Regulation 3

Renewal of authorisation of a preparation of endo-1,4-beta-xylanase (EC 3.2.1.8) produced from *Trichoderma reesei* (CBS 143953, formerly ATCC PTA 5588) (identification number 4a11) as a feed additive for chickens for fattening, laying hens, turkeys for fattening, ducks, minor poultry species, weaned piglets and piglets for fattening, and its authorisation extending to the use for all poultry species, piglets (suckling and weaned), pigs for fattening and minor porcine species

The preparation of endo-1,4-beta-xylanase (EC 3.2.1.8), belonging to the additive category 'zootechnical additives' and to the functional group 'digestibility enhancers', is authorised as an additive in animal nutrition, in accordance with the specifications in the following table(1).

| Additive  | Endo-1,4-beta-xylanase (EC 3.2.1.8)   |
|---|---|
| Identification number                                     | 4a11  |
| Authorisation holder                                      | Danisco (UK) Ltd  |
| Additive category   | Zootechnical additives  |
| Functional group  | Digestibility enhancers   |
| Additive composition                                      | Preparation of endo-1,4-beta-xylanase (EC 3.2.1.8) produced by fermentation with <i>Trichoderma reesei</i> (CBS 143953) with a minimum enzyme activity of 40,000 U/g <sup>(1)</sup>   |
| Characterisation of the active substance(s)               | Endo-1,4-beta-xylanase (EC 3.2.1.8) produced by fermentation with <i>Trichoderma reesei</i> (CBS 143953)  • CAS no: 9025-57-4 <sup>(2)</sup> • EC (IUBMB) no: 3.2.1.8 <sup>(3)</sup> • EINECS no: 232-800-2 <sup>(4)</sup>  |
| Analytical method <sup>(5)(6)</sup>                       | For quantification of endo-1,4-beta-xylanase enzyme activity in the feed additive, premixtures, feed materials and compound feed:  • Colorimetric method measuring water soluble dye released by action of endo-1,4-beta-xylanase from azurine cross-linked wheat arabino xylan substrate |
| Species or category of animal                             | <ul> <li>All poultry species</li> <li>Piglets (suckling and weaned),</li> <li>Pigs for fattening</li> <li>Minor porcine species</li> </ul>  |
| Maximum age   | Not applicable  |
| Content of Minimum endo-1,4-beta- content xylanase (units | <ul> <li>For all poultry species: 625 U/kg</li> <li>For piglets (suckling and weaned), pigs for fattening and minor porcine species: 2,000 U/kg</li> </ul>  |
| of activity/kg of Complete feed Maximum content           | No maximum  |

<sup>(1)</sup> This authorisation is a renewal of the authorisations granted under Commission Regulation (EU) No 9/2010, Commission Implementing Regulation (EU) No528/2011 and Commission Implementing Regulation (EU) No1021/2012. Those Regulations are revoked by regulation 7(1) of, and Schedule 14 to these Regulations. This renewal differs from the previous authorisation by updating the bacterial strain from "ATCC PTA 5588" to "CBS 143953". Additionally, the minimum content of the feed additive for turkeys for fattening is reduced from 1,250 to 625 units of activity per kilogram of complete feed (U/kg), to provide that the minimum content is 625 U/kg for all poultry species.

| with a moisture content of 12%) |   |
|---------------------------------|---|
| Other provisions                | The storage conditions and stability to heat treatment must<br>be stated in the directions for use of the feed additive and<br>premixture |

- 1 unit (U) is the amount of enzyme which releases 0.48 micromoles (μmol) of reducing sugar (xylose equivalent) per minute from wheat arabino xylan at pH 4.2 and 50°C.
- (2) This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (3) This is the identification number adopted by the European Commission which aligns with the numerical system of the International Union of Biochemistry and Molecular Biology (IUBMB) https://iubmb.org.
- (4) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (5) Details of the analytical method is set out in the document referenced "JRC.D.5/FSQ/CvH/DM/ag/ARES(2012)353089" and last updated on 6th June 2016, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2011-0030\_en.
- (6) The enzyme activity for endo-1,4-beta-xylanase is defined in the document referenced "JRC.DG.D.6/CvH/DM/hn/ARES(2010)-375745" and last on updated 6th June 2016, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2010-0007 en.

#### SCHEDULE 2

Regulation 3

Authorisation of a preparation of *Lacticaseibacillus rhamnosus* (formerly *Lactobacillus rhamnosus*) (IMI 507023) (identification number 1k21701) as a feed additive for all animal species

