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EU-Beurteilungsbericht Spiroxamine

Rechtliche Regelungen der Europäischen Union zu Pflanzenschutzmitteln und deren Wirkstoffen Band D 5

Review Report Spiroxamin
Legal Regulations of the European Union
for Plant Protection Products and their Active Substances
Volume D 5

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Vorwort

Für neue Wirkstoffe werden die EU-Mitgliedstaaten in den Richtlinien zur Aufnahme der Wirkstoffe in Anhang I verpflichtet, den nach Abschluss aller Prüfungen erstellten Beurteilungsbericht (Review Report) mit allen Anlagen (mit Ausnahme von vertraulichen Informationen im Sinne von Artikel 14 der Richtlinie 91/414/EWG) allen Interessierten zur Verfügung zu stellen oder auf besonderen Antrag zugänglich zu machen. Für alte Wirkstoffe ergibt sich diese Verpflichtung für die Mitgliedstaaten bereits aus Artikel 7 Absatz 6 Unterabsatz 2 der Verordnung (EWG) Nr. 3600/92.

Die Mitgliedstaaten und die Europäische Kommission haben vereinbart, dass die Beurteilungsberichte, einschließlich der zum Teil sehr umfangreichen Hintergrunddokumente, vorzugsweise beim berichterstattenden Mitgliedstaat angefordert oder eingesehen werden sollen.

Die Biologische Bundesanstalt stellt die Beurteilungsberichte als Berichte aus der Biologischen Bundesanstalt für Land- und Forstwirtschaft als Band D in der Reihe "Rechtliche Regelungen der Europäischen Union zu Pflanzenschutzmitteln und deren Wirkstoffen" über den Saphir Verlag gegen Erstattung der Unkosten zur Verfügung. Das vorliegende 5. Heft dieser Reihe (Band D 5) enthält nicht die Hintergrunddokumente A, B und C des Beurteilungsberichtes. Diese können bei Bedarf bei der BBA eingesehen oder für die Wirkstoffe, für die Deutschland Berichterstatter ist, ebenfalls beim Saphir Verlag gegen Erstattung der Unkosten bezogen werden. Für Spiroxamine war Deutschland Berichterstatter.

In der Reihe "Rechtliche Regelungen der Europäischen Union zu Pflanzenschutzmitteln und deren Wirkstoffen" sind bisher erschienen:

Heft	**Rechtliche Regelungen der Europäischen Union zu Pflanzenschutzmitteln und deren Wirkstoffen**
35/97	Band A: Richtlinie 91/414/EWG und diesbezügliche Protokolle (3. Auflage, Stand: 01. November 1997)
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Preface

According to the Directives for the inclusion of active substances in Annex I with regard to new active substances, EU-Member States are obliged to keep available or make available on special request the review report which is prepared after completion of all evaluations including its appendices (excluding confidential information, in accordance with article 14 of Directive 91/414/EEC) to all interested parties. For existing active substance this obligation for Member States already arises from article 7 (6) subparagraph 2 of Regulation (EEC) No 3600/92.

Member States and the European Commission agreed that requests of review reports including their background documents which are partly very voluminous, shall preferably be addressed to the Rapporteur Member State.

The Federal Biological Research Centre makes available review reports as reports from the Federal Biological Research Centre for Agriculture and Forestry, Volume D of the series "Legal Regulations of the European Union for Plant Protection Products and their Active Substances" via Saphir Verlag against reimbursement of expenses. The present 5th report belonging to this series (Volume D 5) does not include background documents A, B and C of the review report. If the need arises, their inspection at the BBA is possible or they may be also obtained from Saphir Verlag against reimbursement of expenses, however, only for active substances with Germany as Rapporteur Member State. For spiroxamine Germaxy acted as Rapporteur Member State.

In the series Legal Regulations of the European Union for Plant Protection Products and their Active Substances the following Reports have been published:

Report	**Legal Regulations of the European Union for Plant Protection Products and their Active Substances**
35/97	Volume A: Directive 91/414/EEC and respective Protocols (3rd Edition, date: 1 November 1997)
36/97	Volume B: Directives, Regulations, Decisions and Protocols regarding the Evaluation of Active Substances (3rd Edition, date: 1 November 1997)
	Volume C: *In Progress*

RICHTLINIE 1999/73/EG DER KOMMISSION

vom 19. Juli 1999

zur Aufnahme des Wirkstoffs Spiroxamin in Anhang I der Richtlinie 91/414/EWG des Rates über das Inverkehrbringen von Pflanzenschutzmitteln

(Text von Bedeutung für den EWR)

IE KOMMISSION DER EUROPÄISCHEN GEMEINSCHAFTEN —

estützt auf den Vertrag zur Gründung der Europäischen emeinschaft,

estützt auf die Richtlinie 91/414/EWG des Rates vom 15. Juli 991 über das Inverkehrbringen von Pflanzenschutzmitteln (1), uletzt geändert durch die Richtlinie 1999/1/EG der Kommis- on (2), im folgenden „die Richtlinie" genannt, insbesondere auf rtikel 6 Absatz 1,

Erwägung nachstehender Gründe:

) Die deutschen Behörden haben am 13. Oktober 1995 gemäß Artikel 6 Absatz 2 der Richtlinie 91/414/EWG einen Antrag der Bayer AG, im folgenden „der Antragsteller" genannt, auf Aufnahme des Wirkstoffs Spiroxamin in Anhang I der Richtlinie erhalten.

) Gemäß Artikel 6 Absatz 3 der Richtlinie hat die Kommission in ihrer Entscheidung 96/522/EG vom 29. Juli 1996 über die grundsätzliche Anerkennung der Vollständigkeit der Unterlagen, die zur eingehenden Prüfung im Hinblick auf eine etwaige Aufnahme von Spiroxamin in Anhang I der Richtlinie 91/414/EWG des Rates über das Inverkehrbringen von Pflanzenschutzmitteln eingereicht wurden (3) bestätigt, daß die eingereichten Unterlagen grundsätzlich die an die Daten und Informationen gestellten Anforderungen des Anhangs II bzw. für ein Pflanzenschutzmittel, das diesen Wirkstoff enthält, diejenigen des Anhangs III der Richtlinie erfüllen.

) Gemäß Artikel 5 Absatz 1 der Richtlinie ist ein Wirkstoff für einen Zeitraum von höchstens zehn Jahren in Anhang I aufzunehmen, wenn angenommen werden kann, daß keine schädlichen Auswirkungen auf die Gesundheit von Mensch und Tier oder auf das Grundwasser bzw. keine unannehmbaren Auswirkungen auf die Umwelt eintreten werden.

) Die Auswirkungen von Spiroxamin auf die menschliche Gesundheit und auf die Umwelt wurden gemäß Artikel 6 Absätze 2 und 4 der Richtlinie für die von dem Antragsteller vorgeschlagenen Anwendungen geprüft. In seiner Funktion als berichterstattender Mitgliedstaat hat Deutschland der Kommission am 5. Februar 1997 den betreffenden Bewertungsbericht übermittelt.

) Der vorgelegte Bewertungsbericht wurde von den Mitgliedstaaten und der Kommission im Rahmen des Ständigen Ausschusses für Pflanzenschutz geprüft. Diese Prüfung wurde am 12. Mai 1999 in Form des Prüfungsberichts der Kommission für Spiroxamin abgeschlossen. Der Bericht muß möglicherweise unter Berücksichtigung technischer und wissenschaftlicher Entwicklungen aktualisiert werden. In diesem Fall sind auch die Bedingungen für die Aufnahme von Spiroxamin in Anhang I der Richtlinie 91/414/EWG gemäß deren Artikel 6 Absatz 1 zu ändern.

