>T¹⁰</th>
<th>T¹¹</th>
<th>T¹²</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
</tr>
</tbody>
</table>
wherein

• $X^1$ to $X^4$ independently represent a hydrogen atom, a halogen atom, a nitro group, a
hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted
or non-substituted carbaldehyde O-(C-C-C)-alkyl)oxime, a formyloxy group, a formylamino group, a
carbamoyl group, a N-hydroxycarbamoyl group, a pentafluoro-$\lambda^6$-sulphenyl group, a formylamino
group, substituted or non-substituted C-C-C-alkoxycarbamoyl, substituted or non-substituted N-C-C-C-C-
alkyl-(C-C-C-alkoxy)-amino group, substituted or non-substituted (d-C-C-C-alkylmino)-amino group,
substituted or non-substituted N-C-C-C-alkyl-(CrC-C-alkylamino)-amino group, a substituted
or non-substituted (hydroxyimino)-C-C-C-alkyl group, substituted or non-substituted d-C-C-alkyl,
substituted or non-substituted tri(C-C-C-alkyl)silyl-C-(C-C-C)-alkyl, substituted or non-substituted C-C-C-
cycloalkyl, substituted or non-substituted tri(C-t-C-C-alkyl)silyl-C-C-C-cycloalkyl, substituted or non-
substituted d-C-C-C-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C-C-
cycloalkyl having 1 to 5 halogen atoms, a C-C-C-alkenyl, substituted or non-
substituted C₂-C₈-alkynyl, substituted or non-substituted C₆-alkylaminino, substituted or non-substituted di-C₁-C₈-alkylamino, substituted or non-substituted C₈-alkoxy, substituted or non-substituted d-Cs-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C₇-C₈-alkylsulphenyl, substituted or non-substituted C₈-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₇-C₈-alkynyloxy, substituted or non-substituted C₈-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₈-alkynyl, substituted or non-substituted d-C₈-alkylsulphonyl, substituted or non-substituted d-C₈-halogenoalkylsulphonyl, substituted or non-substituted C₈-alkyloxycarbamothioyl, substituted or non-substituted C₈-alkylaminocarbonyloxy, substituted or non-substituted C₈-halogenoalkylcarbonylamino, substituted or non-substituted N-(C₈-alkoxy)-C₁-C₈-alkoxy), substituted or non-substituted halogenoalkanimidoyl having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylcarbamoyle, substituted or non-substituted d-C₈-alkylcarbamoyle having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, substituted or non-substituted N-(C₈-alkoxycarbonyl), substituted or non-substituted d-Cs-alkylcarbomoyl, substituted or non-substituted C₈-alkylcarbamoyl, having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylcarbamoyl, having 1 to 5 halogen atoms, substituted or non-substituted alkylaminocarbonyloxy, substituted or non-substituted di-d-Cs-alkylcarbamoyle having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylcarbamoyle, having 1 to 5 halogen atoms, substituted or non-substituted di-d-Cs-alkylcarbamoyle having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylcarbamoyle having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylaminino having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylcarbamoylaminino having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-halogenoalkylcarbamoylaminino having 1 to 5 halogen atoms, substituted or non-substituted N-C₈-alkyl-(C₁-C₈-alkylcarbamoyle)amino, substituted or non-substituted N-C₈-alkyl-(C₁-C₈-halogenoalkylcarbamoyle)amino having 1 to 5 halogen atoms, substituted or non-substituted N-C₈-alkyl-(di-C₁-C₈-alkylcarbamoyle)amino, substituted or non-substituted N-C₈-alkyl-(di-C₁-C₈-halogenoalkylcarbamoyle)amino having 1 to 5 halogen atoms, substituted or non-substituted d-C₈-alkylaminocarboxyloxy, substituted or non-substituted alkylaminocarboxyloxy, substituted or non-substituted d-C₈-alkylcarbamothioy, substituted or non-substituted di-d-Cs-alkylcarbamothioyl, substituted or non-substituted di-d-Cs-alkylcarbamothioyl, substituted or non-substituted alkylthiylamino, substituted or non-substituted C₈-halogenoalkylthiylamino having 1 to 5 halogen atoms, substituted or non-substituted C₈-halogenoalkylthiylamino, substitut
having 1 to 5 halogen atoms, substituted or non-substituted C-t-Cs-alkylaminosulfanoyl,
substituted or non-substituted di-C-i-Cs-alkylaminosulfanoyl, substituted or non-substituted (Ci-C_5-
alkoxyimino)-Ci-C_6-alkyl, substituted or non-substituted (Ci-C_6-alkenyloxyimino)-Ci-C_6-alkyl,
substituted or non-substituted (Ci-C_6-alkynloxyimino)-Ci-C_6-alkyl, substituted or non-substituted
(benzyloxyimino)-Ci-C_6-alkyl, substituted or non-substituted benzaldehyde, substituted or non-
substituted benzylsulphenyl, substituted or non-substituted benzaloyl, substituted or non-
substituted phenoxy, substituted or non-substituted phenylsulphenyl, substituted or non-
substituted phenylamino, substituted or non-substituted ary1, substituted or non-substituted aryl-
[C-t-C_g]-alkyl, substituted or non-substituted tri(C-t-C_g)-alkyl-silyloxy, substituted or non-substituted
C-rCs-alkylsulphenalamino, substituted or non-substituted d-Cs-halogenoalkylsulphinylamino
having 1 to 5 halogen atoms, substituted or non-substituted c-t-Cs-alkylsulphonylamino,
substituted or non-substituted d-Cs-halogenoalkylsulphonylamino having 1 to 5 halogen atoms,
substituted or non-substituted c-t-Cs-alkoxysulphonylamino, substituted or non-substituted C_t-C_g-
halogenoxysulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted tri(Ci-C_8-
alkyl)-silyl, substituted or non-substituted (c-t-Cs-alkylideneamino)oxy, substituted or non-
substituted (Ci-C_6-alkenylideneamino)oxy, substituted or non-substituted (Ci-C_6-
alkenylideneamino)oxy, substituted or non-substituted (benzylideneamino)oxy ;

- W^1 independently represents a hydrogen atom, a formyl group, a substituted or non-
substituted carbaldehyde O-(C-t-Cs-alkyl)oxime, a carbamoyl group, a N-hydroxycarbamoyl group,
a formylamino group, substituted or non-substituted d-C_6-alkyl, substituted or non-substituted
tri(Ci-C_8-alkyl)silyl-Ci-C_8-alkyl, substituted or non-substituted C_3-C_8-cycloalkyl, substituted or non-
substituted tri(Ci-C_8-alkyl)silyl-C_3-C_8-cycloalkyl, substituted or non-substituted Ci-C_5-
halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C_3-C_8-
halogenocycloalkyl having 1 to 5 halogen atoms, a C_2-C_8-alkenyl, substituted or non-substituted
C_2-C_8-alkynyl, substituted or non-substituted Ci-C_8-alkylamino, substituted or non-substituted di-
Ci-C_8-alkylamino, substituted or non-substituted Ci-C_8-alkoxy, substituted or non-substituted Ci-
C_8-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C_2-C_8-alkenoxly,
substituted or non-substituted C_2-C_8-halogenoalkenoxly having 1 to 5 halogen atoms, substituted
or non-substituted C_2-C_8-alkenyloxly, substituted or non-substituted C_3-C_8-halogenoalkenyloxly
having 1 to 5 halogen atoms, substituted or non-substituted C_3-C_8-aldehydicarbonyl, substituted or non-
substituted N-(C_i-C_8-alkoxy)-Ci-C_8-alkanimidoyl, substituted or non-substituted N-(C_i-C_8-
alkoxy)-Ci-C_8-halogenoalkanimidoyl having 1 to 5 halogen atoms, substituted or non-substituted
Ci-Cs-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C_8-
alkylcarbamoyl, substituted or non-substituted di-Ci-Cs-alkylcarbamoyl, substituted or non-
substituted N-Ci-Cs-alkoxy carbamoyl, substituted or non-substituted Ci-C_8-alkoxy carbamoyl,
substituted or non-substituted N-Ci-C_8-alkyl-Ci-C_8-alkoxy carbamoyl, substituted or non-
substituted Ci-C_8-alkoxy carbonyl, substituted or non-substituted Ci-Cs-halogenoalkoxy carbonyl
having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylcarbamothioyl, substituted or non-substituted di-d-Cs-alkylcarbamothioyl, substituted or non-substituted N-CrC₈⁻alkyloxycarbamothioyl, substituted or non-substituted d-Cs-alkoxycarbamothioyl, substituted or non-substituted N-CrC₈⁻alkylaminosulfamoyl, substituted or non-substituted di-d-Cs-alkylaminosulfamoyl, substituted or non-substituted aryl, substituted or non-substituted aryl-[d-C₈⁻]⁻alkyl.

- A is selected in the list consisting of A¹ to A¹¹⁶:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A²

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A³

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A⁴

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A⁵

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A⁶

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A⁷

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A⁸

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A⁹

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁰

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹¹

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹²

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹³

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁴

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁵

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁶

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁷

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁸

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A¹⁹

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z⁴</td>
<td>Z²</td>
<td>Z¹</td>
<td>Z³</td>
</tr>
<tr>
<td>Z⁵</td>
<td>Z³</td>
<td>Z²</td>
<td>Z¹</td>
</tr>
<tr>
<td>Z⁶</td>
<td>Z⁴</td>
<td>Z³</td>
<td>Z²</td>
</tr>
</tbody>
</table>

A²⁰
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Z¹</td>
<td>K²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z²</td>
<td>N</td>
<td>Z¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><img src="image1" alt="Structure A77" /></td>
<td><img src="image2" alt="Structure A78" /></td>
<td><img src="image3" alt="Structure A79" /></td>
<td><img src="image4" alt="Structure A80" /></td>
</tr>
<tr>
<td><img src="image5" alt="Structure A81" /></td>
<td><img src="image6" alt="Structure A82" /></td>
<td><img src="image7" alt="Structure A83" /></td>
<td><img src="image8" alt="Structure A84" /></td>
</tr>
<tr>
<td><img src="image9" alt="Structure A85" /></td>
<td><img src="image10" alt="Structure A86" /></td>
<td><img src="image11" alt="Structure A87" /></td>
<td><img src="image12" alt="Structure A88" /></td>
</tr>
<tr>
<td><img src="image13" alt="Structure A89" /></td>
<td><img src="image14" alt="Structure A90" /></td>
<td><img src="image15" alt="Structure A91" /></td>
<td><img src="image16" alt="Structure A92" /></td>
</tr>
<tr>
<td><img src="image17" alt="Structure A93" /></td>
<td><img src="image18" alt="Structure A94" /></td>
<td><img src="image19" alt="Structure A95" /></td>
<td><img src="image20" alt="Structure A96" /></td>
</tr>
<tr>
<td><img src="image21" alt="Structure A97" /></td>
<td><img src="image22" alt="Structure A98" /></td>
<td><img src="image23" alt="Structure A99" /></td>
<td><img src="image24" alt="Structure A100" /></td>
</tr>
<tr>
<td><img src="image25" alt="Structure A101" /></td>
<td><img src="image26" alt="Structure A102" /></td>
<td><img src="image27" alt="Structure A103" /></td>
<td><img src="image28" alt="Structure A104" /></td>
</tr>
</tbody>
</table>
wherein

- $Z^1$, $Z^2$, $Z^3$, $Z^4$, $Z^5$, $Z^6$, $Z^7$, $Z^8$ and $Z^9$ independently represent a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted or non-substituted carbaldehyde O-(C-alkyl)oxime, a formyloxy group, a formylamino group, a carbamoyl group, a N-hydroxycarbamoyl group, a pentafluoro-λ⁶-sulphenyl group, a formylamino group, substituted or non-substituted C₈₆-alkoxyamino group, substituted or non-substituted N-C₈₆-alkyl-(C₈₆-alkoxy)-amino group, substituted or non-substituted (C-alkylamino)-amino group, substituted or non-substituted N-C₈₆-alkyl-(C₈₆-alkylamino)-amino group, a substituted or non-substituted (hydroxyimino)-C₈₆-alkyl group, substituted or non-substituted C₈₆-alkyl, substituted or non-substituted tri(C₈₆-alkyl)silyl-C₈₆-alkyl, substituted or non-substituted C₃₈₆-cycloalkyl, substituted or non-substituted tri(C₈₆-alkyl)silyl-C₃₈₆-cycloalkyl, substituted or non-substituted C₈₆-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C₈₆-halogenocycloalkyl having 1 to 5 halogen atoms, a C₆₈₆-alkenyl, substituted or non-substituted C₈₆-alkynyl, substituted or non-substituted C₈₆-alkylamino, substituted or non-substituted di-C₈₆-alkylamino, substituted or non-substituted C₈₆-alkoxy, substituted or non-substituted C₈₆-alkoxyamino group, substituted or non-substituted (C₈₆-cycloalkoxycarbonyl)amino, substituted or non-substituted C₆₈₆-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C₈₆-halogenoalkylsulphenyl, substituted or non-substituted C₂₈₆-alkenylamino, substituted or non-substituted C₂₈₆-alkenylamino, substituted or non-substituted (C₂₈₆-alkynylamino)carboxylic acid, substituted or non-substituted C₂₈₆-halogenoalkenylamino, substituted or non-substituted C₂₈₆-halogenoalkenylamino, substituted or non-substituted (C₂₈₆-alkynylamino)carboxylic acid, substituted or non-substituted C₃₈₆-halogenoalkenylamino, substituted or non-substituted C₃₈₆-halogenoalkenylamino, substituted or non-substituted (C₃₈₆-alkynylamino)carboxylic acid.
1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylcarbonyl, substituted or non-
substituted N-(Ci-C₈₈-alkoxy)-Ci-C₈₈-alkanaminidoyl, substituted or non-substituted N-(Ci-C₈₈-alkoxy)-
Ci-C₈₈-halogenoalkanaminidoyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₈-
halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₈-
alkylcarbamoylm, substituted or non-substituted di-Ci-Cs-alkylcarbamoylm, substituted or non-
substituted N-Ci-Cs-alkyloxy carbamoylm, substituted or non-substituted Ci-C₈₈-alkoxy carbamoylm,
substituted or non-substituted N-Ci-C₈₈-alke-Ci-C₈₈-alkoxy carbamoylm, substituted or non-
substituted Ci-C₈₈-alkoxy carbamoylm, substituted or non-substituted N-Ci-Cs-halogenoalkylcarbonyl
having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₈-alkylcarbonyloxy, substituted or
non-substituted Ci-Cs-halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, substituted or non-
substituted Ci-C₈₈-alkylcarbonylamino, substituted or non-substituted Ci-C₈₈-
halogenoalkylcarbonylamino having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₈-
alkylcarbamoylamino, substituted or non-substituted Ci-C₈₈-halogenoalkylcarbamoylamino having
1 to 5 halogen atoms, substituted or non-substituted di-Ci-C₈₈-alkyl carbamoylamino, substituted or
non-substituted di-Ci-Cs-halogenoalkyl carbamoylamino having 1 to 5 halogen atoms, substituted or
non-substituted N-Ci-C₈₈-alkyl-(Ci-C₈₈-alkyl carbamoylamino), substituted or non-substituted N-
Ci-C₈₈-alkyl-(Ci-C₈₈-halogenoalkyl carbamoylamino) having 1 to 5 halogen atoms, substituted or
non-substituted N-Ci-C₈₈-alkyl-(di-Ci-C₈₈-alkyl carbamoylamino), substituted or non-substituted N-
Ci-C₈₈-alkyl-(di-Ci-C₈₈-halogenoalkyl carbamoylamino) having 1 to 5 halogen atoms, substituted or
non-substituted Ci-Cs-alkylaminocarbonyloxy, substituted or non-substituted di-Ci-C₈₈-
alkylaminocarbonyloxy, substituted or non-substituted Ci-C₈₈-alkylaminocarbonyloxy, substituted or
non-substituted di-Ci-C₈₈-alkylaminocarbothioyl, substituted or non-substituted N-Ci-C₈₈-
alkylaminocarbothioyl, substituted or non-substituted N-Ci-C₈₈-alkylaminocarbothioyl, substituted or
non-substituted N-Ci-C₈₈-alkyl-Ci-C₈₈-alkylaminocarbothioyl, substituted or non-substituted Ci-C₈₈-
alkylthiolamino, substituted or non-substituted (Ci-C₈₈-alkylthiolamino), substituted or non-
substituted (di-Ci-C₈₈-alkylthiolamino)-oxy, substituted or non-substituted Ci-C₈₈-
alkylsulphenyl, substituted or non-substituted Ci-C₈₈-halogenoalkylsulphenyl having 1 to 5 halogen
atoms, substituted or non-substituted Ci-C₈₈-alkylsulphinyl, substituted or non-substituted Ci-C₈₈-
halogenoalkylsulphinyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₈-
alkylsulphon, substituted or non-substituted Ci-C₈₈-halogenoalkylsulphon having 1 to 5 halogen
atoms, substituted or non-substituted Ci-C₈₈-alkylaminosulfoAM, substituted or non-substituted
di-Ci-C₈₈-alkylaminosulfoAM, substituted or non-substituted (Ci-C₈₈-alkoxyimino)-Ci-C₈₈-alkyl,
substituted or non-substituted (Ci-C₈₈-alkoxyimino)-Ci-C₈₈-alkyl, substituted or non-substituted
(Ci-C₈₈-alkoxyimino)-Ci-C₈₈-alkyl, substituted or non-substituted (benzyloxyimino)-Ci-C₈₈-alkyl,
substituted or non-substituted benzylamine, substituted or non-substituted benzylamine, substituted or
non-substituted phenylsulphenyl, substituted or non-substituted phenylamino, substituted or non-substituted aryl, substituted or non-substituted (arylcarbonyl)amino, substituted or non-substituted (heterocyclylcarbonyl)amino, substituted or non-substituted (aryloxycarbonyl)amino, substituted or non-substituted (heterocycloxy carbonyl)amino, substituted or non-substituted tri(d-C₈-alkyl)-silyloxy, substituted or non-substituted d-C₈-halogenoalkylsulphenylamino, substituted or non-substituted d-Cs-halogenoalkylsulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylsulphonylamino, substituted or non-substituted d-Cs-halogenoxysulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-halogenoalkylsulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted d-C₈₉₃-alkylideneamino)oxy, substituted or non-substituted (d-C₈₉₃-alkenylideneamino)oxy, substituted or non-substituted (d-C₈₉₃-alkenyldeneamino)oxy, substituted or non-substituted (d-C₈₉₃-alkynylideneamino)oxy, substituted or non-substituted (benzylideneamino)oxy; provided that when T represents T²₈, T²⁹, T³¹ or T³² and when Y₁ and Y₂ together with the aromatic cycle to which they are attached form a naphtyl and when A represents A², A⁶, A¹¹, A¹², A¹⁴, A¹⁶, A¹⁸, A²⁵, A²⁶, A²⁸ or A³¹ then Z¹ represents a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted or non-substituted carb aldehyde O-(d-C₈₉₃-alkyl)oxime, a formyloxy group, a N-hydroxycarbamoyl group, a pentachloro-λ⁶-sulphenyl group, substituted or non-substituted d-C₈₃-alkoxyamino group, substituted or non-substituted N-d-C₈₃-alkyl-(d-C₈₃-alkoxy)-amino group, substituted or non-substituted (d-C₈₃-alkylamino)-amino group, substituted or non-substituted N-d-C₈₃-alkyl-(d-C₈₃-alkylamino)-amino group, a substituted or non-substituted (hydroxyimino)-d-C₈₃-alkyl group, substituted or non-substituted Ci-C₈₃-alkyl, substituted or non-substituted tri(d-C₈₃-alkyl)silyl-d₃-C₈₃-alkyl, substituted or non-substituted Ci-C₈₃-alkylideneal kyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₃-alkenylidenealkyl, substituted or non-substituted Ci-C₈₃-halogenoalkylidenealkyl having 1 to 5 halogen atoms, a Ci-C₈₃-alkenyl, substituted or non-substituted Ci-C₈₃-alkylamino, substituted or non-substituted di-Ci-C₈₃-alkylamino, substituted or non-substituted Ci-C₈₃-alkoxy, substituted or non-substituted Ci-C₈₃-halogenoalkylidenealkyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₃-alkylsulphenyl, substituted or non-substituted d-C₈₃-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈₃-C₈₃-alkenylidenealkyl, substituted or non-substituted Ci-C₈₃-alkynylidenealkyl, substituted or non-substituted Ci-C₈₃-halogenoalkylidenealkyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈₃-alkylsulph enyl, substituted or non-substituted d-C₈₃-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈₃-C₈₃-alkenylidenealkyl, substituted or non-substituted Ci-C₈₃-alkynylidenealkyl, substituted or non-substituted Ci-C₈₃-halogenoalkylidenealkyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈₃-alky lcarbonyl, substituted or non-substituted N-(Ci-C₈₃-alkoxy)-d-C₈₃-alkanimidoyl, substituted or non-substituted N-(Ci-C₈₃-alkoxy)-C₈₃-C₈₃-halogenoalkan imidoyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈₃-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈₃-alkoxy carbonyl, substituted or non-substituted d-C₈₃-halogenoalkoxycarbonyl having 1 to 5 halogen atoms, substituted or non-
substituted C-i-Cs-alkylcarbonyloxy, substituted or non-substituted C_1-C_8-
halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, substituted or non-substituted C_1-C_8-
alkylaminocarbonyloxy, substituted or non-substituted di-C-i-Cs-alkylaminocarbonyloxy, substituted
or non-substituted Ci-Cs-alkylcarbamothioyl, substituted or non-substituted di-Ci-C_8-
alkylcarbamothioyl, substituted or non-substituted N-C-i-Cs-alkoxy carbamothioyl, substituted or
non-substituted C-i-Cs-alkoxy carbamothioyl, substituted or non-substituted N-C_1-C_8-alkyl-C-t-C_6-
alkoxy carbamothioyl, substituted or non-substituted Cl-C_6-alkylthiolamino, substituted or non-
substituted (C-i-Cs-alkoxythiocarbonyl amino, substituted or non-substituted C_1-C_8-
halogenoalkylthiolamino having 1 to 5 halogen atoms, substituted or non-substituted (C_1-C_6-
alkyl-carbamothioyl)oxy, substituted or non-substituted substituted or non-substituted (Ci-C_1-C_6-
alcoholcarbamothioyl)oxy, substituted or non-substituted C-t-C_6-alkylsulphenyl, substituted or non-
substituted C-i-Cs-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-
substituted C-rCs-alkylsulphynyl, substituted or non-substituted C-i-Cs-halogenoalkylsulphynyl
having 1 to 5 halogen atoms, substituted or non-substituted C-t-C_6-alkylsulphynyl, substituted or
non-substituted C-i-Cs-halogenoalkylsulphonylamino having 1 to 5 halogen atoms, substituted or non-
substituted C-t-C_6-alkylsulphonylamino, substituted or non-substituted substituted (C-i-Cs-alkoxyimino-C-i-C_6-alkyl, substituted or non-substituted (C-i-Cs-alkenyloxymino-C-i-Cs-akyl, substituted or non-substituted (C_1-C_6-
alkenyl oximino)-C-t-C_6-alkyl, substituted or non-substituted (benzoyloxyimino)-C-t-C_6-alkyl,
substituted or non-substituted benzylthio, substituted or non-substituted benzylsulphonylamino,
substituted or non-substituted benzylaminio, substituted or non-substituted phenoxo, substituted or
non-substituted phenylsulphenyl, substituted or non-substituted phenylamino, substituted or non-
substituted aryl, substituted or non-substituted tr(C-t-C_6-alkyl)-silyloxy, substituted or non-
substituted C-t-C_6-alkylsulphenylamino, substituted or non-substituted C-t-C_6-halogeno alkylsulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted C-t-C_6-
alkylsulphonylamino, substituted or non-substituted C-rCs-halogenoalkylsulphonylamino having 1
to 5 halogen atoms, substituted or non-substituted C-t-C_6-alkoxy sulphynylamino, substituted or non-
substituted C-t-C_6-halogenoxysulphonylamino having 1 to 5 halogen atoms, substituted or non-
substituted tr(C-t-C_6-alkyl)-silyl, substituted or non-substituted (C-t-C_6-alkylideneamino)oxy,
substituted or non-substituted (C-t-C_6-alkenyldieneamino)oxy, substituted or non-substituted (C-t-
C_6-alkenyldieneamino)oxy, substituted or non-substituted (benzylideneamino)oxy;