The preparation of *Lacticaseibacillus rhamnosus* (IMI 507023), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive                            | Lacticaseibacillus rhamnosus (IMI 507023)   |
|-------------------------------------|---|
| Identification number               | 1k21701   |
| Authorisation holder <sup>(1)</sup> | None  |
| Additive category                   | Technological additives   |
| Functional group                    | Silage additives  |
| Additive composition                | Solid preparation of <i>Lacticaseibacillus rhamnosus</i> (IMI 507023) containing a minimum of $1 \times 10^{10}$ CFU/g additive |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1687524 08/03/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0075007800790080\_en. The dossier reference number is FAD-2020-0075.
- (3) BS EN 15787:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Lactobacillus spp. used as feed additive". Published by the British Standards Institution on 31st December 2021 (ISBN 978 0 580 99831 7) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

| Characterisation of the active substance(s)                              |                 | Viable cells of Lacticaseibacillus rhamnosus (IMI 507023)  |
|--|-----------------|--|
| Analytical methods <sup>(2)</sup>  |                 | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15787:2021 <sup>(3)</sup>   |
|  |                 | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)  |
| Species or category of animal  |                 | All animal species   |
| Maximum age  |                 | Not applicable   |
| Colony-forming<br>units (CFU) of<br>the additive/kg<br>of fresh material |                 | For use in easy or moderately difficult to ensile fresh materials only. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^9\text{CFU/kg}^{(4)}$ |
|  | Maximum content | No maximum   |
| Other provisions   |                 | The storage conditions must be stated in the directions for use of the feed additive and premixture  |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1687524 08/03/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0075007800790080\_en. The dossier reference number is FAD-2020-0075.
- (3) BS EN 15787:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Lactobacillus spp. used as feed additive". Published by the British Standards Institution on 31st December 2021 (ISBN 978 0 580 99831 7) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

#### SCHEDULE 3

Regulation 3

Authorisation of a preparation of *Pediococcus pentosaceus* (IMI 507024) (identification number 1k21016) as a feed additive for all animal species

The preparation of *Pediococcus pentosaceus* (IMI 507024), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive   |                     | Pediococcus pentosaceus (IMI 507024)   |
|--|---------------------|--|
| Identification number  |                     | 1k21016  |
| Authorisation ho   | lder <sup>(1)</sup> | None   |
| Additive category  | v                   | Technological additives  |
| Functional group   | )                   | Silage additives   |
| Additive composition   |                     | Solid preparation of Pediococcus pentosaceus (IMI 507024) containing a minimum of $1 \times 10^{10}$ CFU/g additive  |
| Characterisation of the active substance(s)                    |                     | Viable cells of <i>Pediococcus pentosaceus</i> (IMI 507024)  |
| Analytical methods <sup>(2)</sup>                              |                     | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15786:2021 <sup>(3)</sup>   |
|  |                     | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)  |
| Species or catego  | ory of animal       | All animal species   |
| Maximum age  |                     | Not applicable   |
| Colony-forming units(CFU) of the additive/kg of fresh material | Minimum<br>content  | For use in easy or moderately difficult to ensile fresh materials only. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^9\text{CFU/kg}^{(4)}$ |
|  | Maximum content     | No maximum   |
| Other provisions   |                     | The storage conditions must be stated in the directions for use of the feed additive and premixture  |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1902366 16/03/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-00760077\_en. The dossier reference number is FAD-2020-0076.
- (3) BS EN 15786:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Pediococcus spp. used as feed additive". Published by the British Standards Institution on 30th November 2021 (ISBN 978 0 580 99830 0) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

Regulation 3

Authorisation of a preparation of *Pediococcus pentosaceus* (IMI 507025) (identification number 1k21017) as a feed additive for all animal species

The preparation of *Pediococcus pentosaceus* (IMI 507025), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive   |                     | Pediococcus pentosaceus (IMI 507025)  |
|--|---------------------|---|
| Identification number  |                     | 1k21017   |
| Authorisation ho   | lder <sup>(1)</sup> | None  |
| Additive category  | ,                   | Technological additives   |
| Functional group   | )                   | Silage additives  |
| Additive composi   | tion                | Solid preparation of Pediococcus pentosaceus (IMI 507025) containing a minimum of $1 \times 10^{10}$ CFU/g additive   |
| Characterisation of active substance(s)                                  |                     | Viable cells of <i>Pediococcus pentosaceus</i> (IMI 507025)   |
| Analytical methods <sup>(2)</sup>  |                     | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15786:2021 <sup>(3)</sup>  |
|  |                     | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)   |
| Species or catego  | ory of animal       | All animal species  |
| Maximum age  |                     | Not applicable  |
| Colony-forming<br>units (CFU) of<br>the additive/kg<br>of fresh material | Minimum<br>content  | For use in easy or moderately difficult to ensile fresh materials only. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^9 \text{CFU/kg}^{(4)}$ |
|  | Maximum content     | No maximum  |
| Other provisions   |                     | The storage conditions must be stated in the directions for use of the feed additive and premixture   |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1902366 16/03/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-00760077\_en. The dossier reference number is FAD-2020-0077.
- (3) BS EN 15786:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Pediococcus spp. used as feed additive" Published by the British Standards Institution on 30th November 2021 (ISBN 978 0 580 99830 0) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