(6) Die Unterlagen und die aus der Prüfung hervorgegangenen Informationen wurden auch dem Wissenschaftlichen Pflanzenausschuß zur Stellungnahme vorgelegt. Dieser Ausschuß hat seine Stellungnahme am 18. Dezember 1998 (4) abgegeben. Der Ausschuß stellte fest, daß potentielle Risiken für Algen, Sedimentlebewesen und möglicherweise Pflanzen bestehen. Deshalb müssen gegebenenfalls risikosenkende Maßnahmen getroffen werden. Hinsichtlich der Exposition bei der Arbeit kam der Ausschuß zu der Schlußfolgerung, daß die geschätzten Grenzwerte bei Verwendung von Schutzkleidung als annehmbar betrachtet werden können. Daher müssen geeignete Schutzmaßnahmen getroffen werden, um die Sicherheit des Personals zu gewährleisten. Diese Schlußfolgerungen stimmen auch mit den Punkten überein, die bei der Prüfung im Rahmen des Ständigen Ausschusses für Pflanzenschutz besonders hervorgehoben wurden.

(7) Die Bewertungen haben ergeben, daß davon ausgegangen werden kann, daß den betreffenden Wirkstoff enthaltende Pflanzenschutzmittel im allgemeinen die Anforderungen gemäß Artikel 5 Absatz 1 Buchstaben a) und b) und Absatz 3 der Richtlinie erfüllen, insbesondere hinsichtlich der geprüften Anwendungen. Daher muß der betreffende Wirkstoff in Anhang I aufgenommen werden, damit die Zulassung von Pflanzenschutzmitteln mit dem betreffenden Wirkstoff in allen Mitgliedstaaten gemäß den Bestimmungen der Richtlinie gewährt werden kann.

(8) Nach der Aufnahme ist den Mitgliedstaaten eine angemessene Frist einzuräumen, um die Bestimmungen der Richtlinie 91/414/EWG über spiroxaminhaltige Pflanzenschutzmittel umzusetzen und insbesondere innerhalb dieser Frist bereits bestehende vorläufige Zulassungen zu überprüfen bzw. vor Ablauf der Frist neue Zulassungen gemäß der Richtlinie zu erteilen. Für Pflanzenschutzmittel, die Spiroxamin und andere in Anhang I aufgeführte Wirkstoffe enthalten, kann auch eine längere Frist erforderlich sein.

(1) ABl. L 230 vom 19.8.1991, S. 1.
(2) ABl. L 21 vom 28.1.1999, S. 21.
(3) ABl. L 220 vom 30.8.1996, S. 23.
(4) SCP/Spirox/004-endg. vom 18. Januar 1999.

(9) Es ist vorzuschreiben, daß die Mitgliedstaaten den endgültigen Prüfungsbericht (mit Ausnahme von vertraulichen Informationen im Sinne des Artikels 14 der Richtlinie) allen Betroffenen zur Einsicht zur Verfügung stellen oder zugänglich machen.

(10) Der Prüfungsbericht ist erforderlich für die ordnungsgemäße Umsetzung bestimmter Teile der einheitlichen Grundsätze gemäß Anhang VI der Richtlinie durch die Mitgliedstaaten, soweit sich diese Grundsätze auf die Bewertung der Angaben nach Anhang II beziehen, die zwecks Aufnahme des Wirkstoffs in Anhang I der Richtlinie vorgelegt wurden.

(11) Die in dieser Richtlinie vorgesehenen Maßnahmen entsprechen der Stellungnahme des Ständigen Ausschusses für Pflanzenschutz vom 12. Mai 1999 —

HAT FOLGENDE RICHTLINIE ERLASSEN:

Artikel 1

Spiroxamin wird hiermit gemäß dem Anhang der vorliegenden Richtlinie als Wirkstoff in Anhang I der Richtlinie 91/414/EWG aufgenommen.

Artikel 2

(1) Die Mitgliedstaaten erlassen die erforderlichen Rechts- und Verwaltungsvorschriften, um dieser Richtlinie bis spätestens 1. Januar 2000 nachzukommen.

(2) Bei Pflanzenschutzmitteln, die Spiroxamin zusammen mit einem anderen in Anhang I der Richtlinie 91/414/EWG aufgeführten Wirkstoff enthalten, wird die Frist gemäß Absatz 1 jedoch so weit verlängert, als die Vorschriften der Richtlinie über die Aufnahme dieses anderen Wirkstoffes in den genannten Anhang I eine längere Umsetzungsfrist vorsehen.

(3) Die Mitgliedstaaten stellen den Prüfungsbericht (mit Ausnahme von vertraulichen Informationen im Sinne von Artikel 14 der Richtlinie 91/414/EWG) allen Betroffenen zur Einsicht zur Verfügung oder machen ihn gegebenenfalls auf besonderen Antrag zugänglich.

(4) Wenn die Mitgliedstaaten diese Vorschriften erlassen, nehmen sie in den Vorschriften selbst oder durch einen Hinweis bei der amtlichen Veröffentlichung auf diese Richtlinie Bezug. Die Mitgliedstaaten regeln die Einzelheiten dieser Bezugnahme.

Artikel 3

Diese Richtlinie tritt am 1. September 1999 in Kraft.

Artikel 4

Diese Richtlinie ist an alle Mitgliedstaaten gerichtet.

Brüssel, den 19. Juli 1999

Für die Kommission

Franz FISCHLER

Mitglied der Kommission

ANHANG

SPIROXAMIN

1. Identität:

   (IUPAC) (8-tert-butyl-1,4-dioxa-spiro [4,5] decan-2-ylmethyl)-ethyl-propyl-amin

2. Zu erfüllende Bedingungen:

   2.1. Der Wirkstoff muß eine Reinheit von mindestens 940 g/kg technisches Erzeugnis (Diastereoisomere A und B zusammen) aufweisen.

   2.2. Nur Verwendungen als Fungizid dürfen zugelassen werden.

   2.3. Bei der Anwendung der einheitlichen Grundsätze gemäß Anhang VI sind die Schlußfolgerungen des vom Ständigen Ausschuß für Pflanzenschutz am 12. Mai 1999 abgeschlossenen Prüfungsberichts über Spiroxamin und insbesondere dessen Anlagen I und II zu berücksichtigen. Ferner müssen die Mitgliedstaaten bei dieser Gesamtbewertung

   — besonders auf die Sicherheit des Personals achten und dafür sorgen, daß die Zulassungsbedingungen geeignete Schutzmaßnahmen umfassen,

   sowie

   — besonders auf die Auswirkungen auf Wasserorganismen achten und dafür sorgen, daß die Zulassungsbedingungen gegebenenfalls Maßnahmen zur Senkung des Risikos umfassen.

3. Aufnahme befristet bis: 1. September 1999.

BERICHTIGUNGEN

Berichtigung der Richtlinie 1999/73/EG der Kommission vom 19. Juli 1999 zur Aufnahme des Wirkstoffs Spiroxamin in Anhang I der Richtlinie 91/414/EWG des Rates über das Inverkehrbringen von Pflanzenschutzmitteln

(Amtsblatt der Europäischen Gemeinschaften L 206 vom 5. August 1999)

Seite 18, Anhang, Nummer 3 „Aufnahme befristet bis"

anstatt: „1. September 1999"

muß es heißen: „1. September 2009".

