The Association of Official Seed Certifying Agencies (AOSCA) Sunflower Variety Review Board (SFVRB), reviewed the following varieties on April 30, 2021. The Board recommended the inclusion of these varieties for certification. Seed of these varieties may be certified, providing production meets all standards of the Certifying Agency of the jurisdiction in which the seed is grown.

All variety information, including descriptions, claims, and research data to support any claim was supplied to the Sunflower Variety Review Board by the applicants. The Sunflower Variety Review Board makes judgment regarding recommendation of varieties for inclusion in certification based on the data supplied. Beyond this, the Sunflower Variety Review Board takes no position on the accuracy or truthfulness of any description or claim made by the applicants.

Further information on current procedures, application forms, and details regarding the Sunflower Variety Review Board can be obtained from:

Chet Boruff, Chief Executive Officer
Association of Official Seed Certifying Agencies
1601 52nd Ave., Suite 1
Moline, IL 61265

Phone: 309-736-0120
Fax: 309-736-0115
E-Mail: cboruff@aosca.org

Respectfully submitted,

Ashley Koala, Chairman
Sunflower Variety Review Board
# 2021 AOSCA Sunflower Variety Review Board

## Table of Contents

<table>
<thead>
<tr>
<th>Applicant</th>
<th>Page</th>
<th>Variety Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuseed Americas Inc</td>
<td>1</td>
<td>KHE0017B</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>2</td>
<td>KHE0776R</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>3</td>
<td>KHE0777R</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>4</td>
<td>KHE7030R</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>5</td>
<td>KHE8123B</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>6</td>
<td>KLE0018B</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>7</td>
<td>KSE8391B</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>8</td>
<td>KSM7966R</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>9</td>
<td>SA454B</td>
</tr>
<tr>
<td>Nuseed Americas Inc</td>
<td>10</td>
<td>WSM3975R</td>
</tr>
<tr>
<td>Pioneer Genetique (Agrigenetics, DBA Mycogen Seeds)</td>
<td>11</td>
<td>394021B</td>
</tr>
<tr>
<td>Pioneer Genetique (Agrigenetics, DBA Mycogen Seeds)</td>
<td>12</td>
<td>CIT177311R</td>
</tr>
<tr>
<td>Pioneer Genetique (Agrigenetics, DBA Mycogen Seeds)</td>
<td>13</td>
<td>CN8861R</td>
</tr>
<tr>
<td>Pioneer Genetique (Agrigenetics, DBA Mycogen Seeds)</td>
<td>14</td>
<td>CP2812B</td>
</tr>
<tr>
<td>Pioneer Genetique (Agrigenetics, DBA Mycogen Seeds)</td>
<td>15</td>
<td>CP8882R</td>
</tr>
<tr>
<td>Pioneer Genetique (Agrigenetics, DBA Mycogen Seeds)</td>
<td>16</td>
<td>V15DS14197R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>17</td>
<td>7PAAJ14R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>18</td>
<td>7PAAK77R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>19</td>
<td>7PAJA76R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>20</td>
<td>7PEC07B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>21</td>
<td>7PFVU42B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>22</td>
<td>7PGUD11B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>23</td>
<td>7PHF186B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>24</td>
<td>7PJCQ56B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>25</td>
<td>7PJNG41R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>26</td>
<td>7PJIYH43R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>27</td>
<td>7PKAN75R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>28</td>
<td>7PKEB40B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>29</td>
<td>7PLFC16R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>30</td>
<td>7PNNR32B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>31</td>
<td>7PPLZ07R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>32</td>
<td>7POKW71R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>33</td>
<td>7PQUC30B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>34</td>
<td>7PTB161R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>35</td>
<td>7PWDB95R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>36</td>
<td>7PWBP15B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>37</td>
<td>7PWOQ53B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>38</td>
<td>7PWWB08B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>39</td>
<td>7PYAC51B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>40</td>
<td>7PZNN09R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>41</td>
<td>7PAAW12R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>42</td>
<td>7PABY83B</td>
</tr>
</tbody>
</table>
# 2021 AOSCA SUNFLOWER VARIETY REVIEW BOARD