Regulation 3

Authorisation of a preparation of *Lactiplantibacillus plantarum* (formerly *Lactobacillus plantarum*) (IMI 507026) (identification number 1k21601) as a feed additive for all animal species The preparation of *Lactiplantibacillus plantarum* (IMI 507026), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive   |                     | Lactiplantibacillus plantarum (IMI 507026)   |
|--|---------------------|--|
| Identification number  |                     | 1k21601  |
| Authorisation ho   | lder <sup>(1)</sup> | None   |
| Additive category  | ,                   | Technological additives  |
| Functional group   | )                   | Silage additives   |
| Additive composi   | tion                | Solid preparation of Lactiplantibacillus plantarum (IMI 507026) containing a minimum of $1 \times 10^{10}$ CFU/g additive  |
| Characterisation substance(s)  | of the active       | Viable cells of Lactiplantibacillus plantarum (IMI 507026)   |
| Analytical methods <sup>(2)</sup>  |                     | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15787:2021 <sup>(3)</sup>   |
|  |                     | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)  |
| Species or catego  | ory of animal       | All animal species   |
| Maximum age  |                     | Not applicable   |
| Colony-forming<br>units (CFU) of<br>the additive/kg<br>of fresh material |                     | For use in easy or moderately difficult to ensile fresh materials only. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^9  \text{CFU/kg}^{(4)}$ |
|  | Maximum<br>content  | No maximum   |
| Other provisions   |                     | The storage conditions must be stated in the directions for use of the feed additive and premixture  |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1687524-08/-3/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0075007800790080\_en. The dossier reference number is FAD-2020-0078.
- (3) BS EN 15787:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Lactobacillus spp. used as feed additive". Published by the British Standards Institution on 31st December 2021 (ISBN 978 0 580 99831 7) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

#### SCHEDULE 6 Regulation 3

Authorisation of a preparation of *Lactiplantibacillus plantarum* (formerly *Lactobacillus plantarum*) (IMI 507027) (identification number 1k21602) as a feed additive for all animal species The preparation of *Lactiplantibacillus plantarum* (IMI 507027), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive   |                     | Lactiplantibacillus plantarum(IMI 507027)  |
|--|---------------------|--|
| Identification number  |                     | 1k21602  |
| Authorisation ho   | lder <sup>(1)</sup> | None   |
| Additive category  | ,                   | Technological additives  |
| Functional group   | )                   | Silage additives   |
| Additive composition   |                     | Solid preparation of <i>Lactiplantibacillus plantarum</i> (IMI 507027) containing a minimum of $1 \times 10^{10}$ CFU/g additive   |
| Characterisation of the active substance(s)                              |                     | Viable cells of Lactiplantibacillus plantarum (IMI 507027)   |
| Analytical methods <sup>(2)</sup>  |                     | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15787:2021 <sup>(3)</sup>   |
|  |                     | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)  |
| Species or catego  | ory of animal       | All animal species   |
| Maximum age  |                     | Not applicable   |
| Colony-forming<br>units (CFU) of<br>the additive/kg<br>of fresh material |                     | For use in easy or moderately difficult to ensile fresh materials only. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^9\text{CFU/kg}^{(4)}$ |
|  | Maximum content     | No maximum   |
| Other provisions   |                     | The storage conditions must be stated in the directions for use of the feed additive and premixture  |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1687524-08/03/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0075007800790080\_en. The dossier reference number is FAD-2020-0079.
- (3) BS EN 15787:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Lactobacillus spp. used as feed additive". Published by the British Standards Institution on 31st December 2021 (ISBN 978 0 580 99831 7) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

Regulation 3

Authorisation of a preparation of *Lactiplantibacillus plantarum* (formerly *Lactobacillus plantarum*) (IMI 507028) (identification number 1k21603) as a feed additive for all animal species The preparation of *Lactiplantibacillus plantarum* (IMI 507028), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive   |                     | Lactiplantibacillus plantarum (IMI 507028)  |
|--|---------------------|---|
| Identification number  |                     | 1k21603   |
| Authorisation ho   | lder <sup>(1)</sup> | None  |
| Additive category  | ,                   | Technological additives   |
| Functional group   | )                   | Silage additives  |
| Additive composi   | tion                | Solid preparation of <i>Lactiplantibacillus plantarum</i> (IMI 507028) containing a minimum of $1 \times 10^{10}$ CFU/g additive  |
| Characterisation of the active substance(s)                              |                     | Viable cells of Lactiplantibacillus plantarum (IMI 507028)  |
| Analytical methods <sup>(2)</sup>  |                     | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15787:2021 <sup>(3)</sup>  |
|  |                     | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)   |
| Species or catego  | ory of animal       | All animal species  |
| Maximum age  |                     | Not applicable  |
| Colony-forming<br>units (CFU) of<br>the additive/kg<br>of fresh material | Minimum<br>content  | For use in easy or moderately difficult to ensile fresh materials only. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^9 \text{CFU/kg}^{(4)}$ |
|  | Maximum content     | No maximum  |
| Other provisions   |                     | The storage conditions must be stated in the directions for use of the feed additive and premixture   |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2021)1687524 08/03/2021" and last updated on 21st April 2021, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0075007800790080\_en. The dossier reference number is FAD-2020-0080.
- (3) BS EN 15787:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Lactobacillus spp. used as feed additive". Published by the British Standards Institution on 31st December 2021 (ISBN 978 0 580 99831 7) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.