COMMISSION DIRECTIVE 1999/73/EC

of 19 July 1999

including an active substance (spiroxamine) in Annex I to Council Directive 91/414/EEC concerning the placing of plant protection products on the market

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market [1], as last amended by Council Directive 99/1/EC [2], hereafter referred to as the Directive, and in particular Article 6(1);

(1) Whereas in accordance with Article 6(2) of Directive 91/414/EEC Germany received on 13 October 1995 an application from Bayer AG, hereafter referred to as the applicant, for the inclusion of the active substance spiroxamine in Annex I to the Directive;

(2) Whereas in accordance with the provisions of Article 6(3) of the Directive the Commission confirmed in Decision 96/522/EC of 29 July 1996 recognising in principle the completeness of the dossier submitted for detailed examination in view of the possible inclusion of spiroxamine in Annex I to Council Directive 91/414/EEC concerning the placing of plant protection products on the market [3] that the dossier submitted for spiroxamine could be considered as satisfying, in principle, the data and information requirements of Annex II and for a plant protection product containing this active substance, of Annex III to the Directive;

(3) Whereas, in accordance with Article 5(1) of the Directive, an active substance should be included for a period not exceeding 10 years in Annex I when it may be expected that there will not be any harmful effects on human or animal health or on groundwater or any unacceptable influence on the environment;

(4) Whereas for spiroxamine, the effects on human health and the environment have been assessed, in accordance with the provisions of Article 6(2) and (4) of the Directive, for the uses proposed by the applicant; whereas Germany acting as nominated rapporteur Member State, has submitted to the Commission on 5 February 1997 the assessment report concerned;

(5) Whereas the submitted report has been reviewed by the Member States and the Commission within the Standing Committee on Plant Health; whereas this review has been finalised on 12 May 1999 in the format of the Commission review report for spiroxamine; whereas it may be necessary to update this report to take account of technical and scientific developments; whereas in such case the conditions for the inclusion of spiroxamine in Annex I to Directive 91/414/EEC will also need to be amended pursuant to Article 6(1) of that Directive;

(6) Whereas the dossier and the information from the review have also been submitted to the Scientific Committee on Plants for opinion; whereas this Committee has given its opinion on 18 December 1998 [4]; whereas this Committee identified potential risks to algae, sediment - dwelling organisms and possibly plants; whereas therefore, where appropriate, risk mitigation measures must be taken; whereas for operator exposure, this Committee concluded that with the use of personal protective equipment (PPE), the estimated operator exposure was acceptable; whereas therefore appropriate protective measures will need to be taken in order to ensure operator safety; whereas these conclusions are also consistent with the issues highlighted in the review carried out within the framework of the Standing Committee on Plant Health;

(7) Whereas it has appeared from the various examinations made that plant protection products containing the active substance concerned may be expected to satisfy in general the requirements laid down in Article 5(1)(a), (b) and (3) of the Directive, in particular with regard to the uses which were examined; whereas therefore it is necessary to include the active substance concerned in Annex I, in order to ensure that in all Member States the authorisations of plant protection products containing the active substance concerned can be granted in accordance with the provisions of the said Directive;

(8) Whereas after inclusion a reasonable period is necessary to permit Member States to implement the provisions of Directive 91/414/EEC on plant protection products containing spiroxamine and in particular to review, within this period, existing provisional authorisations or to grant, by the end of this period at the latest, new authorisations in accordance with the provisions of the Directive; whereas a longer period may also be required for plant protection products containing spiroxamine and other active substances included in Annex I;

[1] OJ L 230, 19.8.1991, p. 1.
[2] OJ L 21, 28.1.1999, p. 21.
[3] OJ L 220, 30.8.1996, p. 23.
[4] SCP/Spirox/004-final dated 18 January 1999.

(9) Whereas it is appropriate to provide that the finalised review report (except for confidential information in the meaning of Article 14 of the Directive) is kept available or made available by the Member States for consultation by any interested parties;

(10) Whereas the review report is required for the proper implementation by the Member States, of several sections of the uniform principles laid down in Annex VI to the Directive, where these principles refer to the evaluation of the Annex II data which were submitted for the purpose of the inclusion of the active substance in Annex I of the Directive;

(11) Whereas the measures provided for in this Directive are in accordance with the opinion of the Standing Committee on Plant Health delivered on the 12 May 1999;

HAS ADOPTED THIS DIRECTIVE:

Article 1

Spiroxamine is hereby designated as an active substance in Annex I to Directive 91/414/EEC, as set out in the Annex hereto.

Article 2

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive, at the latest by 1 January 2000.

2. However, for plant protection products containing spiroxamine together with another active substance which is in Annex I to Directive 91/414/EEC, the period referred to in paragraph 1 is extended to the extent that a longer implementation period is provided for by the provisions laid down in the Directive concerning the inclusion of the other active substance in Annex I to Directive 91/414/EEC.

3. Member States shall keep available the review report (except for confidential information in the meaning of Article 14 of the Directive) for consultation by any interested parties or shall make it available to them on specific request.

4. When Member States adopt the measures, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be laid down by the Member States.

Article 3

This Directive shall enter into force on 1 September 1999.

Article 4

This Directive is addressed to the Member States.

Done at Brussels, 19 July 1999.

For the Commission

Franz FISCHLER

Member of the Commission

ANNEX

SPIROXAMINE

1. Identity

   (IUPAC) (8-tert-Butyl-1,4-dioxa-spiro [4.5] decan-2-ylmethyl)-ethyl-propyl-amine

2. Conditions to be fulfilled:

   2.1. The active substance shall have a minimum purity of 940 g/kg technical product (diastereomers A and B combined).

   2.2. Only uses as a fungicide may be authorised.

   2.3. For the implementation of the uniform principles of Annex VI, the conclusions of the review report on spiroxamine, and in particular the Appendices I and II thereof, as finalised in the Standing Committee on Plant Health on 12 May 1999 shall be taken into account. Furthermore, in this overall assessment Member States:

   — must pay particular attention to operator safety and must ensure that the conditions of authorisation include appropriate protective measures,

   and,

   — must pay particular attention to the impact on aquatic organisms and must ensure that the conditions of authorisation include, where appropriate, risk mitigation measures.

3. Expiry date of the inclusion: 1 September 1999.

CORRIGENDA

Corrigendum to Commission Regulation (EC) No 1664/1999 of 28 July 1999 amending Regulation (EEC) 689/92 fixing the procedure and conditions for the taking over of cereals by intervention agencies

(Official Journal of the European Communities L 197 of 29 July 1999)

Page 28, Article 1, first line:

for: 'Regulation (EEC) No 682/92 is amended as follows:',

read: 'Regulation (EEC) No 689/92 is amended as follows:'.

Corrigendum to Commission Directive 1999/73/EC of 19 July 1999 including an active substance (spiroxamine) in Annex I to Council Directive 91/414/EEC concerning the placing of plant protection products on the market

(Official Journal of the European Communities L 206 of 5 August 1999)

On page 18, in the Annex, at point 3:

for: 'Expiry date of the inclusion: 1 September 1999',

read: 'Expiry date of the inclusion: 1 September 2009'.

FINAL

Review report for the active substance **spiroxamine**

Finalised in the Standing Committee on Plant Health at its meeting on 12 May 1999 in view of the inclusion of spiroxamine in Annex I of Directive 91/414/EEC.