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Applicant</th>
<th>Page</th>
<th>Variety Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>43</td>
<td>7PADZ20B</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>44</td>
<td>7PEMA68R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>45</td>
<td>7PKVN14R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>46</td>
<td>7PPZE68R</td>
</tr>
<tr>
<td>Pioneer Genetique (Overseas)</td>
<td>47</td>
<td>7PRXY70R</td>
</tr>
</tbody>
</table>
Sunflower
KHE0017B

1. KHE0017B is a high oleic, tribenuron-methyl resistant, oilseed maintainer line developed by the pedigree method of selection from the cross KHM8104B/KHE8123B. KHM8104B is a proprietary high oleic, imidazolinone resistant maintainers that has been described and previously approved by the NSVRB. KHE8123B is a high oleic tribenuron-methyl resistant, proprietary line with preferred agronomic characteristics, derived from SA6896B that has been previously described and approved and KHE3357B. The pedigree method of selection was used for the development of KHE0017B. It is a bulk of F7 plants tracing back to a single F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to tribenuron-methyl herbicide.

2. Hybrids utilizing KHE0017B are adapted to major sunflower growing regions of North America, and SE Europe: the hybrids will be primarily for vegetable oil.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: dark green
   Leaf Serration: coarse
   Leaf Blistering: absent or very weak
   Ray Flowers: medium density, broad ovate
   Pappi Color: green
   Undulate, long
   Disk Flower Color: yellow
   Pollen Color: yellow
   Head (neck) Attitude: half-turned down with curved stem
   Seed Shape: elongated
   Seed Thickness: thin
   Hypocotyl Anthocyanin: absent
   Black: absent
   Stripe Appearance: marginal: weakly expressed, center: none or very weakly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None expected.

4. KHE0017B is resistant to tribenuron-methyl herbicide and Downy Mildew races that are controlled by the Pl6 and Pl17 genes.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for the production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. No plan for PVP at this time. Do not provide information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 9, 2021
Sunflower
KHE0776R

1. KHE0776R is a high oleic, tribenuron-methyl resistant, oilseed restorer line developed by the pedigree and backcross method of selection from the cross K12HM69R/KHE9415R. K12HM69R is a proprietary line, previously described and approved by the NSVRB. KHE9415R is a proprietary line with preferred agronomic characteristics, derived from TX16. The pedigree method of selection was used for the development of KHE0776R. It is a bulk of F7 plants tracing back to a single F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, resistance to Downy Mildew and resistance to tribenuron-methyl herbicide.

2. Hybrids utilizing KHE0776R are adapted to Northern sunflower growing regions of North America, and SE Europe, the hybrids will be primarily for vegetable oil.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): medium
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Serration: medium
   Leaf Attitude: low
   Leaf Blistering: weak
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, broad ovate
   Stigma Anthocyanin: absent
   Longitudinal recurved, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: half-turned down with straight stem
   Pollen Color: yellow
   Seed Shape: elongated
   Head Shape: weakly convex
   Seed Thickness: thin
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed, color: black

   List and describe variants and expected frequency. If none, state "none".
   None expected.

4. KHE0776R is resistant to tribenuron-methyl herbicide, and downy mildew races controlled by the Pl33 gene.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for the production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. No plan for PVP at this time. Do not provide information to the PVP database.

Date this application was submitted: March 15, 2021  Date recommended by the VRB: June 9, 2021
Sunflower

KHE0777R

1. KHE0777R is a high oleic, tribenuron-methyl resistant, oilseed restorer line developed by the pedigree method of selection from the cross K12HM69R/KHE9415R. K12HM69R is a proprietary line, previously described and approved by the NSVRB. KHE9415R is a proprietary line with preferred agronomic characteristics, derived from TX16. The pedigree method of selection was used for the development of KHE0777R. It is a bulk of F7 plants tracing back to a single F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, resistance to Downy Mildew and resistance to tribenuron-methyl herbicide.