Regulation 3

Authorisation of a preparation of *Lactiplantibacillus plantarum* (formerly *Lactobacillus plantarum*) (DSM 26571) (identification number 1k1604) as a feed additive for all animal species The preparation of *Lactiplantibacillus plantarum* (DSM 26571), belonging to the additive category 'technological additives' and to the functional group 'silage additives', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive   |                     | Lactiplantibacillus plantarum (DSM 26571)   |
|--|---------------------|---|
| Identification number  |                     | 1k1604  |
| Authorisation ho   | lder <sup>(1)</sup> | None  |
| Additive category  | ,                   | Technological additives   |
| Functional group   | )                   | Silage additives  |
| Additive composi   | tion                | Solid preparation of <i>Lactiplantibacillus plantarum</i> (DSM 26571) containing a minimum of $1 \times 10^{11}$ CFU/g additive   |
| Characterisation substance(s)  | of the active       | Viable cells of Lactiplantibacillus plantarum (DSM 26571)   |
| Analytical methods <sup>(2)</sup>                                    |                     | For enumeration (colony count) of the feed additive:  • Spread plate method on MRS agar in accordance with BS EN 15787:2021 <sup>(3)</sup>  |
|  |                     | For identification of bacterial strain: • Pulsed-field gel electrophoresis (PFGE)   |
| Species or catego  | ory of animal       | All animal species  |
| Maximum age  |                     | Not applicable  |
| Colony-forming<br>units (CFU) of<br>additive/kg of<br>fresh material |                     | For use in easy, moderately difficult and difficult to ensile fresh materials. Minimum content of the additive when not combined with other micro-organisms as silage additives: $1 \times 10^8  \text{CFU/kg}^{(4)}$ |
|  | Maximum<br>content  | No maximum  |
| Other provisions   |                     | The storage conditions must be stated in the directions for use of the feed additive and premixture   |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) Details of the analytical methods are set out in the document referenced "Ares(2020)5563084 15/10/2020" and last updated on 16th October 2020, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2019-0091\_en.
- (3) BS EN 15787:2021 "Animal feeding stuffs: Methods of sampling and analysis. Detection and enumeration of Lactobacillus spp. used as feed additive". Published by the British Standards Institution on 31st December 2021 (ISBN 978 0 580 99831 7) and available at: https://knowledge.bsigroup.com.
- (4) Easy to ensile forage: > 3 % soluble carbohydrates in fresh material; moderately difficult to ensile forage: 1.5-3.0 % soluble carbohydrates in the fresh material; difficult to ensile forage: <1.5 % soluble carbohydrates in the fresh material in accordance with Regulation (EC) 429/2008.</p>

Regulation 3

Renewal of authorisation of a preparation of endo-1,4-beta-xylanase (EC 3.2.1.8) produced from *Trichoderma reesei* (CBS 114044) (identification

number 4a8i) as a feed additive for piglets (weaned), chickens for fattening, chickens reared for laying, turkeys for fattening and turkeys reared for breeding

The preparation of endo-1,4-beta-xylanase (EC 3.2.1.8), belonging to the additive category 'zootechnical additives' and to the functional group 'digestibility enhancers', is authorised as an additive in animal nutrition in accordance with the specifications in the following table(2).

| Additive                                    | Endo-1,4-beta-xylanase (EC 3.2.1.8)  |
|---|--|
| Identification number                       | 4a8i   |
| Authorisation holder                        | Roal Oy  |
| Additive category                           | Zootechnical additives   |
| Functional group                            | Digestibility enhancers  |
| Additive composition                        | Preparation of endo-1,4-beta-xylanase (EC 3.2.1.8) produced by fermentation with <i>Trichoderma reesei</i> (CBS 114044) having a minimum enzyme activity of 160,000 BXU/g for both solid and liquid forms <sup>(1)</sup>   |
| Characterisation of the active substance(s) | Endo-1,4-beta-xylanase (EC 3.2.1.8) produced by fermentation with <i>Trichoderma reesei</i> (CBS 114044)  • CAS no: 9025-57-4 <sup>(2)</sup> • EC (IUBMB) no: 3.2.1.8 <sup>(3)</sup> • EINECS no: 232-800-2 <sup>(4)</sup>                                       |
| Analytical methods <sup>(5)</sup>           | For the quantification of endo-1,4-beta-xylanase (EC 3.2.1.8) in the feed additive and premixtures:  • Colorimetric method based on the enzymatic reaction of endo-1,4-beta-xylanase on the birch xylan substrate at pH 5.3 and 50°C                             |
|   | For the quantification of endo-1,4-beta-xylanase (EC 3.2.1.8) in feed materials and compound feed:  • Colorimetric method based on the enzymatic reaction of endo-1,4-beta-xylanase on the azurine cross-linked wheat arabino xylan substrate at pH 5.3 and 50°C |
| Species or category of animal               | • Piglets (weaned)   |

- (1) Enzyme activity expressed in birch xylan units (BXU), where one BXU is the amount of enzyme which liberates 1 nanomole of reducing sugars as xylose from birch xylan per second at pH 5.3, and 50°C.
- (2) This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (3) This is the identification number allocated by the International Union of Biochemistry and Molecular Biology (IUBMB) https://iubmb.org.
- (4) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (5) Details of the analytical method is set out in the document referenced "Ares(2019)3101222-10/05/2019" and last updated on 2nd July 2019, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2018-0071 en.