• K^1 and K^2 independently represent a hydrogen atom, a formyl group, a substituted or non-
substituted carbaldehyde O-(C-t-C_6-alkyl)oxime, a carbamoyl group, a N-hydroxycarbamoyl group,
a formylamino group, substituted or non-substituted C-t-C_6-alkyl, substituted or non-substituted
tr(C_1-C_6-alkyl)silyl-C-t-C_6-alkyl, substituted or non-substituted C_3-C_8-cycloalkyl, substituted or non-
substituted tr(C_1-C_6-alkyl)silyl-C_3-C_8-cycloalkyl, substituted or non-substituted C_1-C_8-
halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C_3-C_8-
halogenocycloalkyl having 1 to 5 halogen atoms, a C₂₋₅-alkenyl, substituted or non-substituted C₃₋₅-alkynyl, substituted or non-substituted Ci-Cl₆-alkylaminino, substituted or non-substituted di-d-Cs-alkylaminino, substituted or non-substituted C-t-C₆-alkoxy, substituted or non-substituted C₁₋₅₈-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C₂₋₅-alkenyloxy, substituted or non-substituted C₂₋₅₈-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylcarbonyl, substituted or non-substituted N-(C-t-C₆₈-alkoxy)-C-t-C₆₈-alkanimidoyl, substituted or non-substituted N-(C₁₋₅₈-alkoxy)-C-t-C₆₈-halogenoalkanimidoyl having 1 to 5 halogen atoms, substituted or non-substituted C₁₋₅₈-halogenoalkyloxy, having 1 to 5 halogen atoms, substituted or non-substituted di-C₁₋₅₈-alkyloxycarbonyl, substituted or non-substituted N-Cₖ₋₅₈-aldehyde, substituted or non-substituted N-Cₖ₋₅₈-alkoxy, substituted or non-substituted Cₖ₋₅₈-aldehydoxy, substituted or non-substituted Cₖ₋₅₈-alkyne, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, having 1 to 5 halogen atoms, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, having 1 to 5 halogen atoms, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, having 1 to 5 halogen atoms, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, having 1 to 5 halogen atoms, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, having 1 to 5 halogen atoms, substituted or non-substituted Cₖ₋₅₈-alkyneoxy, substituted or non-substituted aryl, substituted or non-substituted aryl-[C-t-C₆₈]-alkyl ;

- G¹ and G² are independently selected in the list consisting of oxygen, sulfur, NR³, N-OR⁴ and N-NR⁵R⁶ wherein R³ to R⁶ independently represent a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted C-t-C₆₈-alkyl, substituted or non-substituted C₆₋₅₈-cycloalkyl, substituted or non-substituted C₆₋₅₈-halogenocycloalkyl having 1 to 5 halogen atoms, substituted or non-substituted C₆₋₅₈-halogenoalkenyl, substituted or non-substituted C₂₋₅₈-alkenyloxy, substituted or non-substituted C₂₋₅₈-alkenyloxy, having 1 to 5 halogen atoms, substituted or non-substituted C₂₋₅₈-alkenyloxy, substituted or non-substituted C₂₋₅₈-alkenyloxy, having 1 to 5 halogen atoms, substituted or non-substituted C₂₋₅₈-alkenyloxy, substituted or non-substituted C₂₋₅₈-alkenyloxy, having 1 to 5 halogen atoms, substituted or non-substituted C₂₋₅₈-alkenyloxy, substituted or non-substituted aryl, substituted or non-substituted aryl-[C-t-C₆₈]-alkyl ;

as well as salts, N-oxides, metallic complexes and metalloidic complexes thereof
As a further aspect, when Y₁ and Y₂ together with the aromatic cycle to which they are attached in the
compound of formula (I) do form a naphthyl, quinoleine or isoquinoleine, the present invention provides
aryloxyalkyl-heterocycle derivatives of formula (Ia), (Ib) and (Ic)

\[
\text{\begin{align*}
\text{(Ia)} & \quad \text{\begin{array}{c}
\text{A} (\text{CR} \text{R'} \text{R''})_{n} \\
\text{Y}^{1} \quad \text{Y}^{2} \quad \text{Y}^{3} \quad \text{Y}^{4}
\end{array}} \\
\text{(Ib)} & \quad \text{\begin{array}{c}
\text{A} (\text{CR} \text{R'})_{n} \\
\text{T} \quad \text{N} \quad \text{Y}^{1} \quad \text{Y}^{2} \quad \text{Y}^{3} \quad \text{Y}^{4}
\end{array}} \\
\text{(Ic)} & \quad \text{\begin{array}{c}
\text{A} (\text{CR} \text{R'})_{n} \\
\text{O} \quad \text{N} \quad \text{Y}^{1} \quad \text{Y}^{2} \quad \text{Y}^{3} \quad \text{Y}^{4}
\end{array}}
\end{align*}}
\]

wherein

- A, T, n, R¹, R², Y³ and Y⁴ are defined in the same manner as the corresponding substituents of the
  compounds of formula (I) according to the invention;
- Y⁵ to Y⁸ independently represent a hydrogen atom, a halogen atom, a nitro group, a hydroxy
group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted or non-
  substituted carbaldehyde O-(Ci-C₈-alkyl)oxime, a formyloxy group, a formylamino group, a
carbamoyl group, a N-hydroxycarbamoyl group, a pentafluoro-λ⁵-sulphenyl group, a formylamino
group, substituted or non-substituted C¹-C₈-alkoxycarbonylamino group, substituted or non-substituted C¹-
  C₈-alkyl, substituted or non-substituted C₃-C₅-cycloalkyl, substituted or non-substituted Ci-C₈-
  halogenoalkyl having 1 to 5 halogen atoms, a C₂-C₅-alkenyl, substituted or non-substituted C₂-C₅-
  alkynyl, substituted or non-substituted Ci-C₈-alkylamino, substituted or non-substituted Ci-C₈-
  alkoxy, substituted or non-substituted Ci-C₈-halogenoalkoxy having 1 to 5 halogen atoms,
  substituted or non-substituted Ci-C₈-alkylsulphenyl, substituted or non-substituted Ci-C₈-
  halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₂-C₅-
  alkynylamino, substituted or non-substituted Ci-C₈-alkynylamino, substituted or non-substituted Ci-C₈-
  alkynylamino, substituted or non-substituted Ci-C₈-alkynlyoxy, substituted or non-substituted C₂-C₅-
  alkenyloxy, substituted or non-substituted C₃-C₅-alkenyloxy, substituted or non-substituted Ci-C₈-
  alkylcarbonyl, substituted or non-substituted Ci-C₈-alkoxycarbonyl, substituted or non-substituted
  phenoxy, substituted or non-substituted phenylsulphenyl, substituted or non-substituted
  phenylamino, substituted or non-substituted aryl;

Any of the compounds according to the invention can exist as one or more stereoisomers depending on
the number of stereogenic units (as defined by the IUPAC rules) in the compound. The invention thus
relates equally to all the stereoisomers and to the mixtures of all the possible stereoisomers, in all
proportions. The stereoisomers can be separated according to the methods which are known perse by
the man ordinary skilled in the art.

Notably, the stereosstructure of the oxime moiety present in the tetrazolylloxime derivative of formula (I)
includes (E) or (Z) isomers and these stereoisomers form part of the present invention.

According to the invention, the following generic terms are generally used with the following meanings:

- halogen means fluorine, chlorine, bromine or iodine;
- heteroatom can be nitrogen, oxygen or sulphur;
• unless indicated otherwise, a group or a substituent that is substituted according to the invention
can be substituted by one or more of the following groups or atoms: a halogen atom, a nitro
group, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a pentafluoro-λ5-
sulphenyl group, a formyl group, a substituted or non-substituted carbaldehyde O-(Ci-C8-
alkyloxime, a formyloxy group, a formylamino group, a carbamoyl group, a N-hydroxycarbamoyl
group, a formylamino group, a (hydroxyimino)-C=t-Cs-alkyl group, a C=t-Cs-alkyl, a tri(Ci-C8-
alkyl)silyl, a tri(Ci-C8-alkyl)silyl-Ci-C8-alkyl, C3-C8-cycloalkyl, tri(d-C8alkyl)silyl-C3-C8-cycloalkyl, a C=t-C8-halenoalkyl having 1 to 5 halogen atoms, a C3-C8-halogenocycloalkyl having 1 to 5 halogen atoms, a C2-C8-alkenyl, a C2-C8-cycloalkenyl a C2-C8-alkynyl, a C2-C8-alkenlyoxy, a C8-
alkenlyoxy, a d-C8-alkylamino, a di-d-C8-alkylamino, a d-C8-alkoxy, a d-C8-halenoalkoxy
having 1 to 5 halogen atoms, a d-C8-alkylsulphonyl, a d-C8-halogenoalkylsulphonyl having 1 to 5 halogen atoms, a C2-C8-alkenlyoxy, a C2-C8-halenoalkenyloxyl having 1 to 5 halogen atoms, a
C3-C8-alkenyloxyl, a C3-C8-halenoalkenyloxyl having 1 to 5 halogen atoms, a C5-C8-
alicylicarbonyl, a Ci-C8-halenoalkylicarbonyl having 1 to 5 halogen atoms, a Ci-C8-
alicylicarbonamyl, a di-Cs-alkylicarbonamyl, a N-Ci-C8-alkylxycarbonamyl, a Ci-C8-
halenoalkylicarbonamyl having 1 to 5 halogen atoms, a Ci-Cs-alkylicarbonoxy, a Ci-C8-
halenoalkylicarbonoxy having 1 to 5 halogen atoms, a Ci-Cs-alkylicarbonylamino, a Ci-C8-
halenoalkylicarbonylamino having 1 to 5 halogen atoms, substituted or non-substituted Ci-C8-
halenoalkylicarbonylamino, substituted or non-substituted Ci-C8-halenoalkoxy\ncarbonylamino having 1 to 5 halogen atoms, a Ci-C8-alkylicarbononycarbono, a di-Ci-C8-alkylicarbononycarbono, a Ci-C8-
halenoalkylicarbonoxygen, a Ci-C8-alkylsulphonyl, a Ci-C8-halenoalkylsulphonyl having 1 to 5 halogen atoms, a Ci-C8-alkylsulphonyl, a Ci-C8-halenoalkylsulphonyl having 1 to 5 halogen atoms, a Ci-
C8-alkylaminosulfamoyl, a di-Ci-C8-alkylaminosulfamoyl, a (d-C8-alkoxyimino)-Ci-C8-alkyl, a (Ci-
C8-alkenxyloxyimino)-Ci-C8-alkyl, a (d-C8-alkenxyloxyimino)-Ci-C8-alkyl, (benzoxylimino)-Ci-C8-
alkyl, Ci-C8-alkoxyalkyl, Ci-C8-halenoalkoxyalkyl having 1 to 5 halogen atoms, aryl, heterocycl,
benzyl, benzylsulphonyl, benzylamino, phenoxy, phenylsulphonyl or phénylamin;
• the term "aryl" means phenyl or naphthyl;
• The term "heterocyclil" means saturated or unsaturated A, 5-, 6- or 7-membered ring comprising
up to 4 heteroatoms selected in the list consisting of N, O, S.

Preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein Y1, Y2, Y3
and Y4 independently represent a hydrogen atom, a halogen atom, a cyano group, a substituted or non-
substituted carbaldehyde O-(Ci-C8-alkyl)oxime, substituted or non-substituted Ci-C8-alkyl, substituted or
non-substituted \( \text{Ci-C}_8^\text{-halogenoalkyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{Ci-C}_8^\text{-alkoxy} \), substituted or non-substituted \( \text{Ci-C}_8^\text{-halogenoalkoxy} \) having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted aryl.

More preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( Y^1, Y^2, Y^3 \) and \( Y^4 \) independently represent a hydrogen atom, a halogen atom, substituted or non-substituted \( \text{Ci-C}_8^\text{-alkyl} \), substituted or non-substituted \( \text{Ci-C}_8^\text{-halogenoalkyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{Ci-C}_8^\text{-alkoxy} \).

Even more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( Y^1, Y^2, Y^3 \) and \( Y^4 \) independently represent a hydrogen atom or a fluorine atom.

Other preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( n \) represents 1.

Other preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( R^1 \) and \( R^2 \) independently represent a hydrogen atom, a halogen atom, substituted or non-substituted \( \text{C}_1^\text{-C}_8^\text{-alkyl} \).

More preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( R^1 \) and \( R^2 \) independently represent a hydrogen atom.

Preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( T \) represents a substituted or non-substituted heterocyclyl group that is selected in the list consisting of \( T^{27} \) to \( T^{32} \).

More preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( T \) represents a substituted or non-substituted heterocyclyl group that is selected in the list consisting of \( T^{31} \) to \( T^{32} \).

Even more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( T \) represents \( T^{31} \).

Preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( X^1 \) to \( X^4 \) independently represent a hydrogen atom, a halogen atom, a substituted or non-substituted carbaldehyde \( \text{O-(Ci-C}_8^\text{-alkyl}) \text{oxime} \), substituted or non-substituted \( \text{Ci-C}_8^\text{-alkyl} \), substituted or non-substituted \( \text{C}_2^\text{-C}_8^\text{-cycloalkyl} \), substituted or non-substituted \( \text{Ci-C}_8^\text{-halogenoalkyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{Ci-C}_8^\text{-halogenocycloalkyl} \) having 1 to 5 halogen atoms, a \( \text{C}_2^\text{-C}_8^\text{-alkenyl} \), substituted or non-substituted \( \text{C}_2^\text{-C}_8^\text{-alkynyl} \), substituted or non-substituted \( \text{Ci-C}_8^\text{-alkoxy} \), substituted or non-substituted \( \text{Ci-C}_8^\text{-halogenoalkoxy} \) having 1 to 5 halogen atoms.

More preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein \( X^1 \) to \( X^4 \) independently represent a hydrogen atom, a halogen atom, substituted or non-substituted \( \text{Ci-C}_8^\text{-alkyl} \).
Even more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein X₁ to X⁴ independently represent a methyl group.

Preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein W¹ represents a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted Ci-C₈-alkyl, substituted or non-substituted C₃-C₆-cycloalkyl, substituted or non-substituted Ci-C₈-halogenoalkyl having 1 to 5 halogen atoms, a C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted d-C₈-alkoxy, substituted or non-substituted d-C₈-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted aryl, substituted or non-substituted aryl-[Ci-C₈]-alkyl.

Other more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein W¹ represents a hydrogen atom, a halogen atom, methyl, ethyl, isopropyl, isobutyl, tertbutyl, trifluoromethyl, difluoromethyl, allyl, ethynyl, propargyl, cyclopropyl, methoxy, trifluoromethoxy and cyano.

Other preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein A is selected in the list consisting of A¹ to A₆.

Other more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein A is selected in the list consisting of A², A₆, A₈, A¹¹ to A¹₈.