2. Hybrids utilizing KHE0777R are adapted to Northern sunflower growing regions of North America, and SE Europe, the hybrids will be primarily for vegetable oil.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): medium
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: medium green
   Ray Flowers: medium density, broad ovate
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   longitudinal recurved, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: half-turned down with straight stem
   Pollen Color: yellow
   Seed Shape: elongated
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed, color: black

   List and describe variants and expected frequency. If none, state “none”. None expected.

4. KHE0777R is resistant to tribenuron-methyl herbicide, and downy mildew races controlled by the Pl33 gene.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for the production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. No plan for PVP at this time. Do not provide information to the PVP database.

Date this application was submitted: March 15, 2021       Date recommended by the VRB: June 9, 2021
Sunflower

KHE7030R

1. KHE7030R is a high oleic, tribenuron-methyl resistant, oilseed restorer line developed by the pedigree and backcross method of selection from the cross K12HM69R*7/K12HE62R. K12HM69R and K12HE62R are proprietary lines, previously described and approved by the NSVRB. The pedigree and backcross method of selection was used for the development of KHE7030R. It is a bulk of BC6F7 plants tracing back to a single BC6F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to tribenuron-methyl herbicide.

2. Hybrids utilizing KHE7030R are adapted to Northern sunflower growing regions of North America, and SE Europe, the hybrids will be primarily for vegetable oil.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium, or tall?): medium
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: medium green
   Ray Flowers: medium density, broad ovate
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   Lateral recurved, medium length
   Pappi Color: green
   Pollen Color: yellow
   Seed Shape: elongated
   Seed Outer Pericarp Color: black
   Head (neck) Attitude: half-turned down with straight stem
   Seed Thickness: thin
   Hypocotyl Anthocyanin: absent

   List and describe variants and expected frequency. If none, state “none”.
   None expected.

4. KHE7030R is resistant to tribenuron-methyl herbicide.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for the production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☐ No

7. No plan for PVP at this time. Do not provide information to the PVP database.

Date this application was submitted: March 15, 2021  Date recommended by the VRB: June 9, 2021
Sunflower

KHE8123B

1. KHE8123B is a high oleic, tribenuron-methyl resistant, oilseed maintainer line developed by the pedigree and backcross method of selection from the cross SA6896B*4/KHE3357B. SA6896B is a proprietary high oleic, imidazolinone resistant maintainers that has been described and previously approved by the NSVRB. KHE3357B is a high oleic, tribenuron-methyl resistant, proprietary line with preferred agronomic characteristics, derived from HA458. The pedigree and backcross method of selection was used for the development of KHE8123B. It is a bulk of BC3F7 plants tracing back to a single BC3F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, downy mildew resistance and resistance to tribenuron-methyl herbicide.

2. Hybrids utilizing KHE8123B are adapted to major sunflower growing regions of North America, and SE Europe: the hybrids will be primarily for vegetable oil.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: dark green
   Ray Flowers: medium density, broad ovate
   Undulated, long
   Disk Flower Color: yellow
   Pollen Color: yellow
   Head Shape: flat
   Head (neck) Attitude: half-turned down with curved stem
   Seed Shape: elongated
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: weakly expressed, center: none or very weakly expressed, color: grey

   List and describe variants and expected frequency. If none, state “none”.
   None expected.