<sup>(2)</sup> This authorisation is a renewal of the authorisation granted under Commission Regulation (EC) 902/2009. This feed additive was also previously authorised as a feed additive for laying hens, minor poultry species and pigs for fattening under Commission Implementing Regulation (EU) No1110/2011 ("EUR 2011/1110"). EUR 2011/1110 expired on 24 November 2021. EUR 902/2009 and 2011/1110 are revoked by regulation 7 of, and Schedule 14 to, these Regulations. This renewal differs from the previous authorisation as the identification number has been updated from "4a8" to "4a8i" and the minimum level of stock enzyme is reduced from 4,000,000 BXU/g in solid form and 400,000 BXU/g in liquid form.

|  |                 | <ul> <li>Chickens for fattening</li> <li>Chickens reared for laying</li> <li>Turkeys for fattening</li> <li>Turkeys reared for breeding</li> </ul>   |
|--|-----------------|--|
| Maximum age  |                 | Not applicable   |
| Content of Endo-1,4-beta-xylanase (units of activity (BXU)/kg of complete feed with a moisture content of 12%) |                 | <ul> <li>For chickens for fattening and chickens reared for laying: 8,000 BXU/kg</li> <li>For turkeys for fattening and turkeys reared for breeding: 16,000 BXU/kg</li> <li>For piglets (weaned): 24,000 BXU/kg</li> </ul> |
|  | Maximum content | No maximum   |
| Other provisions   |                 | The storage conditions and stability to heat treatment must<br>be stated in the directions for use of the feed additive and<br>premixture  |

- (1) Enzyme activity expressed in birch xylan units (BXU), where one BXU is the amount of enzyme which liberates 1 nanomole of reducing sugars as xylose from birch xylan per second at pH 5.3, and 50°C.
- (2) This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (3) This is the identification number allocated by the International Union of Biochemistry and Molecular Biology (IUBMB) https://iubmb.org.
- (4) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (5) Details of the analytical method is set out in the document referenced "Ares(2019)3101222-10/05/2019" and last updated on 2nd July 2019, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2018-0071\_en.

## SCHEDULE 10

Regulation 3

Renewal of authorisation of a preparation of 6-phytase (EC 3.1.3.26) produced from *Trichoderma reesei* (CBS 122001) (identification number 4a12) as a feed additive for pigs, poultry for breeding, poultry for fattening and poultry for laying

The preparation of 6-phytase (EC 3.1.3.26), belonging to the additive category 'zootechnical additives' and to the functional group 'digestibility enhancers', is authorised as an additive in animal nutrition in accordance with the specifications in the following table(3).

<sup>(3)</sup> This authorisation is a renewal of the authorisation granted under Commission Regulation (EU) No 277/2010, Commission Regulation (EU) No 891/2010 and Commission Implementing Regulation (EU) No886/2011. Those Regulations are revoked by regulation 7(1) of, and Schedule 14 these Regulations. This renewal differs from the previous authorisation as the minimum level of stock enzyme activity is reduced from 10,000 PPU/g to 5,000 PPU/g in the liquid forms.

| Additive  | 6-phytase (EC 3.1.3.26)  |
|---|--|
| Identification number                               | 4a12   |
| Authorisation holder                                | Roal Oy  |
| Additive category                                   | Zootechnical additives   |
| Functional group                                    | Digestibility enhancers  |
| Additive composition                                | Preparation of 6-phytase (EC 3.1.3.26) produced by fermentation with <i>Trichoderma reesei</i> (CBS 122001) having a minimum enzyme activity of 40,000 PPU/g for the solid form and 5,000 PPU/g for the liquid form <sup>(1)</sup> .   |
| Characterisation of the active substance(s)         | 6-phytase (EC 3.1.3.26) produced by fermentation with <i>Trichoderma reesei</i> (CBS 122001)  • CAS no: 9001-89-2 <sup>(2)</sup> • EC (IUBMB) no: 3.1.3.26 <sup>(3)</sup> • EINECS no: 232-630-9 <sup>(4)</sup>  |
| Analytical method <sup>(5)</sup>                    | For the quantification of phytase activity in the feed additive, premixtures, feed materials and compound feed:  • Colorimetric method quantifying the enzymatic activity of 6-phytase by measuring released inorganic phosphate from sodium phytate by analysing the colour formed by reduction of a phosphomolybdate complex |
| Species or category of animal                       | <ul><li>Pigs</li><li>Poultry for breeding, poultry for fattening and poultry for laying</li></ul>  |
| Maximum age   | Not applicable   |
| Content of 6- phytase (units of activity (PPU)/     | <ul> <li>For pigs, poultry for breeding and poultry for fattening:<br/>250 PPU/kg</li> <li>For poultry for laying: 125 PPU/kg</li> </ul>   |
| kg of complete feed with a moisture content of 12%) | No maximum   |
| Other provisions                                    | The storage conditions and stability to heat treatment must<br>be stated in the directions for use of the feed additive and<br>premixture  |