Other preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein Z¹ represents a hydrogen atom, a halogen atom, an amino group, a formylamino group, substituted or non-substituted Ci-C₈-alkoxyamino group, substituted or non-substituted N-Ci-C₈-alkyl-(Ci-C₈-alkoxy)-amino group, substituted or non-substituted Ci-C₈-alkyl, a C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted d-C₈-alkylamino, substituted or non-substituted (d-C₈-alkoxy-alkylamino, substituted or non-substituted (C₃-C₆-cycloalkoxy carbonyl)amino, substituted or non-substituted (C₂-C₈-alkenyloxy carbonyl)amino, substituted or non-substituted (C₂-C₆-alkynyloxy carbonyl)amino, substituted or non-substituted C₂-C₈-alkylcarbonyl, substituted or non-substituted d-Cs-alkylcarbonyl amino, substituted or non-substituted d-Cs-halogenoalkyl carbonyl amino having 1 to 5 halogen atoms, substituted or non-substituted C₆-C₈-alkyl carbamoyle, substituted or non-substituted d-C₈-alkylthioylamino, substituted or non-substituted (d-C₈-alkoxythiocarbonyl)amino, substituted or non-substituted C₂-C₈-halogenoalkylthioylamino having 1 to 5 halogen atoms, substituted or non-substituted benzylamino, substituted or non-substituted phenylamino, substituted or non-substituted (arylcarbonyl)amino, substituted or non-substituted (heterocyclylcarbonyl)amino, substituted or non-substituted (aryloxy carbonyl)amino, substituted or non-substituted (heterocyclyloxy carbonyl)amino.

Other more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein Z¹ represents an amino group, a formylamino group, a C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted d-C₈-alkylamino, substituted or non-substituted d-C₈-alkoxyamino, substituted or non-substituted Ci-C₈-alkyl, substituted or non-substituted Ci-C₈-alkenyl, substituted or non-substituted Ci-C₈-alkynyl, substituted or non-substituted d-C₈-alkoxy, substituted or non-substituted d-C₈-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted aryl, substituted or non-substituted aryl-[Ci-C₈]-alkyl.

Other more preferred compounds of formula (I) and (Ia) to (Ic) according to the invention are those wherein W¹ represents a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted Ci-C₈-alkyl, substituted or non-substituted C₃-C₆-cycloalkyl, substituted or non-substituted Ci-C₈-halogenoalkyl having 1 to 5 halogen atoms, a C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted d-C₈-alkoxy, substituted or non-substituted d-C₈-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted aryl, substituted or non-substituted aryl-[Ci-C₈]-alkyl.
(Ci-C₈-alkoxycarbonyl)annino, substituted or non-substituted (C₃-C₈-cycloalkoxycarbonyl)annino, substituted or non-substituted (C₉-C₁₈-alkenylxycarbonyl)annino, substituted or non-substituted (C₉-C₁₈-alkynylxycarbonyl)amino, substituted or non-substituted d-Cs-alkylcarbonylannino, substituted or non-substituted (arylcarbonyl)amino, substituted or non-substituted (heterocycloxyxycarbonyl)amino, substituted or non-substituted (aryloxycarbonyl)amino, substituted or non-substituted (heterocycloxyxycarbonyl)amino.

Other preferred compounds of formula (I) and (la) to (lc) according to the invention are those wherein Z² to Z⁹ independently represent a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted d-C₈-alkyld, substituted or non-substituted C₉-C₁₈-cycloalkyl, substituted or non-substituted C₈-halogenoalkyl having 1 to 5 halogen atoms, a C₉-C₁₈-alkenyl, substituted or non-substituted C₉-C₁₈-alkynyl, substituted or non-substituted d-C₉-alkoxy, substituted or non-substituted d-C₉-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted aryl, substituted or non-substituted aryl-[d-C₈]-alkyld.

Other more preferred compounds of formula (I) and (la) to (lc) according to the invention are those wherein Z² to Z⁹ are independently selected in the list consisting of hydrogen, halogen, methyl, ethyl, isopropyl, isobutyl, tertbutyl, trifluoromethyl, difluoromethyl, allyl, ethynyl, propargyl, cyclopropyl, methoxy, trifluoromethoxy, acetyl, and cyano.

Other preferred compounds of formula (I) and (la) to (lc) according to the invention are those wherein K¹ and K² are independently selected in the list consisting of hydrogen, methyl, ethyl, isopropyl, isobutyl, tertbutyl, allyl, propargyl, cyclopropyl, acetyl, trifluoroacetyl and mesyl.

Preferred compounds of formula (la) to (lc) according to the invention are those wherein Y⁵ to Y⁸ independently represent a hydrogen atom, a halogen atom, substituted or non-substituted Ci-C₈-alkyl.

More preferred compounds of formula (la) to (lc) according to the invention are those wherein Y⁵ to Y⁸ independently represent a hydrogen atom or a fluorine atom.

The above mentioned preferences with regard to the substituents of the of formula (I) and (la) to (lc) according to the invention can be combined in various manners. These combinations of preferred features thus provide sub-classes of compounds according to the invention. Examples of such sub-classes of preferred compounds according to the invention can combine:

- preferred features of A with preferred features of one or more of T, Q¹, Q², Y¹, Y², R¹, R² and n;
- preferred features of T with preferred features of one or more of A, Q¹, Q², Y¹, Y², R¹, R² and n;
- preferred features Q¹ with preferred features of one or more of A, T, Q², Y¹, Y², R¹, R² and n;
- preferred features Q² with preferred features of one or more of A, T, Q¹, Y¹, Y², R¹, R² and n;
- preferred features Y¹ with preferred features of one or more of A, T, Q¹, Q², Y², R¹, R² and n;
- preferred features Y² with preferred features of one or more of A, T, Q¹, Q², Y¹, R¹, R² and n;
- preferred features R¹ with preferred features of one or more of A, T, Q¹, Q², Y¹, Y², R² and n;
preferred features $R^2$ with preferred features of one or more of $A$, $T$, $Q^1$, $Q^2$, $Y^1$, $Y^2$, $R^1$ and $n$;
preferred features $n$ with preferred features of one or more of $A$, $T$, $Q^1$, $Q^2$, $Y^1$, $Y^2$, $R^1$ and $R^2$.

In these combinations of preferred features of the substituents of the compounds according to the invention, the said preferred features can also be selected among the more preferred features of each of $A$, $T$, $Q^1$, $Q^2$, $Y^1$, $Y^2$, $R^1$, $R^2$ and $n$; so as to form most preferred subclasses of compounds according to the invention.

The preferred features of the other substituents of the compounds according to the invention can also be part of such sub-classes of preferred compounds according to the invention, notably the groups of substituents $X^1$ to $X^4$, $Z^1$ to $Z^2$, $K^1$, $K^2$, $G^1$, $G^2$, $Y^3$ to $Y^8$ and $W^1$.

The present invention also relates to a process for the preparation of compounds of formula (I) and (Ia) to (Ic). Thus, according to a further aspect of the present invention, there is a provided a process $P\,1$ for the preparation of compounds of formula (I) and (Ia) to (Ic), as herein-defined, as illustrated by the following reaction schemes.

![Reaction Scheme](image)

wherein $T$, $A$, $Q^1$, $Q^2$, $Y^1$, $Y^2$, $R^1$, $R^2$ and $n$ are as herein-defined and LG represents a leaving group. Suitable leaving groups can be selected in the list consisting of a halogen atom or other customary nucleofugal groups such as triflate, mesylate, or tosylate.

In a further aspect, the present invention also relates to a fungicide composition comprising an effective and non-phytotoxic amount of an active compound of formula (I).

The expression "effective and non-phytotoxic amount" means an amount of composition according to the invention which is sufficient to control or destroy the fungi present or liable to appear on the crops and which does not entail any appreciable symptom of phytotoxicity for the said crops. Such an amount can vary within a wide range depending on the fungus to be controlled, the type of crop, the climatic conditions and the compounds included in the fungicide composition according to the invention. This amount can be determined by systematic field trials, which are within the capabilities of a person skilled in the art.
Thus, according to the invention, there is provided a fungicide composition comprising, as an active ingredient, an effective amount of a compound of formula (I) as herein defined and an agriculturally acceptable support, carrier or filler.

According to the invention, the term "support" denotes a natural or synthetic organic or inorganic compound with which the active compound of formula (I) is combined or associated to make it easier to apply, notably to the parts of the plant. This support is thus generally inert and should be agriculturally acceptable. The support can be a solid or a liquid. Examples of suitable supports include clays, natural or synthetic silicates, silica, resins, waxes, solid fertilisers, water, alcohols, in particular butanol organic solvents, mineral and plant oils and derivatives thereof. Mixtures of such supports can also be used.

The composition according to the invention can also comprise additional components. In particular, the composition can further comprise a surfactant. The surfactant can be an emulsifier, a dispersing agent or a wetting agent of ionic or non-ionic type or a mixture of such surfactants. Mention can be made, for example, of polyacrylic acid salts, lignosulphonic acid salts, phenolsulphonic or naphthalenesulphonic acid salts, polycondensates of ethylene oxide with fatty alcohols or with fatty acids or with fatty amines, substituted phenols (in particular alkylphenols or arylphenols), salts of sulphosuccinic acid esters, taurine derivatives (in particular alkyl taurates), phosphoric esters of polyoxyethylated alcohols or phenols, fatty acid esters of polyols and derivatives of the above compounds containing sulphate, sulphonate and phosphate functions. The presence of at least one surfactant is generally essential if the active compound and/or the inert support are water-insoluble and if the vector agent for the application is water. Preferably, surfactant content can be comprised from 5% to 40% by weight of the composition.

Optionally, additional components can also be included, e.g. protective colloids, adhesives, thickeners, thixotropic agents, penetration agents, stabilisers, sequestering agents. More generally, the active compounds can be combined with any solid or liquid additive, which complies with the usual formulation techniques.

In general, the composition according to the invention can contain from 0.05 to 99% by weight of active compound, preferably 10 to 70% by weight.

Compositions according to the invention can be used in various forms such as aerosol dispenser, capsule suspension, cold fogging concentrate, dustable powder, emulsifiable concentrate, emulsion oil in water, emulsion water in oil, encapsulated granule, fine granule, flowable concentrate for seed treatment, gas (under pressure), gas generating product, granule, hot fogging concentrate, macrogranule, microgranule, oil dispersible powder, oil miscible flowable concentrate, oil miscible liquid, paste, plant rodlet, powder for dry seed treatment, seed coated with a pesticide, soluble concentrate, soluble powder, solution for seed treatment, suspension concentrate (flowable concentrate), ultra low volume (ULV) liquid, ultra low volume
(ULV) suspension, water dispersible granules or tablets, water dispersible powder for slurry treatment, water soluble granules or tablets, water solubler powder for seed treatment and wettable powder. These compositions include not only compositions which are ready to be applied to the plant or seed to be treated by means of a suitable device, such as a spraying or dusting device, but also concentrated commercial compositions which must be diluted before application to the crop.

The compounds according to the invention can also be mixed with one or more insecticide, fungicide, bactericide, attractant, acaricide or pheromone active substance or other compounds with biological activity. The mixtures thus obtained have a broadened spectrum of activity. The mixtures with other fungicide compounds are particularly advantageous. The composition according to the invention comprising a mixture of a compound of formula (I) with a bactericide compound can also be particularly advantageous.

Examples of suitable fungicide mixing partners can be selected in the following lists:

(1) Inhibitors of the ergosterol biosynthesis, for example (1.1) aldimorph (1704-28-5), (1.2) azaconazole (60207-31-0), (1.3) bitertanol (55179-31-2), (1.4) bromuconazole (116255-48-2), (1.5) cyproconazole (113096-99-4), (1.6) diclobutrazole (75736-33-3), (1.7) difenoconazole (119446-68-3), (1.8) diniconazole (83657-24-3), (1.9) diniconazole-M (83657-18-5), (1.10) dodemorph (1593-77-7), (1.11) dodemorph acetate (31717-87-0), (1.12) epoxiconazole (106325-08-0), (1.13) etaconazole (60207-93-4), (1.14) fenarimol (60168-88-9), (1.15) fenbuconazole (114369-43-6), (1.16) fenhexamid (126833-17-8), (1.17) fenpropidin (67306-00-7), (1.18) fenpropimorph (67306-03-0), (1.19) fludioxonil (136426-54-5), (1.20) flurprimidol (56425-91-3), (1.21) flusilazole (85509-19-9), (1.22) flutriafol (76674-21-0), (1.23) furconazole (112839-33-5), (1.24) furconazole-cis (112839-32-4), (1.25) hexaconazole (79983-71-4), (1.26) imazalil (60534-80-7), (1.27) imazalil sulfate (58594-72-2), (1.28) imibenconazole (86598-92-7), (1.29) ipconazole (125225-28-7), (1.30) metconazole (125116-23-6), (1.31) myclobutanil (88671-89-0), (1.32) naftifine (65472-88-0), (1.33) nuarimol (63284-71-9), (1.34) o xoconazole (174212-12-5), (1.35) paclobutrazol (76738-62-0), (1.36) pefurazoate (101903-30-4), (1.37) penconazole (66246-88-6), (1.38) piperalin (3478-94-2), (1.39) prochloraz (67747-09-5), (1.40) propiconazole (60207-90-1), (1.41) prothioconazole (178928-70-6), (1.42) pyributicarb (88678-67-5), (1.43) pyrifloxin (88283-41-4), (1.44) quinconazole (103970-75-8), (1.45) simeconazole (149508-90-7), (1.46) spiroxamine (18134-30-8), (1.47) tebuconazole (107534-96-3), (1.48) terbinafine (91161-71-6), (1.49) tetraconazole (12281-77-3), (1.50) triadimefon (43121-43-3), (1.51) triadimenol (89482-17-7), (1.52) tridemorph (81412-43-3), (1.53) triflumizole (86894-11-1), (1.54) triforine (26644-46-2), (1.55) triticonazole (131983-72-7), (1.56) uniconazole (83657-22-1), (1.57) uniconazole-p (83657-17-4), (1.58) viniconazole (77174-66-4), (1.59) voriconazole (137234-62-9), (1.60) i^-chlorophenyl^,+OH+i^-triazol-i^-yCy cloheptanone (129586-32-9), (1.61) methyl 1-(2,2-dimethyl-2,3-dihydro-lH-inden-1-yl)-1H-imidazole-5-carboxylate (10323-95-0), (1.62) N^-[5-(difluoromethyl)-2-methyl-4-[3-(trimethylsilyl)propoxy]phenyl]-N'-eth yl-N-methyllimidoformamide, (1.63) N-ethyl-N-methyl-N'-(2-methyl-5-(trifluoromethyl)-4-[3-
(2) inhibitors of the respiratory chain at complex I or II, for example (2.1) bixafen (581809-46-3), (2.2) boscalid (188425-85-6), (2.3) carboxin (5234-68-4), (2.4) diflumetorm (130339-07-0), (2.5) fenfuram (24691-80-3), (2.6) fluopyram (658066-35-4), (2.7) flutolanil (66332-96-5), (2.8) fluapyroxad (907204-31-3), (2.9) furametpyr (123572-88-3), (2.10) furmecyclox (60568-05-0), (2.11) isopyrazam (mixture of syn-epimeric racemate 1RS,4SR,9RS and anti-epimeric racemate 1RS,4SR,9SR) (881685-58-1), (2.12) isopyrazam (anti-epimeric racemate 1RS,4SR,9SR), (2.13) isopyrazam (anti-epimeric enantiomer 1R,4S,9S), (2.14) isopyrazam (anti-epimeric enantiomer 1S,4R,9R), (2.15) isopyrazam (syn epimeric racemate 1RS,4SR,9RS), (2.16) isopyrazam (syn-epimeric enantiomer 1R,4S,9R), (2.17) isopyrazam (syn-epimeric enantiomer 1S,4R,9S), (2.18) mepronil (55814-41-0), (2.19) oxycarboxin (5259-88-1), (2.20) penflufen (494793-67-8), (2.21) penthiopyrad (183675-82-3), (2.22) sedaxane (874967-67-6), (2.23) thifluzamide (130000-40-7), (2.24) 1-methyl-N-[2-(1,1,2,2-tetrafluoroethoxy)phenyl]-3-(trifluoromethyl)-1H-pyrazole-4-carboxamide, (2.25) 3-(difluoromethyl)-1-methyl-N-[2-(1,1,2,2-tetrafluoroethoxy)phenyl]-1H-pyrazole-4-carboxamide, (2.26) 3-(difluoromethyl)-N-[4-fluoro-2-(1,2,3,3,hexafluoropropoxy)phenyl]-1-methyl-1H-pyrazole-4-carboxamide, (2.27) N-[1-(2,4-dichlorophenyl)-1-methoxypropan-2-yl]-3-(difluoromethyl)-1-methyl-1H-pyrazole-4-carboxamide (1092400-95-7) (WO 2008148570) and salts thereof.


(4) Inhibitors of the mitosis and cell division, for example (4.1) benomyl (17804-35-2), (4.2) carbendazim (10605-21-7), (4.3) chlorfenazole (3574-96-7), (4.4) diethofencarb (87130-20-9), (4.5) ethaboxam (162650-77-3), (4.6) fluopicolide (2391 10-15-7), (4.7) fuberidazole (3878-19-1), (4.8) pencurion (66063-05-6), (4.9) thiabendazole (148-79-8), (4.10) thiophanate-methyl (23564-05-8), (4.11) thiophanate (23564-06-9), (4.12) zoxamide (156052-68-5), (4.13) 5-chloro-7-(4-methylpiperidin-1-yl)-6-(2,4,6-trifluorophenyl)[1,2,4]triazolo[1,5-a]pyrimidine (214706-53-3), (4.14) 3-chloro-5-(6-chloropyridin-3-yl)-6-methyl-4-(2,4,6-trifluorophenyl)pyridazine (1002756-87-7) and salts thereof.

(5) Compounds capable to have a multisite action, like for example (5.1) Bordeaux mixture (801-1-63-0), (5.2) captafol (2425-06-1), (5.3) captan (133-06-2) (WO 02/12172), (5.4) chlorothalonil (1897-45-6), (5.5) copper hydroxide (20427-59-2), (5.6) copper naphthenate (1338-02-9), (5.7) copper oxide (1317-39-1), (5.8) copper oxychloride (1332-40-7), (5.9) copper(2+) sulfate (7758-98-7), (5.10) dichlofluanid (1085-98-9), (5.11) dithianon (3347-22-6), (5.12) dodine (2439-10-3), (5.13) dodine free base, (5.14) ferbam (14484-64-1), (5.15) fluorofolpet (719-96-0), (5.16) folpet (133-07-3), (5.17) guazatine (108173-90-6), (5.18) guazatine acetate, (5.19) iminocardin (13516-27-3), (5.20) iminocardin albesilate (169202-06-6), (5.21) iminocardin triacetate (57520-17-9), (5.22) mancozeb (53988-93-5), (5.23) mancozeb (8018-01-7), (5.24) maneb (12427-38-2), (5.25) metiram (9006-42-2), (5.26) metiram zinc (9006-42-2), (5.27) oxine-copper (10380-28-6), (5.28) propamidine (104-32-5), (5.29) propineb (12071-83-9), (5.30) sulphur and sulphur preparations including calcium polysulphide (7704-34-9), (5.31) thiram (137-26-8), (5.32) tolylfluanid (731-27-1), (5.33) zineb (12122-67-7), (5.34) ziram (137-30-4) and salts thereof.

(6) Compounds capable to induce a host defence, like for example (6.1) acibenzolar-S-methyl (135158-54-2), (6.2) isotonil (224049-04-1), (6.3) probenazole (27605-76-1), (6.4) tiadinil (223580-51-6) and salts thereof.

(7) Inhibitors of the amino acid and/or protein biosynthesis, for example , (7.1) andoprim (23951-85-1), (7.2) blasticidin-S (2079-00-7), (7.3) cyprodinil (121552-61-2), (7.4) kasugamycin (6980-18-3), (7.5) kasugamycin hydrochloride hydrate (19408-46-9), (7.6) mepanipyrim (110235-47-7), (7.7) pyrimethanil (531 12-28-0) and salts thereof.
(8) Inhibitors of the ATP production, for example (8.1) fentin acetate (900-95-8), (8.2) fentin chloride (639-58-7), (8.3) fentin hydroxide (76-87-9) and (8.4) silthiofam (175217-20-6).