1. Procedure followed for the evaluation process

This review report has been established as a result of the evaluation of the new active substance spiroxamine, made in the context of the work provided for in Articles 5 and 6 of Directive 91/414/EEC concerning the placing of plant protection products on the market, with a view to the possible inclusion of this substance in Annex I to the Directive.

In accordance with the provisions of Article 6(2) of Directive 91/414/EEC, the German authorities received on 13 October 1995 an application from Bayer AG, hereafter referred as the applicant, for the inclusion of the active substance spiroxamine in Annex I to the Directive. The German authorities indicated to the Commission on 22 March 1996 the results of a first examination on the completeness of the dossier, with regard to the data and information requirements provided for in Annex II and, for at least one plant protection product containing the active substance concerned, in Annex III to the Directive. Subsequently, and in accordance with the requirements of Article 6(2), a dossier on spiroxamine was distributed to the Member States and the Commission.

The Commission referred the dossier to the Standing Committee on Plant Health in the meeting of the working group 'legislation' thereof on 22 April 1996, during which the Member States confirmed the receipt of the dossier.

In accordance with the provisions of Article 6(3), which requires the confirmation at Community level that the dossier is to be considered as satisfying, in principle, the data and information requirements provided for in Annex II and, for at least one plant protection product containing the active substance concerned, in Annex III to the Directive and in accordance with the procedure laid down in Article 20 of the Directive, the Commission confirmed in its Decision 96/522/EC[1] of 29 July 1996 that these requirements were satisfied.

Within the framework of that decision and with a view to the further organisation of the works related to the detailed examination of the dossier provided for in Article 6(2) and (4) of Directive 91/414/EEC, it was agreed between the Member States and the Commission that Germany would, as rapporteur Member State, carry out the detailed examination of the dossier and report the conclusions of its examination accompanied by any recommendations on the inclusion or non-inclusion and any conditions relating thereto, to the Commission as soon as possible and at the latest within a period of one year.

Germany submitted to the Commission on 5 February 1997 the report of its detailed scientific examination, hereafter referred to as the monograph, including, as required, a recommendation concerning the possible inclusion of spiroxamine in Annex I to the Directive.

On receipt of the monograph, the Commission forwarded it for consultation to all the Member States as well as to Bayer AG being the applicant on 11 February 1997.

The Commission organised further an intensive consultation of specialised scientific experts from a representative number of Member States, to review the monograph and the comments received thereon (peer review), in particular on each of the following disciplines:

- identity and physical /chemical properties ;
- fate and behaviour in the environment ;

[1] OJ N° L220, 30.08.96, p.23.

- ecotoxicology ;
- mammalian toxicology ;
- residues and analytical methods ;
- regulatory questions.

The meetings for this consultation were organised on behalf of the Commission by the Pesticide Safety Directorate (PSD) in York, United Kingdom, from April to June 1997.

The report of the peer review (i.e. full report) was circulated, for further consultation, to Member States and the sole applicant on 30 July 1997.

The dossier, monograph and the peer review report (i.e. full report) including in particular an outline résumé of the remaining technical questions, were referred to the Standing Committee on Plant Health, and specialised working groups of this Committee, for final examination, with participation of experts from the 15 Member States. This final examination took place from September 1997 to May 1998, and was finalised in the meeting of the Standing Committee on 12 May 1999.

The present review report contains the conclusions of this final examination; given the importance of the monograph, the peer review report (i.e. full report) and the comments and clarifications submitted after the peer review as basic information for the final examination process, these documents are considered respectively as background documents A, B and C to this review report and are part of it.

These documents were also submitted to the Scientific Committee for Plants for a separate consultation. The report of this Committee was formally adopted on 18 December 1998 (SCP/SPIROX/004-Final[2])

2. Purposes of this review report

This review report, including the background documents and appendices thereto, have been developed and finalised in support of the Directive 1999/73/99/EEC concerning the inclusion of spiroxamine in Annex I to Directive 91/414/EEC, and to assist the Member States in decisions on individual plant protection products containing spiroxamine they have to take in accordance with the provisions of that Directive, and in particular the provisions of article 4(1) and the uniform principles laid down in Annex VI.

This review report provides also for the evaluation required under Section A.2.(b) of the above mentioned uniform principles, as well as under several specific sections of part B of these principles. In these sections it is provided that Member States, in evaluating applications and granting authorisations, shall take into account the information concerning the active substance in Annex II of the directive, submitted for the purpose of inclusion of the active substance in Annex I, as well as the result of the evaluation of those data.

In parallel with the provisions of Article 7(6) of Regulation 3600/92 for existing active substances, the Commission and the Member States will keep available or make available this review report for consultation by any interested parties or will make it available to them on their specific request. Moreover the Commission will send a copy of this review report (not including the background documents) to the applicant.

The information in this review report is, at least partly, based on information which is confidential and/or protected under the provisions of Directive 91/414/EEC. It is therefore recommended that this review report would not be accepted to support any registration outside the context of Directive 91/414/EEC, e.g. in third countries, for which the applicant has not demonstrated possession of regulatory access to the information on which this review report is based.

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[2] Opinion of the scientific committee on plants regarding the inclusion of spiroxamine in annex I to council directive 91/414/EEC concerning the placing of plant protection products on the market.

3. Overall conclusion in the context of Directive 91/414/EEC

The overall conclusion from the evaluation is that it may be expected that plant protection products containing spiroxamine will fulfil the safety requirements laid down in Article 5(1)(a) and (b) and (3) of Directive 91/414/EEC. This conclusion is however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 of this report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive 91/414/EEC, for each spiroxamine containing plant protection product for which Member States will grant or review the authorisation.

Furthermore, these conclusions were reached within the framework of the following uses which were proposed and supported by the applicant:

- **foliar fungicide for use on barley, wheat, rye and triticale**

Extension of the use patterns beyond those described above will require an evaluation at Member State level in order to establish whether the proposed extensions of use can satisfy the requirements of Article 4(1) and of the uniform principles laid down in Annex VI of Directive 91/414/EEC.

With particular regard to residues, this current review has established that the residues arising from the proposed uses, consequent on application consistent with good plant protection practice, have no harmful effects on human or animal health. The Theoretical Maximum Daily Intake (TMDI) for a 60 kg adult is 7 % of the Acceptable Daily Intake (ADI), based on the FAO/WHO European Diet (August 1994). This intake value reflects the current use pattern for this active substance.

The review has identified acceptable exposure scenarios for operators, workers and bystanders, which require, however, confirmation for each plant protection product and use scenario in accordance with the relevant sections of the above mentioned uniform principles.

The review has also concluded that under the proposed and supported conditions of use there are no unacceptable effects on the environment, as provided for in Article 4 (1) (b) (iv) and (v) of Directive 91/414/EEC, provided that certain conditions are taken in to account as detailed in Section 6 of this report.

4. Identity and Physical/chemical properties

The main identity and the physical/chemical properties of spiroxamine are given in Appendix I.

The active substance shall have a minimum purity of 940 g/kg technical product (diastereomers A and B combined).

The review has established that for the active substance notified by the applicant (Bayer AG), none of the manufacturing impurities considered are, on the basis of information currently available, of toxicological or environmental concern.

5. Endpoints and related information

In order to facilitate Member States, in granting or reviewing authorisations, to apply adequately the provisions of Article 4(1) of Directive 91/414/EEC and the uniform principles laid down in Annex VI of that Directive, the most important endpoints as identified during the evaluation process are listed in Appendix II.