- (1) Enzyme activity expressed in PPU units, where one PPU is the amount of enzyme which liberates 1 micromole ( $\mu$ mol) of inorganic phosphate from sodium phytate per minute at pH 5.0 and 37°C.
- (2) This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (3) This is the identification number allocated by the International Union of Biochemistry and Molecular Biology (IUBMB) https://iubmb.org.
- (4) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (5) Details of the analytical method is set out in the document referenced "D08/FSQ/CVH/SY/D/Ares(2009)173372" and last updated on 6th June 2016, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2008-0040\_en.

Regulation 3

Authorisation of L#lysine base (liquid) produced from *Corynebacterium glutamicum* (KCCM 80216 or KCTC 12307BP) (identification number 3c326) as a feed additive for all for all animal species

The substance of L#lysine base (liquid), belonging to the additive category 'nutritional additives' and to the functional group 'amino acids, their salts and analogues', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive                                    | L#lysine base (liquid)   |
|---|--|
| Identification number                       | 3c326  |
| Authorisation holder <sup>(1)</sup>         | None   |
| Additive category                           | Nutritional additives  |
| Functional group                            | Amino acids, their salts and analogues   |
| Additive composition                        | Aqueous solution with a minimum of 50% L-lysine.   |
| Characterisation of the active substance(s) | L#lysine base (liquid) (C <sub>6</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> ) produced by fermentation with <i>Corynebacterium glutamicum</i> (KCCM 80216 or KCTC 12307BP)  • CAS no: 56-87-1 <sup>(2)</sup> • EINECS no: 200-294-2 <sup>(3)</sup>              |
| Analytical methods <sup>(4)</sup>           | For the quantification of lysine in the feed additive and premixtures containing more than 10% lysine:  • Ion exchange chromatography coupled with post-column derivatisation and optical detection (IEC-VIS/FLD) in accordance with BS EN ISO 17180:2013 <sup>(5)</sup> |
|   | For the quantification of lysine in premixtures, feed materials and compound feed:  • Ion exchange chromatography coupled with post-column derivatisation and photometric detection (IEC-VIS) in accordance with Commission Regulation (EC) 152/2009 (Annex 3-F)         |
|   | For the quantification of lysine in water:  • Ion exchange chromatography coupled with post-column derivatisation and optical detection (IEC-VIS/FLD) in accordance with BS EN ISO 17180:2013 <sup>(5)</sup> ; or  |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) This is a reference to the CAS Registry Number® assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (3) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (4) Details of the analytical methods is set out in the document referenced "Ares(2020)4503369-31/08/2020" and last updated on 16th October 2020, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0008\_en.
- (5) BS EN ISO 17180:2013 "Animal feeding stuffs. Determination of lysine, methionine and threonine in commercial amino acid products and premixtures". Published by the British Standards Institution on 30th April 2013 (ISBN 978 0 580 76077 8) and available at: https://knowledge.bsigroup.com.

|  |               | <ul> <li>Ion exchange chromatography coupled with post-<br/>column derivatisation and optical detection (IEC-<br/>VIS) in accordance with Commission Regulation (EC)<br/>152/2009 (Annex 3-F)</li> </ul> |
|--|---------------|--|
| Species or category o                          | f animal      | All animal species   |
| Maximum age                                    |               | Not applicable   |
| Content of L- Minimum lysine (mg/kg of content |               | No minimum   |
| with a moisture                                | ximum<br>tent | No maximum   |
| Other provisions                               |               | <ol> <li>The lysine content must be stated on the labelling of the additive</li> <li>L-lysine base (liquid) may be placed on the market and used as an additive consisting of a preparation</li> </ol>   |

- (1) There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.
- (2) This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (3) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (4) Details of the analytical methods is set out in the document referenced "Ares(2020)4503369-31/08/2020" and last updated on 16th October 2020, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0008\_en.
- (5) BS EN ISO 17180:2013 "Animal feeding stuffs. Determination of lysine, methionine and threonine in commercial amino acid products and premixtures". Published by the British Standards Institution on 30th April 2013 (ISBN 978 0 580 76077 8) and available at: https://knowledge.bsigroup.com.