(9) Inhibitors of the cell wall synthesis, for example (9.1) benthiavalicarb (177406-88-7), (9.2) dimethomorph (110488-70-5), (9.3) flumorph (211867-47-9), (9.4) iprovalicarb (140923-17-7), (9.5) mandipropamid (374726-62-2), (9.6) polyoxins (11113-80-7), (9.7) polyoxorim (22976-86-9), (9.8) validamycin A (37248-47-8) and (9.9) valifenalate (283159-94-4; 283159-90-0).

(10) Inhibitors of the lipid and membrane synthesis, for example (10.1) biphenyl (92-52-4), (10.2) chloroneb (2675-77-6), (10.3) dicloran (99-30-9), (10.4) edifenphos (17109-49-8), (10.5) etridiazole (2593-15-9), (10.6) iodocarb (55406-53-6), (10.7) iprobenfos (26087-47-8), (10.8) isoprothiolane (50512-35-1), (10.9) propamocarb (25606-41-1), (10.10) propamocarb hydrochloride (25606-41-1), (10.11) prothiocarb (19622-08-3), (10.12) pyrazoxins (13457-18-6), (10.13) quintozone (82-68-8), (10.14) tecnaezne (117-18-0) and (10.15) tolclofos-methyl (57018-04-9).

(11) Inhibitors of the melanin biosynthesis, for example (11.1) carpropamid (104030-54-8), (11.2) diclocytem (139920-32-4), (11.3) fenoxanil (115852-48-7), (11.4) phthalide (27355-22-2), (11.5) pyroquilon (57369-32-1) and (11.6) tricyclazole (41814-78-2).

(12) Inhibitors of the nucleic acid synthesis, for example (12.1) benalaxyl (71626-1-14), (12.2) benalaxyl-M (kiralaxyl) (98243-83-5), (12.3) bupirimate (41483-43-6), (12.4) clozacylacoon (67932-85-8), (12.5) dimethirimol (5221-53-4), (12.6) ethirimol (23947-60-6), (12.7) furalaxyl (57646-30-7), (12.8) hymexazol (10004-44-1), (12.9) metalaxyl (57837-19-1), (12.10) metalaxyl-M (mefenoxam) (70630-17-0), (12.11) ofurace (58810-48-3), (12.12) oxadixyl (77732-09-3) and (12.13) oxolinic acid (14698-29-4).

(13) Inhibitors of the signal transduction, for example (13.1) chlozolinate (84332-86-5), (13.2) fenpiclonil (74738-17-3), (13.3) fludioxonil (131341-86-1), (13.4) iprodione (36734-19-7), (13.5) procymidone (32809-16-8), (13.6) quinoxyfen (124495-18-7) and (13.7) vinclozolin (50471-44-8).

(14) Compounds capable to act as an uncoupler, like for example (14.1) binapacryl (485-31-4), (14.2) dinocap (131-72-6), (14.3) ferimzone (89269-64-7), (14.4) fluazinam (79622-59-6) and (14.5) meptyldinocap (131-72-6).

(15) Further compounds, like for example (15.1) benthiazole (21564-17-0), (15.2) bethoxazin (163269-30-5), (15.3) capsimycin (70694-08-5), (15.4) carvone (99-49-0), (15.5) chinomethionat (2439-01-2), (15.6) chlazafenone (688046-61-9), (15.7) cufrane (11096-18-7), (15.8) cyflufenamid (180409-60-3), (15.9) cymoxanil (57966-95-7), (15.10) cyprosulfamide (221667-31-8), (15.11) dizomet (533-74-4), (15.12) debacarb (62732-91-6), (15.13) dichlorophen (97-23-4), (15.14) diclomezine (62865-36-5), (15.15)
difenzoquat (49866-87-7), (15.16) difenzoquat methylsulphate (43222-48-6), (15.17) diphenylamine (122-39-4), (15.18) ecomate, (15.19) fenpyrazamine (473798-59-3), (15.20) flumetover (154025-04-4), (15.21) fluoroimide (41205-21-4), (15.22) flusulfamide (106917-52-6), (15.23) flutianil (304900-25-2), (15.24) fosetyl-aluminium (39148-24-8), (15.25) fosetyl-calcium, (15.26) fosetyl-sodium (39148-16-8), (15.27) hexachlorobenzene (118-74-1), (15.28) irumamycin (81604-73-1), (15.29) methasulfocarb (66952-49-6), (15.30) methyl isothiocyanate (556-61-6), (15.31) metrafenone (220899-03-6), (15.32) mildiomycin (67527-71-3), (15.33) natalycin (7681-93-8), (15.34) nickel dimethyldithiocarbamate (15521-65-0), (15.35) nitrothal-isopropyl (10552-74-6), (15.36) octhilinone (26530-20-1), (15.37) oxamocarb (917242-12-7), (15.38) oxyfenthion (34407-87-9), (15.39) pentachlorophenol and salts (87-86-5), (15.40) phenothrin, (15.41) phosphorous acid and its salts (13598-36-2), (15.42) propamocarb-fosetyl, (15.43) propanosine-sodium (88498-02-6), (15.44) proquinazid (189278-12-4), (15.45) pyrrolnitrine (1018-71-9) (EP-A 1 559 320), (15.46) tebuflquin (376645-78-2), (15.47) tecloftalam (76280-91-6), (15.48) tolnofanide (30491-1-98-6), (15.49) triazoxide (72459-58-6), (15.50) trichlamide (70193-21-4), (15.51) zarilamid (84527-51-5), (15.52) 1-(4-[[4-[(5R)-5-phenyl-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-y]piperidin-1-yl]-2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]ethanone (1003319-79-6) (WO 2008013622), (15.53) 1-(4-[[4-[[5S]-5-(2,6-difluorophenyl)-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-y]piperidin-1-yl]-2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]ethanone (1003319-80-9) (WO 2008013622), (15.54) 1-(4-[[4-[[5S]-5-(2,6-difluorophenyl)-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-y]piperidin-1-yl]-2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]ethanone (1003318-67-9) (WO 2008013622), (15.55) 1-(4-methoxyphenox)-3,3-dimethylbutan-2-yl 1H-imidazole-1-carboxylate (111227-17-9), (15.56) 2,3,5,6-tetrachloro-4-(methylsulfonyl)pyridine (13108-52-6), (15.57) 2,3-dibutyl-6-chlorothieno[2,3-d]pyrimidin-4(3H)-one (221451-58-7), (15.58) 2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]-1-(4-[[4-[[5R]-5-phenyl-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-y]piperidin-1-yl]-2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]ethanone (1003318-67-9) (WO 2008013622), (15.59) 2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]-1-(4-[[4-[[5S]-5-phenyl-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-y]piperidin-1-yl]ethanone (1003316-53-7) (WO 2008013622), (15.60) 2-[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]-1-[4-[[4-[[5S]-5-phenyl-4,5-dihydro-1,2-oxazol-3-yl]-1,3-thiazol-2-y]piperidin-1-yl]ethanone (1003316-54-8) (WO 2008013622), (15.61) 2-butoxy-6-iodo-3-propyl-4H-chromen-4-one, (15.62) 2-chloro-5-[2-chloro-1-(2,6-difluoro-4-methoxyphenyl)-4-methyl-1H-imidazol-5-yl]pyridine, (15.63) 2-phenylphenol and salts (90-43-7), (15.64) 3,4,5-trichloropyridine-2,6-dicarbonitrile (17824-85-0), (15.65) 3-[5-(4-chlorophenyl)-2,3-dimethyl-1,2-oxazolidin-3-yl]pyridine, (15.66) 3-chloro-5-(4-chlorophenyl)-4-(2,6-difluorophenyl)-6-methylpyridazine, (15.67) 4-(4-chlorophenyl)-5-(2,6-difluorophenyl)-3,6-dimethylpyridazine, (15.68) 5-amino-1,3,4-thiadiazole-2-thiol, (15.69) 5-chloro-N'-phenyl-N'-(4-phenoxyphenyl) hydrazine-2-sulfonohydrazide (134-31-6), (15.70) 5-methyl-6-octyl[1,2,4]triazolo[1,5-alpyrimidin-7-amine, (15.71) ethyl (2Z)-3-amino-2-cyano-3-phenylprop-2-enoate, (15.72) N-(4-chlorobenzyl)-3-[3-methoxy-(prop-2-yn-1-yloxy)phenyl]propanamide, (15.73) N-[4-chlorophenyl]((cyano)methyl)3-[3-methoxy-(prop-2-yn-1-yloxy)phenyl]propanamide, (15.74) N-[5-bromo-3-chloropyridin-2-yl]methyl]-2,4-dichloropyridine-3-carboxamide, (15.75) N-[1-(5-bromo-3-chloropyridin-2-yl)ethyl]-2,4-dichloropyridine-3-carboxamide, (15.76) N-[1-(5-bromo-3-chloropyridin-2-yl)ethyl]-2-fluoro-4-idopyridine-3-carboxamid
(15.77) N-\{(E)-[(cyclopropylmethoxy)imino][6-(difluoromethoxy)-2,3-difluorophenyl]methyl\}-2-phenylacetamide (221201-92-9), (15.78) N-\{(Z)-[(cyclopropylmethoxy)imino][6-(difluoromethoxy)-2,3-difluorophenyl]methyl\}-2-phenylacetamide (221201-92-9), (15.79) N-methyl-2-\{1-\{[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]acetyl\}piperidin-4-yl\}-N-(1,2,3,4-tetrahydronaphthalen-1-yl)-1,3-thiazole-4-carboxamide (922514-49-6) (WO 2007014290), (15.80) N-methyl-2-\{1-\{[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]acetyl\}piperidin-4-yl\}-N-\{(922514-49-6) pyrazol-1-yl\}acetyl\}piperidin-4-yl\}-N-(1,2,3,4-tetrahydronaphthalen-1-yl)-1,3-thiazole-4-carboxamide (922514-07-6) (WO 2007014290), (15.81) N-methyl-2-\{1-\{[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]acetyl\}piperidin-4-yl\}-N-\{(922514-49-6) pyrazol-1-yl\}acetyl\}piperidin-4-yl\}-N-(1,2,3,4-tetrahydronaphthalen-1-yl)-1,3-thiazole-4-carboxamide (922514-48-5) (WO 2007014290), (15.82) pentyl 6-\{[1-methyl-1H-tetrazol-5-yl](phenyl)methylidene]imino\}oxy]nethyl[pyridin-2-yl]carbannate, (15.83) phenazine-1-carboxylic acid, (15.84) quinolin-8-ol (134-31-6) and (15.85) quinolin-8-ol sulfate (2:1) (134-31-6).

According to another object of the present invention, there is provided a method for controlling the phytopathogenic fungi of plants, crops or seeds, characterized in that an agronomically effective and substantially non-phytotoxic quantity of a fungicide composition according to the invention is applied as seed treatment, foliar application, stem application, drench or drip application (chemigation) to the seed, the plant or to the fruit of the plant or to soil or to inert substrate (e.g. inorganic substrates like sand, rockwool, glasswool; expanded minerals like perlite, vermiculite, zeolite or expanded clay), Pumice, Pyroclastic materials or stuff, synthetic organic substrates (e.g. polyurethane) organic substrates (e.g. peat, composts, tree waste products like coir, wood fibre or chips, tree bark) or to a liquid substrate (e.g. floating hydroponic systems, Nutrient Film Technique, Aeroponics) wherein the plant is growing or wherein it is desired to grow.

The expression "are applied to the plants to be treated" is understood to mean, for the purposes of the present invention, that the fungicide composition which is the subject of the invention can be applied by means of various methods of treatment such as:

- spraying onto the aerial parts of the said plants a liquid comprising one of the said compositions,
- dusting, the incorporation into the soil of granules or powders, spraying, around the said plants and in the case of trees injection or daubing,
- coating or film-coating the seeds of the said plants with the aid of a plant-protection mixture comprising one of the said compositions.

The method according to the invention can either be a curing, preventing or eradicating method.

In this method, a composition used can be prepared beforehand by mixing the two or more active compounds according to the invention.
According to an alternative of such a method, it is also possible to apply simultaneously, successively or separately compounds (A) and (B) so as to have the conjugated (A)/(B) effects, of distinct compositions each containing one of the two or three active ingredients (A) or (B).

The dose of active compound usually applied in the method of treatment according to the invention is generally and advantageously

- for foliar treatments: from 0.1 to 10,000 g/ha, preferably from 10 to 1,000 g/ha, more preferably from 50 to 300 g/ha; in case of drench or drip application, the dose can even be reduced, especially while using inert substrates like rockwool or perlite;
- for seed treatment: from 2 to 200 g per 100 kilogram of seed, preferably from 3 to 150 g per 100 kilogram of seed;
- for soil treatment: from 0.1 to 10,000 g/ha, preferably from 1 to 5,000 g/ha.

The doses herein indicated are given as illustrative Examples of method according to the invention. A person skilled in the art will know how to adapt the application doses, notably according to the nature of the plant or crop to be treated.

Under specific conditions, for example according to the nature of the phytopathogenic fungus to be treated or controlled, a lower dose can offer adequate protection. Certain climatic conditions, resistance or other factors like the nature of the phytopathogenic fungi or the degree of infestation, for example, of the plants with these fungi, can require higher doses of combined active ingredients. The optimum dose usually depends on several factors, for example on the type of phytopathogenic fungus to be treated, on the type or level of development of the infested plant, on the density of vegetation or alternatively on the method of application.

Without it being limiting, the crop treated with the pesticide composition or combination according to the invention is, for example, grapevine, but this could be cereals, vegetables, lucerne, soybean, market garden crops, turf, wood, tree or horticultural plants.

The method of treatment according to the invention can also be useful to treat propagation material such as tubers or rhizomes, but also seeds, seedlings or seedlings pricking out and plants or plants pricking out. This method of treatment can also be useful to treat roots. The method of treatment according to the invention can also be useful to treat the over-ground parts of the plant such as trunks, stems or stalks, leaves, flowers and fruit of the concerned plant.

Among the plants that can be protected by the method according to the invention, mention can be made of cotton; flax; vine; fruit or vegetable crops such as Rosaceae sp. (for instance pip fruit such as apples and pears, but also stone fruit such as apricots, almonds and peaches), Ribesioideae sp., Juglandaceae sp., Betulaceae sp., Anacardiaceae sp., Fagaceae sp., Moraceae sp., Oleaceae sp., Actinidaceae sp.
Lauraceae sp., Musaceae sp. (for instance banana trees and plantains), Rubiaceae sp., Theaceae sp., Sterculiceae sp., Rutaceae sp. (for instance lemons oranges and grapefruit); Solanaceae sp. (for instance tomatoes), ściaceae sp., Asteraceae sp. (for instance lettuces), Umbelliferae sp., Cruciferae sp., Chenopodiaceae sp., Cucurbitaceae sp., Papilionaceae sp. (for instance peas), Rosaceae sp. (for instance strawberries); major crops such as Graminae sp. (for instance maize, lawn or cereals such as wheat, rice, barley and triticale), Asteraceae sp. (for instance sunflower), Cruciferae sp. (for instance colza), Fabaceae sp. (for instance peanuts), Papilionaceae sp. (for instance soybean), Solanaceae sp. (for instance potatoes), Chenopodiaceae sp. (for instance beetroots); horticultural and forest crops; as well as genetically modified homologues of these crops.

The composition according to the invention can also be used against fungal diseases liable to grow on or inside timber. The term "timber" means all types of species of wood and all types of working of this wood intended for construction, for example solid wood, high-density wood, laminated wood and plywood. The method for treating timber according to the invention mainly consists in contacting one or more compounds according to the invention or a composition according to the invention; this includes for example direct application, spraying, dipping, injection or any other suitable means.

Among the diseases of plants or crops that can be controlled by the method according to the invention, mention can be made of:

Powdery mildew diseases such as:
- Blumeria diseases, caused for example by Blumeria graminis;
- Podosphaera diseases, caused for example by Podosphaera leucotricha;
- Sphaerotheca diseases, caused for example by Sphaerotheca fuliginea;
- Uncinula diseases, caused for example by Uncinula necator;

Rust diseases such as:
- Gymnosporangium diseases, caused for example by Gymnosporangium sabinae;
- Hemileia diseases, caused for example by Hemileia vastatrix;
- Phakopsora diseases, caused for example by Phakopsora pachyrhizior Phakopsora meibomiae;
- Puccinia diseases, caused for example by Puccinia recondita;
- Uromyces diseases, caused for example by Uromyces appendiculatus;

Oomycete diseases such as:
- Bremia diseases, caused for example by Bremia lactucae;
- Peronospora diseases, caused for example by Peronospora pisi or P. brassicae;
- Phytophthora diseases, caused for example by Phytophthora infestans;
- Plasmopara diseases, caused for example by Plasmopara viticola;
- Pseudoperonospora diseases, caused for example by Pseudoperonospora humuli or Pseudoperonospora cubensis;
- Pythium diseases, caused for example by Pythium ultimum;
Leafspot, leaf blotch and leaf blight diseases such as:

- Alternaria diseases, caused for example by *Alternaria solani*;
- Cercospora diseases, caused for example by *Cercospora beticola*;
- Cladosporium diseases, caused for example by *Cladosporium cucumerinum*;
- Cochliobolus diseases, caused for example by *Cochliobolus sativus*;
- Colletotrichum diseases, caused for example by *Colletotrichum lindemuthianum*;
- Cycloconium diseases, caused for example by *Cycloconium oleaginum*;
- Diaporthe diseases, caused for example by *Diaporthe citri*;
- Elsinoe diseases, caused for example by *Elsinoe fawcettii*;
- Gloeosporium diseases, caused for example by *Gloeosporium laeticolor*;
- Glomerella diseases, caused for example by *Glomerella cingulata*;
- Guignardella diseases, caused for example by *Guignardia bidwellii*;
- Leptosphaeria diseases, caused for example by *Leptosphaeria maculans*; *Leptosphaeria nodorum*;
- Magnaporthe diseases, caused for example by *Magnaporthe grisea*;
- Mycosphaerella diseases, caused for example by *Mycosphaerella graminicola*; *Mycosphaerella arachidicola*; *Mycosphaerella fijensis*;
- Phaeosphaeria diseases, caused for example by *Phaeosphaeria nodorum*;
- Pyrenophora diseases, caused for example by *Pyrenophora teres*;
- Ramularia diseases, caused for example by *Ramularia collo-cygni*;
- Rhynchosporium diseases, caused for example by *Rhynchosporium secalis*;
- Septoria diseases, caused for example by *Septoria api* or *Septoria lycopersici*;
- Typhula diseases, caused for example by *Typhula incarnata*;
- Venturia diseases, caused for example by *Venturia inaequalis*;

Root and stem diseases such as:

- Corticium diseases, caused for example by *Corticium graminearum*;
- Fusarium diseases, caused for example by *Fusarium oxysporum*;
- Gaummannomyces diseases, caused for example by *Gaummannomyces graminis*;
- Rhizoctonia diseases, caused for example by *Rhizoctonia solani*;
- Tapesia diseases, caused for example by *Tapesia acuformis*;
- Thielaviopsis diseases, caused for example by *Thielaviopsis basicola*;

Ear and panicle diseases such as:

- Alternaria diseases, caused for example by *Alternaria spp.*;
- Aspergillus diseases, caused for example by *Aspergillus flavus*;
- Cladosporium diseases, caused for example by *Cladosporium spp.*;
- Claviceps diseases, caused for example by *Claviceps purpurea*;
- Fusarium diseases, caused for example by *Fusarium culmorum*;
- Gibberella diseases, caused for example by *Gibberella zeae*;
- Monographella diseases, caused for example by *Monographella nivalis*;
Smut and bunt diseases such as:

- Sphacelotheca diseases, caused for example by *Sphacelotheca reiliana*;
- Tilletia diseases, caused for example by *Tilletia caries*;
- Urocystis diseases, caused for example by *Urocystis occulta*;
- Ustilago diseases, caused for example by *Ustilago nuda*;

Fruit rot and mould diseases such as:

- Aspergillus diseases, caused for example by *Aspergillus flavus*;
- Botrytis diseases, caused for example by *Botrytis cinerea*;
- Penicillium diseases, caused for example by *Penicillium expansum*;
- Sclerotinia diseases, caused for example by *Sclerotinia sclerotiorum*;
- Verticillium diseases, caused for example by *Verticillium dahliae*;

Seed and soilborne decay, mould, wilt, rot and damping-off diseases:

- Alternaria diseases, caused for example by *Alternaria brassicicola*;
- Ascochyta diseases, caused for example by *Ascochyta lentis*;
- Aspergillus diseases, caused for example by *Aspergillus flavus*;
- Cladosporium diseases, caused for example by *Cladosporium herbarum*;
- Cochliobolus diseases, caused for example by *Cochliobolus sativus* (Conidiatorm: *Drechslera, Bipolaris* Syn: *Helminthosporium*);
- Colletotrichum diseases, caused for example by *Colletotrichum coccodes*;
- Fusarium diseases, caused for example by *Fusarium culmorum*;
- Gibberella diseases, caused for example by *Gibberella zeae*;
- Macrophomina diseases, caused for example by *Macrophomina phaseolina*;
- Monographella diseases, caused for example by *Monographella nivalis*;
- Penicillium diseases, caused for example by *Penicillium expansum*;
- Phoma diseases, caused for example by *Phoma lingam*;
- Phomopsis diseases, caused for example by *Phomopsis sojae*;
- Phytophthora diseases, caused for example by *Phytophthora cactorum*;
- Pyrenophora diseases, caused for example by *Pyrenophora graminea*;
- Pyricularia diseases, caused for example by *Pyricularia oryzae*;
- Pythium diseases, caused for example by *Pythium ultimum*;
- Rhizoctonia diseases, caused for example by *Rhizoctonia solani*;
- Rhizopus diseases, caused for example by *Rhizopus oryzae*;
- Sclerotium diseases, caused for example by *Sclerotium rolfsii*;
- Septoria diseases, caused for example by *Septoria nodorum*;
- Typhula diseases, caused for example by *Typhula incarnata*;
- Verticillium diseases, caused for example by *Verticillium dahliae*;

Canker, broom and dieback diseases such as:
Nectria diseases, caused for example by *Nectria galligena*;

Blight diseases such as:

Monilinia diseases, caused for example by *Monilinia laxa*;

Leaf blister or leaf curl diseases such as:

Taphrina diseases, caused for example by *Taphrina deformans*;

Decline diseases of wooden plants such as:

Esca diseases, caused for example by *Phaemoniella clamydospora*;

Eutypa dyeback, caused for example by *Eutypa lata*;

Dutch elm disease, caused for example by *Ceratocystis ulmi*;

Diseases of flowers and Seeds such as:

Botrytis diseases, caused for example by *Botrytis cinerea*;

Diseases of tubers such as:

Rhizoctonia diseases, caused for example by *Rhizoctonia solani*;

Helminthosporium diseases, caused for example by *Helminthosporium solani*.

The method of treatment according to the invention can be used in the treatment of genetically modified organisms (GMOs), e.g. plants or seeds. Genetically modified plants (or transgenic plants) are plants in which a heterologous gene has been stably integrated into the genome. The expression "heterologous gene" essentially means a gene which is provided or assembled outside the plant and when introduced in the nuclear, chloroplastic or mitochondrial genome gives the transformed plant new or improved agronomic or other properties by expressing a protein or polypeptide of interest or by downregulating or silencing other gene(s) which are present in the plant (using for example, antisense technology, co suppression technology or RNA interference - RNAi - technology). A heterologous gene that is located in the genome is also called a transgene. A transgene that is defined by its particular location in the plant genome is called a transformation or transgenic event.

Depending on the plant species or plant cultivars, their location and growth conditions (soils, climate, vegetation period, diet), the treatment according to the invention may also result in superadditive ("synergistic") effects. Thus, for example, reduced application rates and/or a widening of the activity spectrum and/or an increase in the activity of the active compounds and compositions which can be used according to the invention, better plant growth, increased tolerance to high or low temperatures, increased tolerance to drought or to water or soil salt content, increased flowering performance, easier harvesting, accelerated maturation, higher harvest yields, bigger fruits, larger plant height, greener leaf color, earlier flowering, higher quality and/or a higher nutritional value of the harvested products, higher sugar concentration within the fruits, better storage stability and/or processability of the harvested products are possible, which exceed the effects which were actually to be expected.
At certain application rates, the active compound combinations according to the invention may also have a strengthening effect in plants. Accordingly, they are also suitable for mobilizing the defense system of the plant against attack by unwanted phytopathogenic fungi and/or microorganisms and/or viruses. This may, if appropriate, be one of the reasons of the enhanced activity of the combinations according to the invention, for example against fungi. Plant-strengthening (resistance-inducing) substances are to be understood as meaning, in the present context, those substances or combinations of substances which are capable of stimulating the defense system of plants in such a way that, when subsequently inoculated with unwanted phytopathogenic fungi and/or microorganisms and/or viruses, the treated plants display a substantial degree of resistance to these unwanted phytopathogenic fungi and/or microorganisms and/or viruses. In the present case, unwanted phytopathogenic fungi and/or microorganisms and/or viruses are to be understood as meaning phytopathogenic fungi, bacteria and viruses. Thus, the substances according to the invention can be employed for protecting plants against attack by the abovementioned pathogens within a certain period of time after the treatment. The period of time within which protection is effected generally extends from 1 to 10 days, preferably 1 to 7 days, after the treatment of the plants with the active compounds.

Plants and plant cultivars which are preferably to be treated according to the invention include all plants which have genetic material which impart particularly advantageous, useful traits to these plants (whether obtained by breeding and/or biotechnological means).

Plants and plant cultivars which are also preferably to be treated according to the invention are resistant against one or more biotic stresses, i.e. said plants show a better defense against animal and microbial pests, such as against nematodes, insects, mites, phytopathogenic fungi, bacteria, viruses and/or viroids.

Plants and plant cultivars which may also be treated according to the invention are those plants which are resistant to one or more abiotic stresses. Abiotic stress conditions may include, for example, drought, cold temperature exposure, heat exposure, osmotic stress, flooding, increased soil salinity, increased mineral exposure, ozon exposure, high light exposure, limited availability of nitrogen nutrients, limited availability of phosphorus nutrients, shade avoidance.

Plants and plant cultivars which may also be treated according to the invention, are those plants characterized by enhanced yield characteristics. Increased yield in said plants can be the result of, for example, improved plant physiology, growth and development, such as water use efficiency, water retention efficiency, improved nitrogen use, enhanced carbon assimilation, improved photosynthesis, increased germination efficiency and accelerated maturation. Yield can furthermore be affected by improved plant architecture (under stress and non-stress conditions), including but not limited to, early flowering, flowering control for hybrid seed production, seedling vigor, plant size, internode number and distance, root growth, seed size, fruit size, pod size, pod or ear number, seed number per pod or ear, seed mass, enhanced seed filling, reduced seed dispersal, reduced pod dehiscence and lodging resistance. Further yield traits include seed composition, such as carbohydrate content, protein content,
oil content and composition, nutritional value, reduction in anti-nutritional compounds, improved processability and better storage stability.

Plants that may be treated according to the invention are hybrid plants that already express the characteristic of heterosis or hybrid vigor which results in generally higher yield, vigor, health and resistance towards biotic and abiotic stress factors. Such plants are typically made by crossing an inbred male-sterile parent line (the female parent) with another inbred male-fertile parent line (the male parent). Hybrid seed is typically harvested from the male sterile plants and sold to growers. Male sterile plants can sometimes (e.g. in corn) be produced by detasseling, i.e. the mechanical removal of the male reproductive organs (or males flowers) but, more typically, male sterility is the result of genetic determinants in the plant genome. In that case, and especially when seed is the desired product to be harvested from the hybrid plants it is typically useful to ensure that male fertility in the hybrid plants is fully restored. This can be accomplished by ensuring that the male parents have appropriate fertility restorer genes which are capable of restoring the male fertility in hybrid plants that contain the genetic determinants responsible for male-sterility. Genetic determinants for male sterility may be located in the cytoplasm. Examples of cytoplasmic male sterility (CMS) were for instance described in Brassica species (WO 1992/005251, WO 1995/009910, WO 1998/27806, WO 2005/002324, WO 2006/021972 and US 6,229,072). However, genetic determinants for male sterility can also be located in the nuclear genome. Male sterile plants can also be obtained by plant biotechnology methods such as genetic engineering. A particularly useful means of obtaining male-sterile plants is described in WO 1989/10396 in which, for example, a ribonuclease such as barnase is selectively expressed in the tapetum cells in the stamens. Fertility can then be restored by expression in the tapetum cells of a ribonuclease inhibitor such as barstar (e.g. WO 1991/002069).

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may be treated according to the invention are herbicide-tolerant plants, i.e. plants made tolerant to one or more given herbicides. Such plants can be obtained either by genetic transformation, or by selection of plants containing a mutation imparting such herbicide tolerance. Herbicide-tolerant plants are for example glyphosate-tolerant plants, i.e. plants made tolerant to the herbicide glyphosate or salts thereof. Plants can be made tolerant to glyphosate through different means. For example, glyphosate-tolerant plants can be obtained by transforming the plant with a gene encoding the enzyme 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS). Examples of such EPSPS genes are the AroA gene (mutant CT7) of the bacterium Salmonella typhimurium (Comai et al., Science (1983), 221, 370-371), the CP4 gene of the bacterium Agrobacterium sp. (Barry et al., Curr. Topics Plant Physiol. (1992), 7, 139-145), the genes encoding a Petunia EPSPS (Shah et al., Science (1986), 233, 478-481), a Tomato EPSPS (Gasser et al., J. Biol. Chem. (1988),263, 4280-4289), or an Eleusine EPSPS (WO 2001/66704). It can also be a mutated EPSPS as described in for example EP-A 0837944, WO 2000/066746, WO 2000/066747 or WO 2002/026995. Glyphosate-tolerant plants can also be obtained by expressing a gene that encodes a glyphosate oxido-reductase enzyme as described in US 5,776,760 and
US 5,463,175. Glyphosate-tolerant plants can also be obtained by expressing a gene that encodes a glyphosate acetyl transferase enzyme as described in for example WO 2002/036782, WO 2003/092360, WO 2005/012515 and WO 2007/024782. Glyphosate-tolerant plants can also be obtained by selecting plants containing naturally-occurring mutations of the above-mentioned genes, as described in for example WO 2001/024615 or WO 2003/013226.

Other herbicide resistant plants are for example plants that are made tolerant to herbicides inhibiting the enzyme glutamine synthase, such as bialaphos, phosphinotricin or glufosinate. Such plants can be obtained by expressing an enzyme detoxifying the herbicide or a mutant glutamine synthase enzyme that is resistant to inhibition. One such efficient detoxifying enzyme is an enzyme encoding a phosphinothricin acetyltransferase (such as the bar or pat protein from Streptomyces species). Plants expressing an exogenous phosphinothricin acetyltransferase are for example described in US 5,561,236; US 5,648,477; US 5,646,024; US 5,273,894; US 5,637,489; US 5,276,268; US 5,739,082; US 5,908,810 and US 7,1 12,665.

Further herbicide-tolerant plants are also plants that are made tolerant to the herbicides inhibiting the enzyme hydroxyphenylpyruvatedioxygenase (HPPD). Hydroxyphenylpyruvatedioxygenases are enzymes that catalyze the reaction in which para-hydroxyphenylpyruvate (HPP) is transformed into homogentisate. Plants tolerant to HPPD-inhibitors can be transformed with a gene encoding a naturally-occurring resistant HPPD enzyme, or a gene encoding a mutated HPPD enzyme as described in WO 1996/038567, WO 1999/024585 and WO 1999/024586. Tolerance to HPPD-inhibitors can also be obtained by transforming plants with genes encoding certain enzymes enabling the formation of homogentisate despite the inhibition of the native HPPD enzyme by the HPPD-inhibitor. Such plants and genes are described in WO 1999/034008 and WO 2002/36787. Tolerance of plants to HPPD inhibitors can also be improved by transforming plants with a gene encoding an enzyme prephenate dehydrogenase in addition to a gene encoding an HPPD-tolerant enzyme, as described in WO 2004/024928.

Still further herbicide resistant plants are plants that are made tolerant to acetolactate synthase (ALS) inhibitors. Known ALS-inhibitors include, for example, sulfonylurea, imidazolinone, triazolopyrimidines, pyrimidinylxoy(thio)benzoates, and/or sulfonylaminocarboxyltriazolinone herbicides. Different mutations in the ALS enzyme (also known as acetohydroxyacid synthase, AHAS) are known to confer tolerance to different herbicides and groups of herbicides, as described for example in Tranel and Wright, Weed Science (2002), 50, 700-712, but also, in US 5,605,01 1, US 5,378,824, US 5,141,870, and US 5,013,659. The production of sulfonylurea-tolerant plants and imidazolinone-tolerant plants is described in US 5,605,01 1; US 5,013,659; US 5,141,870; US 5,767,361; US 5,731,180; US 5,304,732; US 4,761,373; US 5,331,107; US 5,928,937; and US 5,378,824; and international publication WO 1996/033270. Other imidazolinone-tolerant plants are also described in for example WO 2004/040012, WO 2004/106529, WO 2005/02673, WO 2005/093093, WO 2006/007373, WO 2006/015376, WO 2006/024351, and WO 2006/060634. Further sulfonylurea- and imidazolinone-tolerant plants are also described in for example WO 2007/024782.
Other plants tolerant to imidazolinone and/or sulfonylurea can be obtained by induced mutagenesis, selection in cell cultures in the presence of the herbicide or mutation breeding as described for example for soybeans in US 5,084,082, for rice in WO 1997/41218, for sugar beet in US 5,773,702 and WO 1999/057965, for lettuce in US 5,198,599, or for sunflower in WO 2001/065922.

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are insect-resistant transgenic plants, i.e. plants made resistant to attack by certain target insects. Such plants can be obtained by genetic transformation, or by selection of plants containing a mutation imparting such insect resistance.

An "insect-resistant transgenic plant", as used herein, includes any plant containing at least one transgene comprising a coding sequence encoding:

1) an insecticidal crystal protein from *Bacillus thuringiensis* or an insecticidal portion thereof, such as the insecticidal crystal proteins listed by Crickmore et al., Microbiology and Molecular Biology Reviews (1998), 62, 807-813, updated by Crickmore et al. (2005) at the *Bacillus thuringiensis* toxin nomenclature, online at: http://www.lifesci.sussex.ac.uk/Home/Neil_Crickmore/Bt/, or insecticidal portions thereof, e.g., proteins of the Cry protein classes Cry1Ab, Cry1Ac, Cry1F, Cry2Ab, Cry3Aa, or Cry3Bb or insecticidal portions thereof; or

2) a crystal protein from *Bacillus thuringiensis* or a portion thereof which is insecticidal in the presence of a second other crystal protein from *Bacillus thuringiensis* or a portion thereof, such as the binary toxin made up of the Cry34 and Cry35 crystal proteins (Moellenbeck et al., Nat. Biotechnol. (2001), 19, 668-72; Schnepf et al., Applied Environm. Microbiol. (2006), 71, 1765-1774); or

3) a hybrid insecticidal protein comprising parts of different insecticidal crystal proteins from *Bacillus thuringiensis*, such as a hybrid of the proteins of 1) above or a hybrid of the proteins of 2) above, e.g., the Cry1A.105 protein produced by corn event MON98034 (WO 2007/027777); or

4) a protein of any one of 1) to 3) above wherein some, particularly 1 to 10, amino acids have been replaced by another amino acid to obtain a higher insecticidal activity to a target insect species, and/or to expand the range of target insect species affected, and/or because of changes introduced into the encoding DNA during cloning or transformation, such as the Cry3Bb1 protein in corn events MON863 or MON88017, or the Cry3A protein in corn event MIR604;

5) an insecticidal secreted protein from *Bacillus thuringiensis* or *Bacillus cereus*, or an insecticidal portion thereof, such as the vegetative insecticidal (VIP) proteins listed at: http://www.lifesci.sussex.ac.uk/home/Neil_Crickmore/Bt/vip.html, e.g., proteins from the VIP3Aa protein class; or

6) a secreted protein from *Bacillus thuringiensis* or *Bacillus cereus* which is insecticidal in the presence of a second secreted protein from *Bacillus thuringiensis* or *B. cereus*, such as the binary toxin made up of the VIP1A and VIP2A proteins (WO 1994/21795); or
7) a hybrid insecticidal protein comprising parts from different secreted proteins from *Bacillus thuringiensis* or *Bacillus cereus*, such as a hybrid of the proteins in 1) above or a hybrid of the proteins in 2) above; or
8) a protein of any one of 1) to 3) above wherein some, particularly 1 to 10, amino acids have been replaced by another amino acid to obtain a higher insecticidal activity to a target insect species, and/or to expand the range of target insect species affected, and/or because of changes introduced into the encoding DNA during cloning or transformation (while still encoding an insecticidal protein), such as the VIP3Aa protein in cotton event COT102.

Of course, an insect-resistant transgenic plant, as used herein, also includes any plant comprising a combination of genes encoding the proteins of any one of the above classes 1 to 8. In one embodiment, an insect-resistant plant contains more than one transgene encoding a protein of any one of the above classes 1 to 8, to expand the range of target insect species affected when using different proteins directed at different target insect species, or to delay insect resistance development to the plants by using different proteins insecticidal to the same target insect species but having a different mode of action, such as binding to different receptor binding sites in the insect.

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are tolerant to abiotic stresses. Such plants can be obtained by genetic transformation, or by selection of plants containing a mutation imparting such stress resistance. Particularly useful stress tolerance plants include:

a. plants which contain a transgene capable of reducing the expression and/or the activity of poly(ADP-ribose)polymerase (PARP) gene in the plant cells or plants as described in WO 2000/004173 or WO2006/045633 or PCT/EP07/004142.

b. plants which contain a stress tolerance enhancing transgene capable of reducing the expression and/or the activity of the PARG encoding genes of the plants or plants cells, as described e.g. in WO 2004/090140.

c. plants which contain a stress tolerance enhancing transgene coding for a plant-functional enzyme of the nicotinamide adenine dinucleotide salvage synthesis pathway including nicotinamidase, nicotinate phosphoribosyltransferase, nicotinic acid mononucleotide adenyl transferase, nicotinamide adenine dinucleotide synthetase or nicotine amide phosphoribosyltransferase as described e.g. in WO2006/032469 or WO 2006/133827 or PCT/EP07/002433.