6. Particular conditions to be taken into account on short-term basis by Member States in relation to the granting of authorisations of plant protection products containing spiroxamine

On the basis of the proposed and supported uses examined in this review, two particular issues have been identified, at this time, which require particular attention by the Member States and which are highlighted at the level of the Annex I inclusion for this active substance.

- **operator exposure** Member States must pay particular attention to the protection of operators. Acceptable uses have been identified when appropriate protective measures were used. Appropriate protective measures must therefore be applied when Member States grant authorisations.

- **aquatic organisms**: Member States must pay particular attention to the risks to algae, sediment dwelling organisms and possibly plants if this active substance is applied directly adjacent to surface waters. Risk mitigation measures (e.g. buffer zones) should where appropriate be applied by the Member States when granting authorisations.

7. List of studies to be generated

No further studies were identified which were considered at this stage, and under the current inclusion conditions necessary in relation to the inclusion of spiroxamine in Annex I.

8. Information on studies with claimed data protection

For information of any interested parties, Appendix III gives information about the studies for which the applicant has claimed data protection and which are not present in the original dossier neither mentioned in the monograph. This information is only given to facilitate the operation of the provisions of Article 13 of Directive 91/414/EEC in the Member States. It is based on the best information available to the Commission services at the time this review report was prepared; but it does not prejudice any rights or obligations of Member States or operators with regard to its uses in the implementation of the provisions of Article 13 of the Directive 91/414/EEC neither does it commit the Commission.

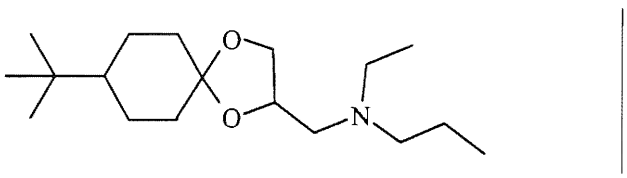
9. Updating of this review report

The technical information in this report may require periodic updating to take account of technical and scientific developments as well as of the results of the examination of any information referred to the Commission in the framework of Articles 7, 10 or 11 of Directive 91/414/EEC. Such adaptations will be examined and finalised in the Standing Committee on Plant Health, in connection with any amendment of the inclusion conditions for spiroxamine in Annex I of the Directive.

APPENDIX I

Identity, physical and chemical properties

SPIROXAMINE

Common name (ISO)	Spiroxamine
Chemical name (IUPAC)	(8-tert-Butyl-1,4-dioxa-spiro [4.5] decan-2-ylmethyl)-ethyl-propyl-amine
Chemical name (CA)	8-(1,1-Dimethylethyl)-N-ethyl-N-propyl-1,4-dioxaspirol [4.5] decane-2-methanamine
CIPAC No	572
CAS No	1181134-30-8 (unstated stereochemistry)
EEC No	Not allocated
FAO SPECIFICATION	-
Minimum purity	940 g/kg (diastereomers A and B combined)
Molecular formula	$C_{18}H_{35}NO_2$
Molecular mass	297.5
Structural formula  **Diastereomer A** **Diastereomer B**	

Melting point	No freezing point down to -170 °C
Boiling point	Decomposition above 120 °C
Appearance	Light brown oily liquid (manufactured)
Relative density	Mixture of diastereomers A + B (990 g/kg; 53 % A + 46% B): 0.930 at 20 °C
Vapour pressure	20 °C: Diastereomer A: $3.0 \cdot 10^{-3}$ - $4.0 \cdot 10^{-3}$ Pa; Diastereomer B: $5.5 \cdot 10^{-3}$ - $5.7 \cdot 10^{-3}$ Pa
Henry's law constant	Diastereomer A: $2.5 \cdot 10^{-3}$ Pa·m³/mol; Diastereomer B: $5.0 \cdot 10^{-3}$ Pa·m³/mol
Solubility in water	pH 3 at 20 °C : > 200 g/l (mixture of diastereomers A + B) pH 7 at 20 °C : 470 mg/l (A), 340 mg/l (B) pH 9 at 20 °C: 14 mg/l (A), 10 mg/l (B)
Solubility in organic solvents	Mixture of diastereomers A + B: > 200 g/l at 20 °C in n-hexane, toluene, dichloromethane, 2-propanol, 1-octanol, polyethyleneglycol, polyethyleneglycol + ethanol, acetone, dimethylformamide
Partition co-efficient (log P_{OW})	pH 5 at 20 °C: 1.28 (A), 1.41 (B) pH 7 at 20 °C: 2.79 (A), 2.98 (B) pH 9 at 20 °C : 4.88 (A), 5.08 (B)
Hydrolytic stability (DT_{50})	pH 5, 7 and 9 at 25 °C: stable
Dissociation constant	pK_b: 6.9 (for diastereomers A and B separately);
Quantum yield of direct photo-transformation in water at S > 290 nm	$6.4 * 10^{-4}$
Flammability	not flammable
Explosive properties	not explosive
UV/VIS absorption (max.)	No maximum of absorbance between 200 nm - 400 nm
Photostability in water (DT_{50})	50.5 d at pH 7

APPENDIX II

END POINTS AND RELATED INFORMATION

SPIROXAMINE

1 Toxicology and metabolism

Absorption, distribution, excretion and metabolism in mammals

Rate and extent of absorption:	High degree of absorption (70 % of the low dose)
Distribution:	Low dose: liver, thymus, adrenals; high dose: fat
Potential for accumulation:	No potential for accumulation; > 97 % of recovered radioactivity excreted within 48 h
Rate and extent of excretion:	Majority renally excreted depending on dose and sex; average ratio 1.8 : 1 (urine:faeces)
Metabolism in animals	Extensively metabolised, no unchanged compound excreted
Toxicologically significant compounds	Parent compound

Acute toxicity

Rat LD_{50} oral	374 mg/kg bw
Rat LD_{50} dermal	1068 mg/kg bw
Rat LC_{50} inhalation	2.0 mg/l air; slight pulmonary irritation potential
Skin irritation	Severe irritation* (the strong irritant action to skin and mucosal tissues which was observed for spiroxamine in toxicological studies must be seen in close relation with the alkalinity of this compound.)
Eye irritation	Not classified
Skin sensitization (test method used and result)	Sensitising, (M&K-test; Buehler)

Short term toxicity

Target / critical effect	Liver / eye / irritation-induced effects of mucosal epithelium*
Lowest relevant oral NOAEL / NOEL	12-mo oral dog:75 ppm (2.5 mg/kg bw/d)
Lowest relevant dermal NOAEL / NOEL	21-d derm. rabbit: 0.2 mg/kg bw/d
Lowest relevant inhalation NOAEL / NOEL	28-d inhal. rat: 0.0143 mg/l air (5.1 mg/kg bw/d)

Genotoxicity

No evidence of mutagenic or genotoxic potential

Long term toxicity and carcinogenicity

Target/critical effect	Liver / eye / irritation-induced effects of mucosal epithelium*
Lowest relevant NOAEL	24-mo oral rat: 70 ppm (4.2 mg/kg bw/d)
Carcinogenicity	No evidence of an oncogenic potential

Reproductive toxicity

Target / critical effect – Reproduction	Minor effects (fetal body weight and litter size) at parental toxic dosages
Target / critical effect – Developmental toxicity	Minor effects (delayed development) at maternal toxic dosages
Lowest relevant reproductive NOAEL / NOEL	80 ppm (9.2 mg/kg bw/d), multigeneration rat study
Lowest relevant developmental NOAEL / NOEL	20 mg/kg bw/d (rabbit)