Regulation 3

Authorisation of L#lysine monohydrochloride (technically pure) produced from *Corynebacterium glutamicum* (KCCM 80216 or KCTC 12307BP) (identification number 3c327) as a feed additive for all animal species

The substance L#lysine monohydrochloride (technically pure), belonging to the additive category 'nutritional additives' and to the functional group 'amino acids, their salts and analogues', is authorised as an additive in animal nutrition in accordance with the specifications in the following table.

| Additive                            | L#lysine monohydrochloride (technically pure)  |
|-------------------------------------|--|
| Identification number               | 3c327  |
| Authorisation holder <sup>(1)</sup> | None   |
| Additive category                   | Nutritional additives  |
| Functional group                    | Amino acids, their salts and analogues   |
| Additive composition                | Powder of L#lysine monohydrochloride with a minimum of 78% L-lysine and a maximum moisture content of 1.5% |

| Characterisation of the active substance(s)   | L-lysine monohydrochloride (technically pure) (C <sub>6</sub> H <sub>15</sub> ClN <sub>2</sub> O <sub>2</sub> ) produced by fermentation with  Corynebacterium glutamicum (KCCM 80216 or KCTC 12307BP)  • CAS no: 657-27-2 <sup>(2)</sup> • EINECS no: 211-519-9 <sup>(3)</sup>   |
|---|---|
| Analytical methods <sup>(4)</sup>   | For the identification of L-lysine monohydrochloride in the feed additive:  • Food Chemicals Codex <sup>(5)</sup> "L-lysine monohydrochloride monograph"  |
|   | For the quantification of lysine in the feed additive and premixtures containing more than 10% lysine:  • Ion exchange chromatography coupled with post-column derivatisation and optical detection (IEC-VIS/FLD) in accordance with BS EN ISO 17180:2013 <sup>(6)</sup>  |
|   | For the quantification of lysine in premixtures, feed materials and compound feed:  • Ion exchange chromatography coupled with post-column derivatisation and photometric detection (IEC-VIS) in accordance with Commission Regulation (EC) 152/2009 (Annex 3-F)  |
|   | For the quantification of lysine in water:  • Ion exchange chromatography coupled with post-column derivatisation and optical detection (IEC-VIS/FLD) in accordance with BS EN ISO 17180:2013 <sup>(6)</sup> ; or  • Ion exchange chromatography coupled with post-column derivatisation and optical detection (IEC-VIS) in accordance with Commission Regulation (EC) 152/2009 (Annex 3-F) |
| Species or category of animal   | All animal species  |
| Maximum age   | Not applicable  |
| Content of L-lysine content monohydrochloride (mg/kg of complete feed with a moisture content of 12%) | No minimum  |
|   | No maximum  |
| Other provisions  | <ol> <li>The lysine content must be stated on the labelling of the additive</li> <li>L-lysine monohydrochloride (technically pure) may be placed on the market and used as an additive consisting of a preparation</li> </ol>   |

<sup>(1)</sup> There is no requirement to include the name of the holder of this authorisation as this authorisation does not fall within the scope of Article 9(5) of Regulation (EC) 1831/2003.

<sup>(2)</sup> This is a reference to the CAS Registry Number® assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.

- (3) The EINECS number is given in the European Inventory of Existing Commercial Substances, as published in O.J. No. C146A, 15.6.90, p.1.
- (4) Details of the analytical methods is set out in the document referenced "Ares(2020)4503369-31/08/2020" and last updated on 16th October 2020, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2020-0008\_en.
- (5) Food Chemicals Codex (FCC), 13th edition (method: FCC L-lysine monohydrochloride monograph published). Published by the United States Pharmacopeial Convention on 1st March 2022 (ISSN 2153-1455) and available at: https:// www.foodchemicalscodex.org/.
- (6) BS EN ISO 17180:2013 "Animal feeding stuffs. Determination of lysine, methionine and threonine in commercial amino acid products and premixtures". Published by the British Standards Institution on 30th April 2013 (ISBN 978 0 580 76077 8) and available at: https://knowledge.bsigroup.com.

### SCHEDULE 13

Regulation 3

Authorisation of a preparation of 3-nitrooxypropanol (identification number 4c1) as a feed additive for ruminants for milk production and for reproduction

The preparation of 3-nitrooxypropanol belonging to the additive category 'zootechnical additives' and to the functional group 'substances which favourably affect the environment', is authorised as an additive in animal nutrition, in accordance with the specifications in the following table.

| Additive                                       | 3-nitrooxypropanol  |
|--|---|
| Identification number                          | 4c1   |
| Authorisation holder                           | DSM Nutritional Products Ltd, Switzerland   |
| Additive category                              | Zootechnical additives  |
| Functional group                               | Substances which favourably affect the environment  |
| Additive composition                           | Preparation of 3-nitrooxypropanol containing a minimum of 10% additive  |
|  | Granular powder consisting of particles with a diameter < 50μm: 0.4%  |
| Characterisation of the active substance(s)    | 3-nitrooxypropanol (C <sub>3</sub> H <sub>7</sub> NO <sub>4</sub> ) • CAS no: 100502-66-7 <sup>(1)</sup>  |
| Analytical method <sup>(2)</sup>               | For the quantification of 3-nitrooxypropanol in the feed additive, premixtures feed materials and compound feed:  • Reversed phase high performance liquid chromatography with spectrophotometric detection (HPLC-UV) |
| Species or category of animal                  | <ul><li>Ruminants for milk production</li><li>Ruminants for reproduction</li></ul>  |
| Maximum age                                    | Not applicable  |
| Content of 3- Minimum nitrooxypropanol content | 53 mg/kg  |

<sup>(1)</sup> This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.