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention show altered quantity, quality and/or storage-stability of the
harvested product and/or altered properties of specific ingredients of the harvested product such as:


Plants or plant cultivars (that can be obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are plants, such as cotton plants, with altered fiber characteristics. Such plants can be obtained by genetic transformation, or by selection of plants contain a mutation imparting such altered fiber characteristics and include:
a) Plants, such as cotton plants, containing an altered form of cellulose synthase genes as described in WO 1998/000549
b) Plants, such as cotton plants, containing an altered form of rsw2 or rsw3 homologous nucleic acids as described in WO2004/053219
c) Plants, such as cotton plants, with increased expression of sucrose phosphate synthase as described in WO 2001/017333
d) Plants, such as cotton plants, with increased expression of sucrose synthase as described in WO02/45485
e) Plants, such as cotton plants, wherein the timing of the plasmodesmatal gating at the basis of the fiber cell is altered, e.g. through down regulation of fiberselective β 1,3-glucanase as described in WO2005/017157
f) Plants, such as cotton plants, having fibers with altered reactivity, e.g. through the expression of N-acteylglucosaminetransferase gene including nodC and chitinsynthase genes as described in WO2006/136351

Plants or plant cultivars (that can be obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are plants, such as oilseed rape or related Brassica plants, with altered oil profile characteristics. Such plants can be obtained by genetic transformation or by selection of plants contain a mutation imparting such altered oil characteristics and include:

a) Plants, such as oilseed rape plants, producing oil having a high oleic acid content as described e.g. in US 5,969,169, US 5,840,946 or US 6,323,392 or US 6,063,947
b) Plants such as oilseed rape plants, producing oil having a low linolenic acid content as described in US 6,270828, US 6,169,190 or US 5,965,755
c) Plant such as oilseed rape plants, producing oil having a low level of saturated fatty acids as described e.g. in US 5,434,283

Particularly useful transgenic plants which may be treated according to the invention are plants which comprise one or more genes which encode one or more toxins, such as the following which are sold under the trade names YIELD GARD® (for example maize, cotton, soya beans), KnockOut® (for example maize), BiteGard® (for example maize), Bt-Xtra® (for example maize), StarLink® (for example maize), Boligard® (cotton), Nucotn® (cotton), Nucotn 33B®(cotton), NatureGard® (for example maize), Protecta® and NewLeaf® (potato). Examples of herbicide-tolerant plants which may be mentioned are maize varieties, cotton varieties and soya bean varieties which are sold under the trade names Roundup Ready® (tolerance to glyphosate, for example maize, cotton, soya bean), Liberty Link® (tolerance to phosphinotricin, for example oilseed rape), IMI® (tolerance to imidazolinones) and STS® (tolerance to sulphonylureas, for example maize). Herbicide-resistant plants (plants bred in a conventional manner for
herbicide tolerance) which may be mentioned include the varieties sold under the name Clearfield® (for example maize).

Particularly useful transgenic plants which may be treated according to the invention are plants containing transformation events, or combination of transformation events, that are listed for example in the databases from various national or regional regulatory agencies (see for example http://gmoinfo.jrc.it/gmp_browse.aspx and http://www.agbios.com/dbase.php).

The compounds according to the invention can also be used for the preparation of composition useful to curatively or preventively treat human or animal fungal diseases such as, for example, mycoses, dermatoses, trichophyton diseases and candidiases or diseases caused by Aspergillus spp., for example Aspergillus fumigatus.

Preparation Examples

Synthesis of butyl [4-([(1-(1-methyl-1H-tetrazol-5-yl)-2-naphthyl]oxy)methyl)-1,3-thiazol-2-yl]carbamate (ex. 21)
To a solution of 144mg (0.49mmol) of 4-[(1-(1-methyl-1H-tetrazol-5-yl)-2-naphthyl]oxy)methyl)-1,3-thiazol-2-amine (prepared as described in JP2005-41793) in 10ml of dioxane, were added 52mg (0.66mmol) of pyridine and 5.4mg (0.04mmol) of 4-dimethylaminopyridine, followed by 120mg (0.8mmol) of butyl chloroformate. The resulting reaction mixture was stirred at room temperature overnight. To the reaction mixture was added 30ml of an aqueous solution of sodium hydrogen carbonate (10g/L), and the resulting mixture was extracted with 50ml of ethyl acetate. The organic phase was dried and solvent evaporated to give the crude product which was purified on silica to give 95mg of the expected butyl [4-([(1-(1-methyl-1H-tetrazol-5-yl)-2-naphthyl]oxy)methyl]-1,3-thiazol-2-yl]carbamate.

Synthesis of 5-{2-[2-(hept-1-yn-1-yl)-1,3-thiazol-4-yl]methoxy]-1-naphthyl]-1-methyl-1H-tetrazole (ex. 7)

Step 1: synthesis of 5-{2-[2-(bromo-1,3-thiazol-4-yl) methoxy]-1-naphthyl]-1-methyl-1H-tetrazole
A mixture of 1.13g (4.4mmol) of 1-(1-methyl-1H-tetrazol-5-yl)-2-naphthol (prepared as described in JP2005-41793) and 1.00gr (4.4mmol) of 2-bromo-4-(bromomethyl)-1,3-thiaole in 10 ml of acetonitrile was stirred at room temperature overnight. The reaction mixture was diluted with 30ml of water, and then extracted with ethyl acetate. The organic phase was dried and solvent evaporated to give the expected product synthesis of 5-{2-[2-(bromo-1,3-thiazol-4-yl) methoxy]-1-naphthyl]-1-methyl-1H-tetrazole.

Step 2:
To 5ml of tetrahydrofuran were added 3.5mg (0.01 mmol) of copper iodide, 143mg (1.49 mmol) of heptyne, 150mg (0.37 mmol) of 5-{2-[(2-bromo-1,3-thiazol-4-yl) methoxy]-1-naphthyl}-1-methyl-1H-tetrazole (as obtained in step 1), 193mg (1.49 mmol) of N,N-diisopropylethylamine and 21.6mg (0.1 mmol) of tetrakis(triphenylphosphine)palladium(0) in a sealed tube under argon atmosphere. The reaction mixture was left to stand at room temperature overnight. Filtration on chemelut, and solvent evaporation of the filtrate were performed before the product was purified with HPLC.


To a solution of 196mg (0.59 mmol) of 6-[[1-(1-methyl-1H-tetrazol-5-yl)-2-naphthyl]oxy]methyl]pyridin-2-amine (prepared as described in JP2005-41793) in 10ml of dioxane, were added 70mg (0.88 mmol) of pyridine and 7.2mg (0.05 mmol) of 4-dimethylaminopyridine, followed by 145mg (0.118 mmol) of propyl chloroformate. The resulting reaction mixture was stirred at room temperature overnight. To the reaction mixture was added 30ml of an aqueous solution of sodium hydrogen carbonate (10g/L), and the resulting mixture was extracted with 50ml of ethyl acetate. The organic phase was dried and solvent evaporated to give the crude product which was purified on silica to give 107mg of the expected propyl [6-[[1-(1-methyl-1H-tetrazol-5-yl)-2-naphthyl]oxy]methyl]pyridin-2-yl]carbamate.

In analogy to the examples above and according to the general description of the processes of preparing the compounds according to the invention the compounds in the following Table 1 may be obtained.
In table 1 A in (I) can have for example the values $A_1$, $A_2$ and $Z$:

$$\begin{array}{c|c|c}
A^1 & A^2 & Z \\
\text{Z-value shown in column Z} & \text{Z-value shown in column Z} & \text{Z-value shown in column Z} \\
\end{array}$$

### Table 1

<table>
<thead>
<tr>
<th>Ex.</th>
<th>$A$</th>
<th>$(CR^1R^2)_n$</th>
<th>$Q'$</th>
<th>$Q^2$</th>
<th>$Y'$, $Y^2$, $Y^3$, $Y^4$</th>
<th>Z</th>
<th>T</th>
<th>MW meas.</th>
<th>LogP&lt;sub&gt;oct&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$A^2$</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>H</td>
<td>5-methyl-1,2,3-thiadiazol-4-yl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Z</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>phenyl</td>
<td>1-(2,2,2-trifluoroethyl)-1H-tetrazol-5-yl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Z</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>phenyl</td>
<td>1-cyclopropyl-1H-tetrazol-5-yl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>$A^1$</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>(2,2-dimethylpropanoyl)amino</td>
<td>1-cyclopropyl-1H-tetrazol-5-yl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>$A^1$</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>(2,2-dimethylpropanoyl)amino</td>
<td>1-(2,2,2-trifluoroethyl)-1H-tetrazol-5-yl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>$A^1$</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>3-methylhex-1-yn-1-yl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>418</td>
<td>4.65</td>
</tr>
<tr>
<td>7</td>
<td>$A^1$</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-; $Y^{3}=Y^{4}=H$</td>
<td>hept-1-yn-1-yl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>418</td>
<td>4.67</td>
</tr>
<tr>
<td>8</td>
<td>$A^1$</td>
<td>CH$_2$</td>
<td>CY$^3$</td>
<td>CY$^4$</td>
<td>$Y'^{+}Y'^{=}=$CH=CH=CH=CH=-</td>
<td>cyclopentylethynyl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>416</td>
<td>4.34</td>
</tr>
<tr>
<td>Ex.</td>
<td>A</td>
<td>(CR&lt;sup&gt;1&lt;/sup&gt;R&lt;sup&gt;2&lt;/sup&gt;)&lt;sub&gt;n&lt;/sub&gt;</td>
<td>Q&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Q&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;; Y&lt;sup&gt;2&lt;/sup&gt;; Y&lt;sup&gt;3&lt;/sup&gt;; Y&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Z</td>
<td>T</td>
<td>MW meas.</td>
<td>LogP&lt;sup&gt;[a]&lt;/sup&gt;</td>
</tr>
<tr>
<td>-----</td>
<td>------</td>
<td>---------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>-----------------</td>
<td>------------------------</td>
<td>----------------------------</td>
<td>----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>9</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>cyclohexylethynyl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>430</td>
<td>4.75</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>cyclopropylethynyl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>388</td>
<td>3.46</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;=Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>hex-1-yn-1-yl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>404</td>
<td>4.27</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>A&lt;sup&gt;2&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>(tert-butoxycarbonyl)amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>433</td>
<td>3.72</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(pentyloxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>453</td>
<td>3.83</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>3-cyclopentylprop-1-yn-1-yl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>430</td>
<td>4.82</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>3-cyclohexylprop-1-yn-1-yl</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>444</td>
<td>5.25</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>bromo</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>403</td>
<td>2.98</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(but-2-yn-1-yloxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>435</td>
<td>2.96</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(4-chlorobutoxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>473</td>
<td>3.33</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(but-3-yn-1-yloxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>435</td>
<td>2.82</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>(propoxycarbonyl)amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>425</td>
<td>3.06</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>(butoxycarbonyl)amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>439</td>
<td>3.42</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(but-3-en-1-yloxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>437</td>
<td>3.15</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(prop-2-en-1-yloxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>423</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>A&lt;sup&gt;1&lt;/sup&gt; CH&lt;sub&gt;2&lt;/sub&gt;</td>
<td>CY&lt;sup&gt;3&lt;/sup&gt;</td>
<td>CY&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Y&lt;sup&gt;1&lt;/sup&gt;+Y&lt;sup&gt;2&lt;/sup&gt;=CH=CH=CH=CH-; Y&lt;sup&gt;3&lt;/sup&gt;+Y&lt;sup&gt;4&lt;/sup&gt;=H</td>
<td>[(prop-2-yn-1-yloxy)carbonyl]amino</td>
<td>1-methyl-1H-tetrazol-5-yl</td>
<td>421</td>
<td>2.69</td>
<td></td>
</tr>
</tbody>
</table>
Measurement of logP values was performed according EEC directive 79/831 Annex V.A8 by HPLC (High Performance Liquid Chromatography) on reversed phase columns with the following methods:

[a] measurement of LC-MS was done at pH 2,7 with 0,1 % formic acid in water and with acetonitrile (contains 0,1% formic acid) as eluent with a linear gradient from 10 % acetonitrile to 95 % acetonitrile.

Calibration was done with not branched alkan2-ones (with 3 to 16 carbon atoms) with known logP-values (measurement of logP values using retention times with linear interpolation between successive alkanones). Lambdamax values were determined using UV-spectra from 200 nm to 400 nm and the peak values of the chromatographic signals.

In table 1, M+H (or M H) means the molecular ion peak, plus or minus 1 a.m.u. (atomic mass unit) respectively, as observed in mass spectroscopy and M (APCI+) means the molecular ion peak as it was found via positive atmospheric pressure chemical ionization in mass spectroscopy.
Biological Examples

Phytophthora test (tomato) / preventive

Solvent: 49 parts by weight of N,N-Dimethylformamide

Emulsifier: 1 part by weight of Alkylarylpolyglycolether

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

To test for preventive activity, young plants are sprayed with the preparation of active compound at the stated rate of application. One day after this treatment, the plants are inoculated with an aqueous spore suspension of *Phytophthora infestans*. The plants remain for one day in an incubation cabinet at approximately 22°C and a relative atmospheric humidity of 100%. Then the plants are placed in an incubation cabinet at approximately 20°C and a relative atmospheric humidity of 96%.

The test is evaluated 7 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

In this test the following compounds according to the invention showed efficacy of 70% or even higher at a concentration of 500ppm of active ingredient and the concrete values in percent are shown in parentheses as follows:

Example 4 (80 %), 13 (95 %), 17 (95 %), 18 (80 %), 20 (80 %), 21 (95 %), 22 (70 %), 25 (70 %) and 28 (90 %).
CLAIMS

1. A compound of formula (I)

\[
\text{A} \quad \text{Q}^1 \quad \text{O}^1 \quad \text{Y}^1 \quad \text{Q}^2 \quad \text{O}^2 \quad \text{Y}^2
\]

(I)

wherein

- \( \text{Q}^1 \) represents \( \text{N} \) or \( \text{CY}^3 \);
- \( \text{Q}^2 \) represents \( \text{N} \) or \( \text{CY}^4 \);
- \( \text{Y}^1, \text{Y}^2, \text{Y}^3 \) and \( \text{Y}^4 \) independently represent a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, a formyl group, a substituted or non-substituted carbonyl, an amino group, a sulphenyl group, a formylamino group, a substituted or non-substituted carbamoyl group, a pentafluoro-\( \lambda^6 \)-sulphenyl group, having a substituted or non-substituted C-1-C6-alkylamino group, a substituted or non-substituted C-1-C6-alkenyl group, a substituted or non-substituted C-1-C6-alkynyl group, a substituted or non-substituted C-1-C6-halogenoalkyl group, a substituted or non-substituted C-1-C6-alkylsulphenyl group, a substituted or non-substituted C-1-C6-halogenoalkylsulphenyl group.
alkanimidoyl, substituted or non-substituted N-(Cl-C₈-alkoxy)-Cl-C₈-halogenoalkaninnidoyl having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-halogenoalkylicarbonyl having 1 to 5 halogen atoms, substituted or non-substituted d-Cs-alkylcarbamoyl, substituted or non-substituted di-Ci-Cs-alkylicarbamoyl, substituted or non-substituted N-d-Cs-alkyloxycarbamoyl, substituted or non-substituted d-Cs-alkoxycarbamoyl, substituted or non-substituted d-C₈-alkoxycarbannidoyl, substituted or non-substituted N-C₁-C₈ alkyl-Ci-C₈-alkoxyxycarbamoyl, substituted or non-substituted d-Cs-alkyloxycarbonyl, substituted or non-substituted d-Cs-halogenoalkyloxy having 1 to 5 halogen atoms, substituted or non-substituted N-C₁-C₈ alkylcarbamoyl, substituted or non-substituted N-d-Cs-alkyloxycarbamoyl, substituted or non-substituted N-d-Cs-alkyloxycarbonyl, substituted or non-substituted d-Cs-halogenoalkyloxy having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₈ alkylcarbamoyl, substituted or non-substituted d-Cs-halogenoalkyloxycarbonyl, substituted or non-substituted N-C₁-C₈-alkyl-(C₁-C₈ alkylcarbamoyl)amino, substituted or non-substituted N-C₁-C₈ alkyl-(d-C₁-C₈ alkylcarbamoyl)amino, substituted or non-substituted d-Cs-halogenoalkylsulphinylamino, substituted or non-substituted d-Cs-halogenoalkylcarbonyloxy, substituted or non-substituted di-d-Cs-alkylaminocarbonyloxy, substituted or non-substituted d-Cs-alkylcarbamothioyl, substituted or non-substituted C₁-C₈ alkylcarbamothioyl, substituted or non-substituted N-C₁-C₈ alkylcarbamothioyloxy, substituted or non-substituted d-Cs-alkoxycarbamothioyloxy, substituted or non-substituted N-C₁-C₈ alkyl-d C₈ alkylcarbamothioyl, substituted or non-substituted C₁-C₈ alkylthioylamino, substituted or non-substituted d-Cs-halogenoalkylythioylamino having 1 to 5 halogen atoms, substituted or non-substituted (d-Cs-alkylcarbamothioyl)-oxy, substituted or non-substituted substituted or non-substituted (di-d-Cs-alkylcarbamothioyl)-oxy, substituted or non-substituted d-C₈ alkylsulphynyl, substituted or non-substituted d-C₈ halogenoalkysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈ alkylsulphynyl, substituted or non-substituted C₁-C₈ halogenoalkysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₈ alkylaminosulfamoyl, substituted or non-substituted di-C₁-C₈ alkylaminosulfamoyl, substituted or non-substituted (d-C₈ alkoxycarbaminino)-d-Cs-alkyl, substituted or non-substituted (C₁-C₈ alkenyloxyiminino)-d-Cs-alkyl, substituted or non-substituted (d-C₈ alkynylxoyiminino)-d-Cs-alkyl, substituted or non-substituted (benzyloxyiminino)-C₁-C₈ alkyl, substituted or non-substituted benzoyloxy, substituted or non-substituted benzylsulphynyl, substituted or non-substituted benzylamino, substituted or non-substituted phenoxy, substituted or non-substituted phenylsulphynyl, substituted or non-substituted phenylamino, substituted or non-substituted aryl, substituted or non-substituted aryl-[d-C₈ alkyl substituted or non-substituted tri(d-C₈ alkyl)-silyloxy, substituted or non-substituted d-C₈ alkylsulfonylaminino, substituted or non-substituted tri(d-C₈ alkyl)-
d-Cs-halogenoalkylsulphinylamino having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-alkylsulphonylamino, substituted or non-substituted d-Cs-halogenoalkylsulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted Ci-Cg-alkoxy sulphonymino having 1 to 5 halogen atoms, substituted or non-substituted Ci-Cg-halogenoalkoxy sulphonymino having 1 to 5 halogen atoms, substituted or non-substituted tr(Ci-Cg-alkyl)-silyl, substituted or non-substituted (Ci-Cg-alkylideneamino)oxy, substituted or non-substituted (d-Cg-alkenylideneamino)oxy, substituted or non-substituted (d-Cg-alkenylsulphinylamino)oxy, substituted or non-substituted (benzylideneamino)oxy, substituted or non-substituted [(arylcarbonyl)amino]-[d-Cg-alkyl], substituted or non-substituted [(d-Cg-alkyl-(d-Cg-alkyl(arylcarbonyl)amino)]-[d-Cg-alkyl], substituted or non-substituted [(d-Cg-alkyl(arylcarbonyl)amino)]-[d-Cg-alkyl], substituted or non-substituted [(d-Cg-alkyl(arylcarbonyl)amino)]-[d-Cg-alkyl], substituted or non-substituted heterocyclic, substituted or non-substituted heterocycloxy, or

• when Y1 and Y2 together with the aromatic cycle to which they are attached do form a naphtyl, quinolene or isoquinolene, Y3 and Y4 are as defined above;

• n represents 1, 2, 3 or 4;

• R1 and R2 independently represent a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted d-Cg-alkyl, substituted or non-substituted Cg-Cg-cycloalkyl, substituted or non-substituted d-Cg-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-halogenocycloalkyl having 1 to 5 halogen atoms, a Cg-Cg-alkenyl, substituted or non-substituted Cg-Cg-alkynyl, substituted or non-substituted Ci-Cg-alkoxy, substituted or non-substituted Ci-Cg-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-halogenoalkenyl, substituted or non-substituted Cg-Cg-halogenoalkynoxy having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkyl sulphonyl, substituted or non-substituted Cg-Cg-sulphonylalkyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-sulphonylalkenyl, substituted or non-substituted Cg-Cg-sulphonylalkyno having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-sulphonylalkynyl, substituted or non-substituted Cg-Cg-alkoxysulphonyl, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-alkynysulphonyl, substituted or non-substituted C-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-halogenoalkynysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substituted or non-substituted Cg-Cg-halogenoalkenysulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Cg-Cg-alkenysulphonyl, substi...
- $T$ represents a hydrogen or a substituted or non-substituted heterocyclyl group that is selected in the list consisting of $T_1$ to $T_{32}$:

<table>
<thead>
<tr>
<th>$T^1$</th>
<th>$T^2$</th>
<th>$T^3$</th>
<th>$T^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>$T^5$</td>
<td>$T^6$</td>
<td>$T^7$</td>
<td>$T^8$</td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td>$T^9$</td>
<td>$T^{10}$</td>
<td>$T^{11}$</td>
<td>$T^{12}$</td>
</tr>
<tr>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
</tr>
<tr>
<td>$T^{13}$</td>
<td>$T^{14}$</td>
<td>$T^{15}$</td>
<td>$T^{16}$</td>
</tr>
<tr>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
<td><img src="image15.png" alt="Image" /></td>
<td><img src="image16.png" alt="Image" /></td>
</tr>
<tr>
<td>$T^{17}$</td>
<td>$T^{18}$</td>
<td>$T^{19}$</td>
<td>$T^{20}$</td>
</tr>
<tr>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
<td><img src="image19.png" alt="Image" /></td>
<td><img src="image20.png" alt="Image" /></td>
</tr>
<tr>
<td>$T^{21}$</td>
<td>$T^{22}$</td>
<td>$T^{23}$</td>
<td>$T^{24}$</td>
</tr>
<tr>
<td><img src="image21.png" alt="Image" /></td>
<td><img src="image22.png" alt="Image" /></td>
<td><img src="image23.png" alt="Image" /></td>
<td><img src="image24.png" alt="Image" /></td>
</tr>
<tr>
<td>$T^{25}$</td>
<td>$T^{26}$</td>
<td>$T^{27}$</td>
<td>$T^{28}$</td>
</tr>
<tr>
<td><img src="image25.png" alt="Image" /></td>
<td><img src="image26.png" alt="Image" /></td>
<td><img src="image27.png" alt="Image" /></td>
<td><img src="image28.png" alt="Image" /></td>
</tr>
</tbody>
</table>
wherein

- $X^1$ to $X^4$ independently represent a hydrogen atom, a halogen atom, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted or non-substituted carbaldehyde O-(Ci-C$_g^5$-alkyl)oxime, a formyloxy group, a formylamino group, a carbamoyl group, a N-hydroxycarbamoyl group, a pentafluoro-2$_6^6$-sulphenyl group, a formylamino group, substituted or non-substituted C$_i$-C$_g^5$-alkoxyamino group, substituted or non-substituted N-C$_i$-C$_g^5$-alkyl-(Ci-C$_g^5$-alkoxy)-amino group, substituted or non-substituted (d-C$_g^5$-alkylamino)-amino group, substituted or non-substituted N-C$_i$-C$_g^5$-alkyl-(CrC$_g^5$-alkylamino)-amino group, a substituted or non-substituted (hydroxyimino)-Ci-C$_g^5$-alkyl group, substituted or non-substituted Ci-C$_g^5$-alkyl, substituted or non-substituted tri(C$_i$-C$_g^5$-alkyl)silyl-Ci-C$_g^5$-alkyl, substituted or non-substituted C$_3$-C$_g^5$-cycloalkyl, substituted or non-substituted tri(d-C$_g^5$-alkyl)silyl-C$_3$-C$_g^5$-cycloalkyl, substituted or non-substituted d-C$_g^5$-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C$_3$-C$_g^5$-halogenocycloalkyl having 1 to 5 halogen atoms, a C$_2$-C$_g^5$-alkenyl, substituted or non-substituted C$_2$-C$_g^5$-alkynyl, substituted or non-substituted d-C$_g^5$-alkylamino, substituted or non-substituted di-d-C$_g^5$-alkylamino, substituted or non-substituted d-C$_g^5$-alkoxy, substituted or non-substituted d-C$_g^5$-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C$_i$-C$_g^5$-alkylsulphenyl, substituted or non-substituted d-C$_g^5$-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C$_2$-C$_g^5$-alkenyl, substituted or non-substituted C$_2$-C$_g^5$-halenoalkenyl, substituted or non-substituted C$_3$-C$_g^5$-halenoalkenyl, substituted or non-substituted C$_3$-C$_g^5$-halenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted d-C$_i$-C$_g^5$-alkylcarbonyl, substituted or non-substituted N-(d-C$_g^5$-alkoxy)-Ci-C$_g^5$-alkanimidoyl, substituted or non-substituted N-(d-C$_g^5$-alkoxy)-Ci-C$_g^5$-halenoalkanimidoyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_g^5$-halenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_g^5$-alkylcarbamoyl, substituted or non-substituted d-C$_i$-C$_g^5$-alkylcarbamoyl, substituted or non-substituted N-C$_i$-C$_g^5$-alkoxy carbamoyl, substituted or non-substituted Ci-C$_g^5$-alkoxy carbamoyl, substituted or non-substituted N-C$_i$-C$_g^5$-alkoxy carbamoyl, substituted or non-substituted Ci-C$_g^5$-alkoxy carbamoyl, substituted or non-substituted N-C$_i$-C$_g^5$-alkoxy carbamoyl, substituted or non-substituted Ci-C$_g^5$-alkoxy carbamoyl, substituted or non-substituted Ci-C$_g^5$-halenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_g^5$-halenoalkylcarbonyl, substituted or non-substituted Ci-C$_g^5$-halenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_g^5$-halenoalkylcarbonyl, substituted or non-substituted Ci-C$_g^5$-halenoalkylcarbonyl.
alkylcarbamoylamino, substituted or non-substituted d-CS-halogenoalkylcarbamoylannino having 1 to 5 halogen atoms, substituted or non-substituted di-d-CS-alkylcarbamoylannino, substituted or non-substituted di-d-CS-halogenoalkylcarbamoylannino having 1 to 5 halogen atoms, substituted or non-substituted N-Ci-C \(_8^1\)-alkyl-(Ci-C \(_8^1\)-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C \(_8^1\)-alkyl-(Ci-C \(_8^1\)-halogenoalkylcarbamoyl)amino having 1 to 5 halogen atoms, substituted or non-substituted N-Ci-C \(_8^1\)-alkyl-(di-Ci-C \(_8^1\)-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C \(_8^1\)-alkyl-(di-Ci-C \(_8^1\)-halogenoalkylcarbamoyl)amino having 1 to 5 halogen atoms, substituted or non-substituted d-CS-alkylaminocarboxyloxy, substituted or non-substituted d-CS-alkylcarbamothioyl, substituted or non-substituted di-d-CS-alkylcarbamothioyl, substituted or non-substituted N-Ci-C \(_8^1\)-alkylloxycarbamothioyl, substituted or non-substituted d-CS \(_8^1\)-alkoxy carbamothioyl, substituted or non-substituted N-d-CS-alkyl-d-CS-alkoxy carbamothioyi, substituted or non-substituted C \(_1^1\)-C \(_8^1\)-alkylthiylamiino, substituted or non-substituted d-CS \(_8^1\)-halogenoalkylthioyi annino having 1 to 5 halogen atoms, substituted or non-substituted (d-CS \(_8^1\)-alkyl-carbamothioyi)-oxy, substituted or non-substituted d-CS \(_8^1\)-halogenoalkylsulphinylamino having 1 to 5 halogen atoms, substituted or non-substituted d-CS \(_8^1\)-alkylsulphinylamino, substituted or non-substituted d-CS \(_8^1\)-halogenoalkylsulphonyl having 1 to 5 halogen atoms, substituted or non-substituted d-CS \(_8^1\)-alkylsulphonyl, substituted or non-substituted d-CS \(_8^1\)-halogenoalkylsulphonyl having 1 to 5 halogen atoms, substituted or non-substituted d-CS \(_8^1\)-alkylsulphonyl, substituted or non-substituted C \(_1^1\)-C \(_8^1\)-alkoxyimino)-d-CS \(_8^1\)-alkyl, substituted or non-substituted (d-CS \(_8^1\)-alkenylxyynnino)-d-CS \(_8^1\)-alkyl, substituted or non-substituted (d-CS \(_8^1\)-alkenylxyynnino)-d-CS \(_8^1\)-alkyl, substituted or non-substituted (benzyloxyimino)-d-CS \(_8^1\)-alkyl, substituted or non-substituted benzylxy, substituted or non-substituted benzylosulphenyl, substituted or non-substituted benzylamino, substituted or non-substituted phenoxy, substituted or non-substituted phenylsulphenyl, substituted or non-substituted phenylamino, substituted or non-substituted aryl, substituted or non-substituted aryl-[d-CS \(_8^1\)-alkyl, substituted or non-substituted tri(d-CS \(_8^1\)-alkyl)-silyloxy, substituted or non-substituted C \(_1^1\)-C \(_8^1\)-alkylsulfinylamino, substituted or non-substituted d-CS-halogenoalkylsulphonylimino having 1 to 5 halogen atoms, substituted or non-substituted d-CS-halogenoalkylsulphonylimino having 1 to 5 halogen atoms, substituted or non-substituted d-CS \(_8^1\)-alkoxy sulphophyllannino, substituted or non-substituted C \(_1^1\)-C \(_8^1\)-halogenoxy sulphophyllannino having 1 to 5 halogen atoms, substituted or non-substituted tri(d-CS \(_8^1\)-alkyl)-silyl, substituted or non-substituted (d-CS \(_8^1\)-alkylideneannino)oxy, substituted or non-substituted (d-CS \(_8^1\)-alkenylideneannino)oxy, substituted or non-substituted (C \(_1^1\)-C \(_8^1\)-alkenyldieneannino)oxy, substituted or non-substituted (benzyldieneannino)oxy;
• \( W^1 \) independently represents a hydrogen atom, a formyl group, a substituted or non-substituted carbaldehyde \( O-(\text{C}_r \text{C}_g \text{alky}) \) oxime, a carbamoyl group, a N-hydroxycarbamoyl group, a formylamino group, substituted or non-substituted \( \text{C}_t \text{C}_g \text{alkyl} \), substituted or non-substituted \( \text{tri}(\text{C}_t \text{C}_g \text{alkyl}) \) silyl-\( \text{C}_t \text{C}_g \text{alkyl} \), substituted or non-substituted \( \text{C}_t \text{C}_g \text{cycloalkyl} \), substituted or non-substituted \( \text{tri}(\text{C}_t \text{C}_g \text{alkyl}) \) silyl-C-\( \text{C}_3 \text{C}_8 \) cycloalkyl, substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenocycloalkyl} \) having 1 to 5 halogen atoms, a \( \text{C}_t \text{C}_g \text{alkeny} \), substituted or non-substituted \( \text{C}_t \text{C}_g \text{alkyn} \), substituted or non-substituted \( \text{Cl-C}_g \text{alkylamino} \), substituted or non-substituted \( \text{dicyanoalkyl} \), substituted or non-substituted \( \text{Cl-C}_g \text{alkylamino} \), substituted or non-substituted \( \text{C}_t \text{C}_g \text{alkoxy} \), substituted or non-substituted \( \text{Cl-C}_g \text{alkoxy} \), substituted or non-substituted \( \text{dihalogenoalkoxy} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkynlyoxy} \), substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkynlyoxy} \), having 1 to 5 halogen atoms, substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkynlyoxy} \), substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkynlyoxy} \), having 1 to 5 halogen atoms, substituted or non-substituted \( \text{Cl-C}_g \text{alkylcarbamoyl} \), substituted or non-substituted \( \text{N-(Cl-C}_g \text{alkoxy)-Cl-C}_g \text{alkanimidoyl} \), substituted or non-substituted \( \text{N-(Cl-C}_g \text{alkoxy)-Cl-C}_g \text{halogenoalkanimidoyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkylcarbonyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{C}_t \text{C}_g \text{halogenoalkylcarbonyl} \), substituted or non-substituted \( \text{dicyanoalkylcarbonyl} \), substituted or non-substituted \( \text{N-C}_t \text{C}_g \text{alkoxyalkoxycarbamoyl} \), substituted or non-substituted \( \text{d-C}_g \text{alkoxycarbamoyl} \), substituted or non-substituted \( \text{N-C}_t \text{C}_g \text{alkoxyalkoxycarbamoyl} \), substituted or non-substituted \( \text{d-C}_g \text{alkoxycarbamoyl} \), substituted or non-substituted \( \text{d-Cs-alkoxycarbonyl} \), substituted or non-substituted \( \text{di-Cs-halogenoalkoxycarbonyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{di-Cs-halogenoalkoxycarbonyl} \), substituted or non-substituted \( \text{di-Cs-halogenoalkoxycarbonyl} \), substituted or non-substituted \( \text{d-Cs-alkoxycarbamothioyl} \), substituted or non-substituted \( \text{N-C}_t \text{C}_g \text{alkoxyalkoxycarbamothioyl} \), substituted or non-substituted \( \text{d-Cs-alkoxycarbamothioyl} \), substituted or non-substituted \( \text{N-d-Cs-alkyl-d-Cs-alkoxycarbamothioyl} \), substituted or non-substituted \( \text{Cl-C}_g \text{alkylsulphonyl} \), substituted or non-substituted \( \text{Cl-C}_g \text{halogenoalkylsulphonyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{Cl-C}_g \text{halogenoalkylsulphonyl} \), substituted or non-substituted \( \text{Cl-C}_g \text{halogenoalkylsulphonyl} \) having 1 to 5 halogen atoms, substituted or non-substituted \( \text{Cl-C}_g \text{halogenoalkylsulphonyl} \), substituted or non-substituted \( \text{di-Cl-C}_g \text{alkylaminosulfamoyl} \), substituted or non-substituted \( \text{di-Cl-C}_g \text{alkylaminosulfamoyl} \), substituted or non-substituted \( \text{aryl} \), substituted or non-substituted \( \text{aryl-}[\text{C}_t \text{C}_g \text{alkyl}] \);