Delayed neurotoxicity

No relevant effects

Other toxicological studies

None of toxicological relevance

Medical data

No negative experiences affecting the health of workers

Summary

	Value	Study	Safety factor
ADI	0.025 mg/kg bw/d	90-d & 12-mo oral dog	100
AOEL systemic	0.024 mg/kg bw/d	28-d oral rat	100, 70% absorption
AOEL inhalation	0.05 mg/kg bw/d	28-d inhal. rat	100
AOEL dermal	0.05 mg/kg bw/d	21-d derm. rabbit	100
ARfD (acute reference dose)	Not allocated (Not necessary)		

Dermal absorption

4 % for mixing/loading, 18.5 % for application

2 Fate and behaviour in the environment

2.1 Fate and behaviour in soil

Route of degradation

Aerobic:

Mineralization after 100 days:	44.7 % 44.5 % 30.7 %
Non-extractable residues after 100 days:	26.4 % 26.2 % 24.7 %
Relevant metabolites above 10 % of applied active substance: name and/or code % of applied rate (range and maximum)	Six metabolites formed in amounts lower than 10%.

Supplemental studies

Anaerobic:	Study not submitted, not necessary
Soil photolysis:	DT_{50} = 26 d Eight metabolites formed, each in amounts less than 10 %.
Remarks:	No particular remarks

Rate of degradation

Method of calculation Timme and Frehse (modified likehood)

Laboratory studies

DT_{50}lab (20 °C, aerobic):	35 d	1.5st Order	0.9849
	59 d	2nd Order	0.9823
	52 d	2nd Order	0.9944
DT_{90}lab (20 °C, aerobic):	> 100 d	14.3 % as after 100 d	
		27.4 % as after 100 d	
		24.9 % as after 100 d	

DT_{50}lab (10 °C, aerobic): Not submitted. Data can be obtained by calculation.

DT_{50}lab (20 °C, anaerobic): Not submitted, not required

Field studies

(country or region)

DT_{50f} from soil dissipation studies:	1 - 48 d
DT_{90f} with specified values for the respective order of the reaction (copied from Ecco full report)	DT_{90f}: 196 d (Sqrt 1st) <480 d (Sqrt 1st) 298 d (Sqrt 1st) 207 d (2nd order) 90 d (Sqrt 1st) 49 d (Sqrt 1st)

	197 d (Sqrt 1.5st) 69 d (Sqrt 1st) 93 d (Sqrt 1st) 78 d (2nd order) 430 d (2nd order) 488 d (Sqrt 2st) 145 d (Sqrt 1st) 221 d (Sqrt 1st)
Soil accumulation studies:	Not submitted, not required
Soil residue studies:	Not submitted, not required
Remarks	
e.g. effect of soil pH on degradation rate	No particular remarks

Adsorption/desorption

K_{oc} / K_{om}:

Loamy sand	709.9/411.8
Silt loam	1874.0/1087.0
Silty clay	6417.1/3722.2
Loamy sand	2415.3/1797
Sand	658.8/382.1

Mobility

Laboratory studies:

Column leaching:	Not submitted, not required
Aged residue leaching:	Ageing for 1 - 2 months 0.2 - 0.5 % applied radioactivity in leachate

Field studies:

Lysimeter/Field leaching studies:	Not submitted, not required
Remarks:	No particular remarks

2.2 Fate and behaviour in water

Abiotic degradation

Hydrolytic degradation:	No hydrolysis observed at pH 5 or 7. Slight hydrolysis at pH 9.
Relevant metabolites:	Spiroxamine is hydrolytically stable.
Photolytic degradation:	DT_{50} = 50.5 d 4 photodegradation products, each less than 5.3 %

Biological degradation

Ready biological degradability:	Not submitted, not required
Water/sediment study:	DT_{50} (water): 13 h or 12 h DT_{50} (whole system): 106 d or 28 d
Relevant metabolites - Residues in the water phase (% of applied) Maximum at day 0: At the end of the study at day 100: - Residues in the sediment (% of applied)	N-oxide Spiroxamine 11 % Not found Not found
Accumulation in water and/or sediment:	Not expected

Degradation in the saturated zone

Not submitted, not required

Remarks:

No particular remarks

2.3 Fate and behaviour in air

Volatility

Vapour pressure:	Diastereomer A: $4.0 \cdot 10^{-3}$ Pa Diastereomer B: $5.7 \cdot 10^{-3}$ Pa
Henry's law constant:	Diastereomer A: $2.5 \cdot 10^{-3}$ Pa·m^3/mol Diastereomer B: $5.0 \cdot 10^{-3}$ Pa·m^3/mol

Photolytic degradation

Direct photolysis in air:	DT_{50} = 50.5 d 4 photodegradation products observed
Photochemical oxidative degradation in air DT_{50}:	0.8 - 1.15 h (Atkinson) (12-h day and $1.5 \cdot 10^6$ OH radicals/cm^3)
Volatilisation	from plant surfaces under practical use conditions within 24 hours: 29.6, 35.1 and 12.4 % of applied dose.
Remarks:	No particular remarks

3 Ecotoxicology

Terrestrial Vertebrates

Acute toxicity to mammals:	LD_{50} = 460 mg/kg bw (Mouse)
Acute toxicity to birds:	LD_{50} = 565 mg/kg bw (Bobwhite quail)
Dietary toxicity to birds:	LC_{50} ~ 5000 ppm (Mallard duck)
Reproductive toxicity to birds:	NOEC = 30 ppm (Bobwhite quail)
Short term oral toxicity to mammals:	NOEC = 30 ppm (Rat, 28 d study)

Aquatic Organisms

Acute toxicity fish:	LC_{50} (*Lepomis macrochirus*) = 7.13 mg as/l
Long-term toxicity fish:	NOEC (Oncorhynchus mykiss) = 0.014 mg as/l
Bioaccumulation fish:	BCF: 71-87 (*Lepomis macrochirus*)
Acute toxicity invertebrate:	EC_{50} (*Daphnia magna*) = 6.1 mg as/l
Chronic toxicity invertebrate:	NOEC (Daphnia magna) = 0.1mg as/l
Acute toxicity algae:	EC_{50} (*Scenedesmus subspic.*) = 0.003 mg as/l
Chronic toxicity sediment dwelling organism:	NOEC 3.2 mg as/l (*Chironomus riparius*)

Honeybees

Acute oral toxicity:	LD_{50} = 100 µg as/bee
Acute contact toxicity:	LD_{50} = 4.2 µg as/bee
Semi-field test	No effects at 1.5 kg as/ha (500 EC)

Other arthropod species

Predatory mites	
Typhlodromus pyri	99 % mortality at 0.74 kg as/ha (500 EC, lab-test)
Typhlodromus pyri	9-43 % population effect at 1.75 kg as/ha (total of 6 applications; 500 EC, field test; week and 4 weeks after last application)
Typhlodromus pyri	20-41 % population effect at 1.3 kg as/ha (total population of 4 applications; 500 EC, field test; week and 4 weeks after last application)
Parasitoid wasps	
Aphidius rhopalosiphi (pupae)	77 % mortality at 0.75 kg as/ha (500 EC, extended lab-test)
Aphidius rhopalosiphi (pupae)	11% mortality at 0.75 kg as/ha (500 EC, semi-field-test)
Aphidius rhopalosiphi (adults)	no effect at 0.75 kg as/ha (500 EC, extended lab-test)
Plant –dwelling predators	
Chrysopa carnea	100 % mortality at 1.5 kg as/ha (500 EC, lab-test)
Coccinella septempunctata	98 % mortality at 0.75 kg as/ha (500 EC, lab-test)
Coccinella septempunctata (adults)	no effect at 0.75 kg as/ha (500 EC, semi-field-test)
Coccinella septempunctata (larvae)	2.9 % (direct spray) at 0.75 kg as/ha (500 EC, semi-field-test)