<sup>(2)</sup> Details of the analytical method is set out in the document referenced "Ares(2020)981992-15/02/2020" and last updated on 4th May 2020, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2019-0057\_en.

| 1                | Maximum<br>content | 88 mg/kg   |
|------------------|--------------------|--|
| Other provisions |                    | <ol> <li>The storage conditions and stability to heat treatment must be stated in the directions for use of the feed additive and premixture</li> <li>The additive must be incorporated into feed in the form of a premixture</li> </ol> |

- (1) This is a reference to the CAS Registry Number<sup>®</sup> assigned to this preparation by the Chemical Abstracts Service https://cas.org/cas-data/cas-registry.
- (2) Details of the analytical method is set out in the document referenced "Ares(2020)981992-15/02/2020" and last updated on 4th May 2020, available at: https://joint-research-centre.ec.europa.eu/publications/fad-2019-0057\_en.

Regulation 7

Revocation of retained direct EU legislation

## PART 1

Revocation of retained direct EU legislation in accordance with regulation 7(1)

Commission Regulation (EU) No 9/2010 concerning the authorisation of the endo-1,4-beta-xylanase produced by *Trichoderma reesei* (ATCC PTA 5588) as a feed additive for chickens for fattening, laying hens, ducks and turkeys for fattening (holder of authorisation Danisco (UK) Ltd, trading as Danisco Animal Nutrition and represented by Genencor International B.V.)(4).

Commission Regulation (EU) No 277/2010 concerning the authorisation of 6-phytase as a feed additive for poultry for fattening and breeding other than turkeys for fattening, for poultry for laying and for pigs other than sows (holder of authorisation Roal Oy)(5).

Commission Regulation (EU) No 891/2010 concerning the authorisation of a new use of 6-phytase as a feed additive for turkeys (holder of authorisation Roal Oy)(6).

Commission Implementing Regulation (EU) No528/2011 concerning the authorisation of endo-1,4-β-xylanase produced by *Trichoderma reesei* (ATCC PTA 5588) as a feed additive for weaned piglets and pigs for fattening (holder of authorisation Danisco (UK) Ltd, trading as Danisco Animal Nutrition and represented by Genencor International B.V.)(7).

Commission Implementing Regulation (EU) No886/2011 concerning the authorisation of 6-phytase (EC 3.1.3.26) produced by *Trichoderma reesei* (CBS 122001) as a feed additive for sows (holder of authorisation Roal Oy)(8).

Commission Implementing Regulation (EU) No1110/2011 concerning the authorisation of an enzyme preparation of endo-1,4-beta-xylanase produced by *Trichoderma reesei* (CBS 114044) as a feed additive for laying hens, minor poultry species and pigs for fattening (holder of authorisation Roal Oy)(9).

<sup>(4)</sup> EUR 2010/9.

<sup>(5)</sup> EUR 2010/277.

<sup>(6)</sup> EUR 2010/891.

<sup>(7)</sup> EUR 2011/528. (8) EUR 2011/886.

<sup>(9)</sup> EUR 2011/1110.

Commission Implementing Regulation (EU) No1021/2012 concerning the authorisation of endo-1,4-beta-xylanase produced by *Trichoderma reesei* (ATCC PTA 5588) as a feed additive for minor poultry species other than ducks (holder of authorisation Danisco (UK) Ltd, trading as Danisco Animal Nutrition and represented by Genencor International B.V.)(10).

Commission Implementing Regulation (EU) No1196/2012 amending Regulation (EU) No9/2010 as regards the minimum content of a preparation of endo-1,4-beta-xylanase produced by *Trichoderma reesei* (ATCC PTA 5588) as a feed additive in feed for laying hens (holder of authorisation Danisco Animal Nutrition)(11).

Commission Implementing Regulation (EU) 2018/1569 amending Implementing Regulation (EU) No1110/2011 concerning the authorisation of an enzyme preparation of endo-1,4-beta-xylanase produced by *Trichoderma reesei* (CBS 114044) as a feed additive for laying hens, minor poultry species and pigs for fattening (holder of authorisation Roal Oy)(12).

# PART 2

Revocation of retained direct EU legislation in accordance with regulation 7(2)

Commission Regulation (EC) No 902/2009 concerning the authorisation of an enzyme preparation of endo-1,4-beta-xylanase produced by *Trichoderma reesei* (CBS 114044) as a feed additive for weaned piglets, chickens for fattening, chickens reared for laying, turkeys for fattening and turkeys reared for breeding (holder of authorisation Roal Oy)(13).

<sup>(10)</sup> EUR 2012/1021.

<sup>(11)</sup> EUR 2012/1196.

<sup>(12)</sup> EUR 2018/1569.

<sup>(13)</sup> EUR 2009/902.