- \( A \) is selected in the list consisting of \( A^1 \) to \( A^{16} \) :
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$A^6$</td>
<td>$A^7$</td>
<td>$A^8$</td>
</tr>
<tr>
<td>$A^9$</td>
<td>$A^{10}$</td>
<td>$A^{11}$</td>
</tr>
<tr>
<td>$A^{12}$</td>
<td>$A^{13}$</td>
<td>$A^{14}$</td>
</tr>
<tr>
<td>$A^{15}$</td>
<td>$A^{16}$</td>
<td>$A^{17}$</td>
</tr>
<tr>
<td>$A^{18}$</td>
<td>$A^{19}$</td>
<td>$A^{20}$</td>
</tr>
<tr>
<td>$A^{21}$</td>
<td>$A^{22}$</td>
<td>$A^{23}$</td>
</tr>
<tr>
<td>$A^{24}$</td>
<td>$A^{25}$</td>
<td>$A^{26}$</td>
</tr>
<tr>
<td>$A^{27}$</td>
<td>$A^{28}$</td>
<td>$A^{29}$</td>
</tr>
<tr>
<td>$A^{30}$</td>
<td>$A^{31}$</td>
<td>$A^{32}$</td>
</tr>
<tr>
<td>$A^{33}$</td>
<td>$A^{34}$</td>
<td>$A^{35}$</td>
</tr>
<tr>
<td>$A^{36}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>A⁶¹</td>
<td>A⁶²</td>
<td>A⁶³</td>
</tr>
<tr>
<td>A⁶⁵</td>
<td>A⁶⁶</td>
<td>A⁶⁷</td>
</tr>
<tr>
<td>A⁶⁹</td>
<td>A⁷⁰</td>
<td>A⁷¹</td>
</tr>
<tr>
<td>A⁷³</td>
<td>A⁷⁴</td>
<td>A⁷⁵</td>
</tr>
<tr>
<td>A⁷⁷</td>
<td>A⁷⁸</td>
<td>A⁷⁹</td>
</tr>
<tr>
<td>A⁸¹</td>
<td>A⁸²</td>
<td>A⁸³</td>
</tr>
<tr>
<td>A⁸⁵</td>
<td>A⁸⁶</td>
<td>A⁸⁷</td>
</tr>
</tbody>
</table>
wherein
• $Z^1, Z^2, Z^3, Z^4, Z^5, Z^6, Z^7, Z^8$ and $Z^9$ independently represent a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted or non-substituted carbaldehyde O-(C-t-C$_8$-alkyl)oxime, a formyloxy group, a formylamino group, a carbamoylamino group, a N-hydroxycarbamoyl group, a pentafluoro-$\lambda^5$-sulphenyl group, a formylamino group, substituted or non-substituted C-t-C$_8$-alkoxyamino group, substituted or non-substituted N-C-t-C$_8$-alkyl-(C-t-C$_8$-alkoxy)-amino group, substituted or non-substituted (C-t-C$_8$-alkylamino)-amino group, substituted or non-substituted N-C-C$_8$-alkyl-(C$_8$-alkylamino)-amino group, a substituted or non-substituted (hydroxyimino)-C-t-C$_8$-alkyl group, substituted or non-substituted C-t-C$_8$-alkyl, substituted or non-substituted tri(C-t-C$_8$-alkyl)silyl-C-t-C$_8$-alkyl, substituted or non-substituted C$_3$-C$_8$-cycloalkyl, substituted or non-substituted tri(C$_8$-alkyl)silyl-C$_3$-C$_8$-cycloalkyl, substituted or non-substituted C$_3$-C$_8$-halogenocycloalkyl having 1 to 5 halogen atoms, substituted or non-substituted C$_3$-C$_8$-halogenocycloalkyl having 1 to 5 halogen atoms, a C$_2$-C$_8$-alkenyl, substituted or non-substituted C$_2$-C$_8$-alkynyl, substituted or non-substituted C$_2$-C$_8$-alkylamino, substituted or non-substituted di-C$_2$-C$_8$-alkylamino, substituted or non-substituted Ci-C$_8$-alkoxy, substituted or non-substituted (C$_3$-C$_8$-cycloalkoxy carbonyl)amino, substituted or non-substituted Ci-C$_8$-halogenoalcohol having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_8$-halogenoalkyl, substituted or non-substituted Ci-C$_8$-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C$_2$-C$_8$-halogenoalkenyl, substituted or non-substituted (C$_3$-C$_8$-alkenyloxy carbonyl)amino, substituted or non-substituted C$_2$-C$_8$-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C$_2$-C$_8$-alkenyloxy, substituted or non-substituted (C$_3$-C$_8$-alkenyloxy carbonyl)amino, substituted or non-substituted C$_3$-C$_8$-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C$_3$-C$_8$-halogenoalkenyloxy, substituted or non-substituted N-(C$_3$-C$_8$-alkoxy)-C$_3$-C$_8$-alkanamidoyl, substituted or non-substituted N-(C$_3$-C$_8$-alkoxy)-C$_3$-C$_8$-halogenoalkanamidoyl having 1 to 5 halogen atoms, substituted or non-substituted C$_2$-C$_8$-alkylcarbamoyl, substituted or non-substituted di-C$_2$-C$_8$-alkylcarbamoyl, substituted or non-substituted N-C$_2$-C$_8$-alkyl-C$_2$-C$_8$-alkylcarbamoyl, substituted or non-substituted N-C$_2$-C$_8$-alkyl-C$_2$-C$_8$-alkylcarbamoyl, substituted or non-substituted C$_3$-C$_8$-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_8$-alkylcarbamoylamino, substituted or non-substituted Ci-C$_8$-halogenoalkylcarbonylamino having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_8$-halogenoalkylcarbonylamino having 1 to 5 halogen atoms, substituted or non-substituted Ci-C$_8$-alkylcarbamoylamino, substituted or non-substituted Ci-C$_8$-halogenoalkylcarbamoylamino having 1 to 5 halogen atoms, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted N-Ci-C$_8$-alkyl-(Ci-C$_8$-alkylcarbamoyl)amino, substituted or non-substituted
Ci-C₈-alkyl-(Ci-C₈-halogenoalkylcarbamoyl)annino having 1 to 5 halogen atoms, substituted or non-substituted N-Ci-C₈-alkyl-(di-Ci-C₈-halogenoalkylcarbamoyl)annino, substituted or non-substituted N-Ci-C₈-alkyl-(di-Ci-C₈-halogenoalkylcarbamoyl)annino having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-alkylaminocarboxyloxy, substituted or non-substituted di-Ci-C₈-alkylaminocarboxyloxy, substituted or non-substituted Ci-Cs-alkylcarbamothioyl, substituted or non-substituted di-C-i-Cs-alkylcarbamothioyl, substituted or non-substituted N-C₉-C₈-alkyloxy carbamothioyl, substituted or non-substituted C-i-Cs-alkoxycarbamothioyl, substituted or non-substituted N-C₉-rCs-alkyl-C-rCs-alkoxycarbamothioyl, substituted or non-substituted C₁-C₈-alkyllithiylamino, substituted or non-substituted (C-i-Cs-alkoxythiocarbonyl-aminol, substituted or non-substituted C-rCs-halogenoalkylthiylamino having 1 to 5 halogen atoms, substituted or non-substituted (d-Cs-alkyl-carbamothioyl-oxyl, substituted or non-substituted substituted or non-substituted (di-C-i-Cs-alkyl-carbamothioyl-oxyl, substituted or non-substituted C₁-C₈-alkylsulphenyl, substituted or non-substituted C₁-C₈-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₈-alkylsulphinyl, substituted or non-substituted C₁-C₈-halogenoalkylsulphinyl having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₈-alkylsulphonyl, substituted or non-substituted C₁-C₈-halogenoalkylsulphonyl having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₈-alkylaminosulphamoyl, substituted or non-substituted di-C-i-Cs-alkylaminosulphamoyl, substituted or non-substituted (C-i-Ce-alkoxyimino*C-i-Ce-alkyl, substituted or non-substituted (C-i-Ce-alkenylxoyimino*C-i-Ce-alkyl, substituted or non-substituted (C-i-Ce-alkenyloxoyimino*C-i-Ce-alkyl, substituted or non-substituted (benzoxoxyimino)-C-r Cs-alkyl, substituted or non-substituted benzalloy, substituted or non-substituted benzylamo, substituted or non-substituted phenoxy, substituted or non-substituted phenylsulphonyl, substituted or non-substituted phenylamino, substituted or non-substituted aryl, substituted or non-substituted (arylcyanoyl) amino, substituted or non-substituted (heterocyclic carboxylamin, substituted or non-substituted (aryloxycarbonyl)amino, substituted or non-substituted (heterocyclyoxycarbonyl) amino, substituted or non-substituted tri(C₁-C₈-alkyl)-silyloxy, substituted or non-substituted C₁-C₈-alkylsulfonylamino, substituted or non-substituted C₁-C₈-halogenoalkylsulfonylamino having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₈-alkoxysulfonylamino, substituted or non-substituted C₁-C₈-halogenoalkoxysulfonylamino having 1 to 5 halogen atoms, substituted or non-substituted tri(C₁-C₈-alkyl)-silyl, substituted or non-substituted (C₁-C₈-alkylidene amino)oxyl, substituted or non-substituted (C₁-C₈-alkylidene amino)oxy, substituted or non-substituted (C₁-C₈-alkylidene amino)oxy, substituted or non-substituted (benzylidene amino)oxyl; provided that when T represents T₂₈, T₂₉, T₃₁ or T₃₂ and when Y₁ and Y₂ together with the aromatic cycle to which they are attached form a napthyl and when A represents A², A₆, A¹¹, A₁², A₁⁴, A₁⁵, A₁₈, A₂₅, A₂₆; A₂₉ or A₃¹ then Z¹ represents a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl
group, a substituted or non-substituted carbaldehyde O-(Ci-C₈-alkyl)oxime, a formyloxy group, a
N-hydroxycarbamoyl group, a pentafluoro-λ₅-sulphenyl group, substituted or non-substituted
C₁-C₈-alkoxyannino group, substituted or non-substituted N-C₁-C₈-alkyl-(C₁-C₈-alkoxy)-annino
group, substituted or non-substituted (C₈-C₉-alkylannino)-annino group, substituted or non-
substituted N-C₁-C₈-alkyl-(C₁-C₈-alkylannino)-annino group, a substituted or non-substituted
(hydroximino)-C₈-C₉-alkyl group, substituted or non-substituted C₈-C₉-alkyl, substituted or non-
substituted tri(C₈-C₉-alkyl)silyl-C₈-C₉-alkyl, substituted or non-substituted C₃-C₈-cycloalkyl,
substituted or non-substituted tri(d-C₈-alkyl)silyl-C₃-C₈-cycloalkyl, substituted or non-substituted
C₈-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₈-
halogenocycloalkyl having 1 to 5 halogen atoms, a C₂-C₈-alkenyl, substituted or non-substituted
C₂-C₈-alkynyl, substituted or non-substituted C₈-alkylamino, substituted or non-substituted di-
C₈-alkylamino, substituted or non-substituted C₈-alkoxy, substituted or non-substituted d-
C₈-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₈-
halogenoalkenyloxy having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₈-alkynoxy,
substituted or non-substituted C₃-C₈-halogenoalkenyloxy having 1 to 5 halogen atoms, substituted
or non-substituted d-Cs-alkylcarbonyl, substituted or non-substituted N-(C₁-C₈-alkoxy)-d-C₈-
alkanimidoyl, substituted or non-substituted N-(d-C₈-alkoxy)-d-C₈-halogenoalkanimidoyl having
1 to 5 halogen atoms, substituted or non-substituted d-Cs-halogenoalkylcarbonyl having 1 to 5
halogen atoms, substituted or non-substituted C₁-C₈-halogenoalkylcarbonyl, substituted or non-
substituted C₁-C₈-halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, substituted or non-
substituted C₁-C₈-alkylaminocarbonyloxy, substituted or non-substituted di-C₁-C₈-alkylaminocar-
bonyloxy, substituted or non-substituted C₁-C₈-alkylaminocarbonyl, substituted or non-sub-
stituted C₁-C₈-alkylaminocarbonyloxy, substituted or non-substituted C₁-C₈-alkylaminocar-
bonyloxy, substituted or non-substituted C₁-C₈-alkylaminocarbonyl, substituted or non-sub-
stituted (C₁-C₈-alkoxythiocarbonyl)amino, substituted or non-substituted C₁-C₈-
halogenoalkythioyloxy, substituted or non-substituted (C₁-C₈-alkyl-carbamoiothioyloxy),
substituted or non-substituted or non-substituted (di-C₁-C₈-
alkyl-carbamothioyl)-oxy, substituted or non-substituted C₁-C₈-alkylsulphinyl, substituted or non-
substituted C₁-C₈-halogenoalkylsulphinyl having 1 to 5 halogen atoms, substituted or non-
substituted C₁-C₈-halogenoalkylsulphinyl, substituted or non-substituted C₁-C₈-halogenoalkyl-

alkylaminosulfamoyl, substituted or non-substituted (C₁-C₆-alkoxyimino)-C₆-alkyl, substituted or non-substituted (C₁-C₆-alkenylxoyimino)-C₆-alkyl, substituted or non-substituted (C₁-C₆-alkynylxoyimino)-C₆-alkyl, substituted or non-substituted (benzylxoyimino)-C₆-alkyl, substituted or non-substituted benzyloxy, substituted or non-substituted benzylamino, substituted or non-substituted phenoxa, substituted or non-substituted phenylsulphonyl, substituted or non-substituted aryl, substituted or non-substituted tri(d-C₆-alkyl)-silylox, substituted or non-substituted C-rCs-alkylsulphenylamino, substituted or non-substituted C-rCs-halogenoalkylsulfonylamino having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₆-alkylsulphenylamino, substituted or non-substituted C-rCs-halogenoalkylsulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted C₁-C₆-alkoxysulphonylamino, substituted or non-substituted C₁-C₆-halogenosulphonylamino having 1 to 5 halogen atoms, substituted or non-substituted tri(C₁-C₆-alkyl)-silyl, substituted or non-substituted (C₁-C₆-alkylidenamino)oxy, substituted or non-substituted (C₁-C₆-alkylidenamino)oxy, substituted or non-substituted (C₁-C₆-alkylidenamino)oxy, substituted or non-substituted (benzylidenamino)oxy, substituted or non-substituted C₁-C₆-alkylaminosulfamoyl, substituted or non-substituted (C₁-C₆-alkenylamino)oxy, substituted or non-substituted N-C₁-C₈-alkylamino, substituted or non-substituted O-(C₁-C₆-alkyl)oxime, a carbamoyl group, a N-hydroxycarbamoyl group, a formylamino group, substituted or non-substituted C₁-C₆-silyl, substituted or non-substituted tri(C₁-C₆-alkyl)silyl-C₂-C₆-alkyl, substituted or non-substituted C₃-C₆-cycloalkyl, substituted or non-substituted tri(C₇-C₈-alkyl)silyl-C₂-C₆-cycloalkyl, substituted or non-substituted C₁-C₆-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₆-halogenocycloalkyl having 1 to 5 halogen atoms, a C₂-C₆-alkenyl, substituted or non-substituted C₂-C₆-alkynyl, substituted or non-substituted C₁-C₆-alkylamino, substituted or non-substituted di-C₁-C₆-alkylamino, substituted or non-substituted C₁-C₆-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted C₂-C₆-alkenylxy, substituted or non-substituted C₃-C₆-halogenoalkynoxy having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-alkylcarbonyl, substituted or non-substituted N-(C₁-C₆-alkoxy)-C₁-C₆-alkanamidoyl, substituted or non-substituted N-(C₁-C₆-alkoxy)-C-t-C₆-halogenoanamidoyl having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-halogenoalkylcarbonyl having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-alkylcarbonyl, substituted or non-substituted di-C-i-Cs-alkylcarbonyl, substituted or non-substituted N-C-i-Cs-alkyl-C-i-Cs-alkoxy carbamoyl, substituted or non-substituted N-C-i-Cs-alkyl-C-i-Cs-alkoxy carbamoyl, substituted or non-substituted C-i-Cs-alkoxy carbamoyl, substituted or non-substituted C-i-Cs-halogenoalkoxy carbonyl having 1 to 5 halogen atoms, substituted or non-substituted C-i-Cs-alkylcarbamoxyi, substituted or non-substituted di-C-i-Cs-alkylcarbamothyi, substituted or non-substituted N-C-i-Cs-
alkyloxycarbamothioyll, substituted or non-substituted d-Cs-alkoxycarbannothioyl, substituted or non-substituted N-Ci-C₈-alkyl-C₅-C₈-alkoxy carbannothioyl, substituted or non-substituted Ci-C₈-alkylsulphinyl, substituted or non-substituted Ci-C₈-halogenoalkylsulphinyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈-alkylsulphonyl, substituted or non-substituted Ci-C₈-halogenoalkylsulphonyl having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈-alkylaminosulfamoyl, substituted or non-substituted di-Ci-Cs-alkylaminosulfamoyl, substituted or non-substituted aryl, substituted or non-substituted aryl-[Cl-C₈]-alkyl;

- G¹ and G² are independently selected in the list consisting of oxygen, sulfur, NR³, N-OR⁴ and N-NR⁵R⁶ wherein R³ to R⁶ independently represent a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted Ci-C₈-alkyl, substituted or non-substituted C₃-C₈-cycloalkyl, substituted or non-substituted Ci-C₈-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₈-halogenocycloalkyl having 1 to 5 halogen atoms, a C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted Ci-C₈-alkoxy, substituted or non-substituted Ci-C₈-alkenylhalo, substituted or non-substituted C₂-C₈-halogenoalkenyl having 1 to 5 halogen atoms, substituted or non-substituted C₂-C₈-halogenoalkenyl having 1 to 5 halogen atoms, substituted or non-substituted C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted ary1, substituted or non-substituted aryl-[Cl-C₈]-alkyl;

as well as salts, N-oxides, metallic complexes and metalloidal complexes thereof

2. Compound according to claim 1, selected from the compounds of formula (Ia), (Ib) and (Ic)

![Diagram](attachment:image.png)

(la)  
(lb)  
(lc)

wherein

- A, T, n, R¹, R², Y³ and Y⁴ are defined according to claim 1;

- Y⁵ to Y⁸ independently represent a hydrogen atom, a halogen atom, a nitro group, a hydroxy group, a cyano group, an amino group, a sulphenyl group, a formyl group, a substituted or non-substituted carbalddehyde O-(Cl-C₈-alkyl)oxime, a formyloxy group, a formylamino group, a carbamoyl group, a N-hydroxycarbamoyl group, a pentafluoro-λ₆-sulphenyl group, a formylamino group, substituted or non-substituted Ci-C₈-alkoxyamino group, substituted or non-substituted Ci-C₈-alky1, substituted or non-substituted C₃-C₈-cycloalkyl, substituted or non-substituted Ci-C₈-halogenoalkyl having 1 to 5 halogen atoms, a C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkenyl, substituted or non-substituted C₂-C₈-alkynyl, substituted or non-substituted Ci-C₈-alkylamin0,
substituted or non-substituted Ci-C₈'-alkoxy, substituted or non-substituted Ci-C₈'-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted Ci-C₈'-alkylsulphenyl, substituted or non-substituted d-Cs-halogenoalkylsulphenyl having 1 to 5 halogen atoms, substituted or non-substituted C₂-C₈'-alkenyl, substituted or non-substituted C₃-C₈'-alkynl, substituted or non-substituted d-Cs-alkylcarbonyl, substituted or non-substituted d-Cs-alkoxycarbonyl, substituted or non-substituted d-Cs-halogenoalkylsulphenyl, substituted or non-substituted phenylsulphenyl, substituted or non-substituted phenylamino, substituted or non-substituted aryl;

3. Compound according to claim 1 or 2, wherein Y¹, Y², Y³ and Y⁴ independently represent a hydrogen atom, a halogen atom, a cyano group, a substituted or non-substituted carbaldehyde O-(C₁-C₈'-alkyl)oxime, substituted or non-substituted C₁-C₈'-alkyl, substituted or non-substituted d-C₈'-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted d-C₈'-alkoxy, substituted or non-substituted d-C₈'-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted aryloxy.

4. Compound according to anyone of claims 1 to 4, wherein Y¹, Y², Y³ and Y⁴ independently represent a hydrogen atom or a fluorine atom.

5. Compound according to anyone of claims 1 to 4, wherein n represents 1.

6. Compound according to anyone of claims 1 to 5, wherein R¹ and R² independently represent a hydrogen atom, a halogen atom, substituted or non-substituted Ci-C₈'-alkyl.

7. Compound according to anyone of claims 1 to 6, wherein T represents a substituted or non-substituted heterocycl group that is selected in the list consisting of T²⁷ to T³².

8. Compound according to anyone of claims 1 to 7, wherein X¹ to X⁴ independently represent a hydrogen atom, a halogen atom, a substituted or non-substituted carbaldehyde O-(C₁-C₈'-alkyl)oxime, substituted or non-substituted d-C₈'-alkyl, substituted or non-substituted C₃-C₈'-cycloalkyl, substituted or non-substituted Ci-C₈'-halogenoalkyl having 1 to 5 halogen atoms, substituted or non-substituted C₃-C₈'-halogenocycloalkyl having 1 to 5 halogen atoms, a C₂'-C₈'-alkenyl, substituted or non-substituted C₂'-C₈'-alkynl, substituted or non-substituted Ci-C₈'-alkyl, substituted or non-substituted Ci-C₈'-halogenoalkoxy having 1 to 5 halogen atoms.

9. Compound according to anyone of claims 1 to 8, wherein W¹ represents a hydrogen atom, a halogen atom, a cyano group, substituted or non-substituted Ci-C₈'-alkyl, substituted or non-substituted Ci-C₈'-halogenoalkoxy having 1 to 5 halogen atoms, a halogen atom, a cyano group, substituted or non-substituted Ci-C₈'-halogenoalkyl having 1 to 5 halogen atoms.
halogen atoms, a \( \text{C}_2\text{C}_8 \)-alkenyl, substituted or non-substituted \( \text{C}_2\text{C}_8 \)-alkynyl, substituted or non-substituted \( \text{C}_1\text{C}_8 \)-alkoxy, substituted or non-substituted \( \text{C}_1\text{C}_8 \)-halogenoalkoxy having 1 to 5 halogen atoms, substituted or non-substituted phenoxy, substituted or non-substituted ary1, substituted or non-substituted ary1-\([\text{C}_1\text{C}_8]\)-alkyl.

10. Compound according to anyone of claims 1 to 9, wherein \( A \) is selected in the list consisting of \( A^2, A^6, A^8, A^{11} \) to \( A^{18} \).

11. Compound according to anyone of claims 1 to 10, wherein \( Z^1 \) represents an amino group, a halogen atom, a formylamino group, a \( \text{C}_2\text{C}_8 \)-alkenyl, substituted or non-substituted \( \text{C}_2\text{C}_8 \)-alkynyl, substituted or non-substituted \( \text{dC}_8 \)-alkylamino, substituted or non-substituted \( \text{(C-tC}_8 \)-alkoxycarbonyl)amino, substituted or non-substituted \( \text{(C}_5\text{C}_8 \)-cycloalkoxycarbonyl)amino, substituted or non-substituted \( \text{(C}_2\text{C}_8 \)-alkylloxycarbonyl)amino, substituted or non-substituted \( \text{(C}_5\text{C}_8 \)-alkylcarbonylamino, substituted or non-substituted \( \text{(arylcarbonyl)amino, substituted or non-substituted \( \text{(heterocyclylcarbonyl)amino, substituted or non-substituted \( \text{(aryloxycarbonyl)amino, substituted or non-substituted \( \text{(heterocyclyloxycarbonyl)amino.}\n
12. Compound according to anyone of claims 1 to 11, wherein \( Z^2 \) to \( Z^9 \) are independently selected in the list consisting of hydrogen, halogen, methyl, ethyl, isopropyl, isobutyl, terbutyl, trifluoromethyl, difluoromethyl, allyl, ethynyl, propargyl, cyclopropyl, methoxy, trifluoromethoxy, acetyl, and cyano.

13. Compound according to anyone of claims 1 to 12, wherein \( K^1 \) and \( K^2 \) are independently selected in the list consisting of hydrogen, methyl, ethyl, isopropyl, isobutyl, terbutyl, allyl, propargyl, cyclopropyl, acetyl, trifluoroacetyl and mesyl.

14. Compound according to anyone of claims 1 to 13, wherein \( Y^5 \) to \( Y^8 \) independently represent a hydrogen atom, a halogen atom, substituted or non-substituted \( \text{dC}_8 \)-alkyl.

15. A method for the preparation of compounds according to anyone of claims 1 to 14, according to the following reaction schemes:
wherein $T$, $A$, $Q_1$, $Q_2$, $Y_1$, $Y_2$, $R_1$, $R_2$ and $n$ are as defined in claims 1 to 14 and LG represents a leaving group selected in the list consisting of a halogen atom or other customary nucleofugal groups.

16. A fungicide composition comprising, as an active ingredient, an effective amount of a compound of formula (I) according to claims 1 to 14 and an agriculturally acceptable support, carrier or filler.

17. A method for controlling phytopathogenic fungi of plants, crops or seeds, characterized in that an agronomically effective and substantially non-phytotoxic quantity of a compound according to claims 1 to 14 or a fungicide composition according to claim 16 is applied to the soil where plants grow or are capable of growing, to the leaves and/or the fruit of plants or to the seeds of plants.