Ground-dwelling predators	
Bembidion tetracolum	45 % mortality at 2 applications of 0.75 kg as/ha (500 EC, lab-test)
Bembidion tetracolum	6.6 % mortality at 2 applications of 0.75 kg as/ha (500 EC, extended lab-test)
Pardosa spec.	77 % mortality at 2 applications of 0.75 kg as/ha (500 EC, lab-test)
Pardosa spec.	no effect at 2 applications of 0.75 kg as/ha (500 EC, extended lab-test)

Earthworms

Acute toxicity:	LC_{50} > 1000 mg as/kg *(Eisenia fetida)*
Reproductive toxicity:	NOEC > 6.0 l form./ha (500 EC, *Eisenia fetida)*

Soil micro-organisms

Nitrogen mineralization:	No long-lasting effects up to 7.5 l form./ha (EC 500 / EW 383)
Carbon mineralization:	No effects up to 7.5 l form./ha (EC 500)

Appendix III

SPIROXAMINE

The following were submitted after the peer review examination and were not cited in the monograph:-

GUIDELINE	AUTHOR	TITLE	DATE OF SUBMISSION	GLP
AII; 4.1 /05	Schulz, F.	Validation of GLC-method 2001-0034401-93 Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: VB1-2001-0034401, Date: March 13, 1995	04.11.1997	yes
AII; 4.1 /06	Teller, M.G.	Determination of KWG 4168 in formulations - Assay - GLC - internal standard. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: 2001-0034402-97, Date: March 7, 1997	04.11.1997	yes
AII; 4.1 /07	Sutor, P.	Validation supplementof GLC-method 2001-0034402-97 Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: VS1.1-2001-0034402, Date: May 6, 1997	04.11.1997	yes
AII; 4.1 /08	Reubke, K.J.	KWG 4168 - Technical grade active ingredient - Assay - GLC - internal standard Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: 2005-0003502-97, Method No.: 2005-0003502-97, Date: July 21, 1997	04.09.1997	yes
AII; 4.1 /09	Reubke, K.J.	Validation of GLC method 2005-0003502-97: KWG 4168 in KWG 4168 technical Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: VB1-2005-0003502, Date: August 11, 1997	04.09.1997	yes
AII, 4.2.1/06	Allmendinger, H.	Method for the gaschromatographic determination of KWG 4168 residues in grapes (berries), wheat and barley (grain) Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: MR-1090/97 Method No.: 00506, Date: January 07, 1998	21.01.1998	yes

AII, 4.2.1/	Heinemann, O.	Confirmatory procedure for the determination of residues of spiroxamine in/on wheat, barley and grape Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: MR-567/98, Study No. P62283012, Date: September 09, 1998	10.09.1998	yes
AII, 4.2.2 /03	Sommer, H.	Validation of the Method 00402 (MR-501/95) for gaschromatigraphic determination of KWG 4168 on filter paper pads. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: MR - 501/95, Method 00402, Date: September 26, 1995	02.11.1995	yes
AII; 4.2.5 /05	Allmendinger, H	Method for the gas chromatographic determination of the residue of KWG 4168 carboxylic acid in eggs, modification for eggs. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: MR-563/93, Method no.: 00395/M001 Date: September 24, 1997	22.10.1997	yes
AII, 5.1 /10	Klein, O., Printz, H	[1,3-dioxolane-4-^{14}C]KWG 4168: General rat metabolism (second label) Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: PF 4153, Date: August 05, 1996	04.07.1997	yes
AII, 5.3.1 /01	Hartmann, E. *deliverd later, but considered in the monograph*	KWG 4168 - Subacute oral toxcity study in rats - Amendment - Fatty change in the liver, re-evaluation, comparison with other toxicity studies with KWG 4168 Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: 21644A Date: August 25, 1995	05.10.1995	yes
AII, 5.3.2	Jones, R.D. Hastings, T.F.	A subchronic toxicitiy feeding study in the beagle dog Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: 107497, Date: April 10, 1997	04.07.1997	yes
AII, 5.8.3.1	Krötlinger, F.	KWG 4168-N-Oxid, Study for subchronic oral toxicity in rats. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.27475, Date: May 13, 1998	12.06.1998	yes
AII, 5.4.1	Herbold, B.	KWG 4168-N-Oxid, In vitro chromosome aberration test with chinese hamster V79 cells. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: T 8061489, Date: July 27, 1998	12.06.1998 (draft) 08.12.98 (final)	yes
AII, 5.2.5	Diesing, L.	Results of Eye Irritation Tests with Active Ingredient and EC 500 Formulation Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: - Date: May 14, 1998	12.06.1998	yes

AIII, 7.1.3 /01	Märtins, T. *deliverd later, but considered in the monograph*	HWG 1608 133 EW 04624/0037 & KWG 4168 250 - Study on acute inhalation toxicity in rats according to OECD No. 403. Generated by: Bayer AG Submitted by: Bayer AG Bayer file No.: 24375, Date: October 12, 1995	05.10.1995	yes
AII, 7.2.1.3 /01	Scholz, K.	Aerobic metabolism of KWG 4168-N-Oxid in an aquatic model ecosystem. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: PF4180, Date: November 08, 1996	27.11.1996	yes
AIII, 7.3 /03	Peeters, P.A.M. van Lier, J.J. van de Merbel, N.C. Sollie, F.A.E. Jonkman, J.H.G. *deliverd later, but considered in the monograph*	A study to investigate the absorption and excretion of ^{14}C-labelled KWG 4168 after single dose dermal application to healthy volunteers Generated by: Pharma Bio Research International (PBR-941129) Submitted by: Bayer AG Bayer file No.: FM 756 Date: January 25, 1996	05.10.1995	yes
AII, 8.2.4 /02	Heimbach, F. Breuer, P.	Orientierende Wasserflohtoxicität von N-oxid-KWG 4168 (Daphnia magna). Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: HBF/oDM 122, Date: 30.10.1996	27.11.1996	yes
AII, 8.2.7	Heimbach, F.	Influence of 14C-KWG 4168 (tech.) on development and emergence of larvae of Chironomus riparius in a water-sediment system. Generated by: Bayer AG, Submitted by: Bayer AG, Bayer file No.: HBF/Ch 21 , Date: 02.02.1998	01.04.1998	yes

SUMMARY REPORT
OF THE MEETING OF THE STANDING COMMITTEE ON PLANT HEALTH
HELD ON 12 MAY 1999

President : G. Del Bino
All Member States were present

- Extract -

1 EXAMINATION AND POSSIBLE OPINION OF A DRAFT COMMISSION DIRECTIVE CONCERNING THE INCLUSION OF SPIROXAMINE IN ANNEX I TO COUNCIL DIRECTIVE 91/414/EEC (DOC 6899/VI/99 REV 5).

The Commission presented the draft Review report on spiroxamine as finalised in document 7584/VI/99 rev 7. The Committee took note of the review report.

The following declaration was made by the Commission:

At the adoption of the Uniform Principles by Council in September 1997, the Council and the Commission agreed to the following declaration :

"The Council and the Commission note that application of this Directive is without prejudice to the legislation in force concerning the protection of workers.

The Council and the Commission state that this principle will be unequivocally clarified in Directive 91/414/EEC on the occasion of the first amendment of that Directive. The Commission intends to submit a proposal for such amendment within one year from the date of notification of this Directive."

The Commission can for its part confirm its agreement with this declaration (subject to adequate adaptation of the deadline in the declaration).

The Commission consequently presented the draft Commission Directive concerning the inclusion of spiroxamine in Annex I to Council Directive 91/414/EEC.

Vote : unanimous favourable opinion.

The substance concerned is a "new" active substances to be used as foliar fungicide in barley, wheat, rye and triticale. The inclusion decision in Annex 1 will be subject to re-evaluation by July 2009.

EUROPEAN COMMISSION
DIRECTORATE-GENERAL XXIV
CONSUMER POLICY AND CONSUMER HEALTH PROTECTION
Scientific Health Opinions
Management of scientific committees I

SCIENTIFIC COMMITTEE ON PLANTS

SCP/SPIROX/004-Final
18 January, 1999

OPINION OF THE SCIENTIFIC COMMITTEE ON PLANTS REGARDING THE INCLUSION OF SPIROXAMINE IN ANNEX 1 TO DIRECTIVE 91/414/EEC CONCERNING THE PLACING OF PLANT PROTECTION PRODUCTS ON THE MARKET SCIENTIFIC COMMITTEE ON PLANTS (SCP/SPIROX/004-Final)

(Opinion adopted by the Scientific Committee on Plants on December 18, 1998)

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TERMS OF REFERENCE

The draft Commission Directive proposing the inclusion of spiroxamine in Annex 1 to Directive 91/414/EEC had been referred to the Scientific Committee on Plants for consultation with the following questions:

1. Does the data submitted allow an appropriate risk assessment for operators?

2. Having regard to the intrinsic aquatic ecotoxicological effects of spiroxamine and the proposed uses, the Committee is requested to evaluate the risk to the environment which could occur from its uses.

BACKGROUND

The draft Commission Directive for the inclusion of spiroxamine
in Annex 1 to Directive 91/414/EEC concerning the placing of plant protection products on the market was submitted to the Committee for opinion. The Committee had been supplied with documentation comprising a dossier provided by Bayer AG, a monograph prepared by the Geraman authorities, a review report prepared by the Commission services of the Directorate General for Agriculture and the Recommendations of the ECCO Peer Review Programme.

Spiroxamine is a systemic fungicide with apoplastic translocation in plants. It inhibits the biosynthesis of fungal sterols. Its current intended use is on cereals, to control powdery mildew, leaf blotch brown and yellow rusts. The maximum rate of applicaton per season is 1.5 kg active substance / ha.

OPINION OF THE COMMITTEE

Question 1

Does the data submitted allow an appropriate risk assessment for operators?

When addressing questions related to operator exposure, the SCP notes that uniform and scientifically agreed set of criteria and procedures for the risk assessment of operators, bystanders and agricultural workers is not yet available in the European Union. Therefore, the SCP has decided to make case-by-case evaluations of each plant protection product accepting the various procedures adopted by the different evaluation groups as long as they do not show major conflicts with the generally agreed scientific criteria for health risk assessment.

For spiroxamine, the following Acceptable Operator Exposure Level (AOEL) values have been proposed:

AOEL (oral) 0.034 mg/Kg bw (UF[1] = 100)
AOEL (inhalation) 0.05 mg/Kg bw (UF = 100)
AOEL (dermal) 0.05 mg/Kg bw (UF = 100)
AOEL (systemic) 0.024 mg/Kg bw (UF = 100, baased on the oral value with an absorption of 70%)

Although these values have been derived from short-term animal studies, this choice has no major implications with respect to the use of other types of studies, due to the rather similar NOEL values observed in the long-term studies. Therefore the proposed AOELs are acceptable, at least until uniform criteria for setting AOELs are agreed at the European Community level.
For the intended uses, estimated operator exposure accounts for 73% of AOEL with the use of gloves, protective garment and sturdy footwear, thereby providing a sufficient margin of safety.

Question 2

Having regard to the intrinsic aquatic ecotoxicological effects of spiroxamine and the proposed uses, the Committee is requested to evaluate the risk to the environment which could occur from its uses.

The Committee notes that spiroxamine is highly toxic to algae (1) with a 72 h EC_{50}[2] for *Scenedesmus subspicatus* of 3 µg as/l. Although the rapid partitioning of spiroxamine to sediment will reduce exposure to algae in the water column, TER[3] values estimated according to the German drift model by the Rapporteur Member State (RMS) indicate that the use of spiroxamine directly adjacent to surface waters may result in an unacceptable risk to algae.

Although spiroxamine is not an herbicide, it appears to be three orders of magnitude more toxic to algae than to fish or *Daphnia*. The Committee considers that evaluation of the ecotoxicological risk associated with this substance should include information on its toxicity to plants. However, the Committee notes that no information on toxicity to aquatic plants was provided in the monograph. A higher-tier test, as requested (2) to remove restrictions, should therefore also address the issue of higher, rooted aquatic plants.

The rapid partitioning of spiroxamine to sediment and its persistence in sediment (DT_{50}[4] of 106 days (3) indicate a potential risk to sediment-dwelling organisms. One study with *Chironomus riparius* was performed in which no effect on emergence or development was detected at the highest exposure treatment of 2.5 µg as/l. The RMS estimated an initial

[1] Uncertainty factor
[2] Effective concentration 50%
[3] Toxicity: exposure ratio
[4] Disappearance time 50%

surface water PEC[5] for overspray associated with an application rate of 0.75 kg as/ha as 250 µg as/l (4). PECs estimated from spray drift ranged from 0.25-1.6 µg as/l (5) to 12.5 µg as/l (6). Given that the estimated PECs are close to or substantially higher than the highest exposure concentration employed in the *Chironomus* test it could not be assumed that no effects on sediment-dwelling organisms would occur from proposed use. In addition, the above calculations assume one application of 0.75 kg as/ha. Given that two applications per season are possible and that spiroxamine is persistent in sediment, a maximum exposure deriving from 1.5 kg as/ha should be employed in the risk calculations.

The Committee notes reference to a new study, HBF/Ch 21 submitted by the applicant on 9 April 1998(7) that reports a 28-d NOEC[6] for *Chironomus riparius* of 3.2 mg/l, giving a TER for overspray of approximately 12 (assuming one application of 0.75 kg as/ha). Although no specific trigger values for sediment-dwelling organisms are stated in Annex II of Directive 91/414/EEC, the estimated TER of 12 for one application per season (above) is close to the trigger value of 10 used for other long-term tests (i.e., fish and *Daphnia*). For two applications per year the TER would be below a value of 10. The Committee considers therefore that the use of spiroxamine directly adjacent to surface waters at proposed application rates may result in unacceptable risk to sediment-dwelling invertebrates.

CONCLUSION

It is the Committee's opinion that the use of spiroxamine directly adjacent to surface waters at proposed application rates may result in unacceptable risks to algae, sediment-dwelling organisms, and possibly plants.

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[5] Predicted Environmental Concentrations
[6] No observed effect concentration

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