4. KHE8123B is resistant to tribenuron-methyl herbicide and Downy Mildew races that are controlled by the Pl17 gene.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for the production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies.  ○ Yes  ☒ No

7. No plan for PVP at this time. Do not provide information to the PVP database.
Sunflower
KLE0018B

1. KLE0018B is a tribenuron-methyl resistant, oilseed maintainer line developed by the pedigree method of selection from the cross KLM8101B/KHE8123B. KLM8101B is a proprietary imidazolinone resistant maintainers that has been described and previously approved by the NSVRB. KHE8123B is a high oleic tribenuron-methyl resistant, proprietary line with preferred agronomic characteristics, derived from SA6896B that has been previously described and approved and KHE3357B.

The pedigree method of selection was used for the development of KLE0018B. It is a bulk of F7 plants tracing back to a single F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to tribenuron-methyl herbicide.

2. Hybrids utilizing KLE0018B are adapted to major sunflower growing regions of North America, and SE Europe: the hybrids will be primarily for vegetable oil.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: dark green
   Ray Flowers: medium density, broad ovate
   Undulated, long
   Leaf Serration: coarse
   Leaf Blistering: absent or very weak
   Ray Flower Color: light yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: yellow
   Pollen Color: yellow
   Head Shape: flat
   Seed Shape: elongated
   Seed Outer Pericarp Color: black
   Seed Thickness: thin
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal; weakly expressed, center: none or very weakly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None expected.

4. KLE0018B is resistant to tribenuron-methyl herbicide and Downy Mildew races that are controlled by the Pl6 and Pl17 genes.

5. Breeder’s seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeder’s seed will be allowed for the production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. No plan for PVP at this time. Do not provide information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 9, 2021
Sunflower
KSE8391B

1. KSE8391B is a sulfonylurea resistant, linoleic confectionary maintainer line developed by the pedigree and backcross method of selection from the cross SA398B*6/SA491B. SA398B and SA491B are proprietary lines with preferred agronomic characteristics. The pedigree method of selection was used for the development of KSE8391B. It is a bulk of BC5F5 plants tracing back to a single BC5F4 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to sulfonylurea herbicide.

2. Hybrids using KSM8391B are adapted to major sunflower growing regions of North America and Europe; the hybrids will be used primarily for human consumption.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): tall
   Branching Type: absent
   Distal Leaf Shape: narrow triangular to broad triangle
   Leaf Serration: medium
   Leaf Attitude: medium
   Leaf Blistering: weak
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, narrow ovate
   Stigma Anthocyanin: absent
   Undulated, medium length
   Pappi Color: green
   Disk Flower Color: yellow
   Head (neck) Attitude: turned down with slightly curved stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Head Shape: weakly concave
   Seed Thickness: medium
   Seed Outer Pericarp Color: dark brown
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: white

List and describe variants and expected frequency. If none, state “none”.

None

4. KSE8391B is resistant to Sulfonylurea herbicide, and has no known disease or insect resistance.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2022
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☐ No

7. KSE8391B will not be submitted for PVP. AOSCA may not provide descriptive information to the PVP database.

Date this application was submitted: March 12, 2021 Date recommended by the VRB: June 9, 2021
**Sunflower**

**KSM7966R**

1. KSM7966R is an imidazolinone resistant, linoleic confectionary restorer line developed by the pedigree and backcross method of selection from the cross WSM3988R*3/K12HE62R. WSM3988R and K12HE62R are proprietary lines with preferred agronomic characteristics. The pedigree and backcross method of selection was used for the development of KSM7966R. It is a bulk of BC2F5 plants tracing back to a single BC2F4 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to imidazolinone herbicide.

2. Hybrids using KSM7966R are adapted to major sunflower growing regions of North America and Europe; the hybrids will be used primarily for human consumption.

3. Flowering (relatively early, medium, or late?): late  
   Height (relatively short, medium or tall?): medium  
   Branching Type: present, overall  
   Distal Leaf Shape: narrow triangular to broad triangle  
   Leaf Attitude: medium  
   Leaf Color: medium green  
   Leaf Serration: medium  
   Leaf Blistering: weak  
   Ray Flowers: medium density, narrow ovate  
   Ray Flowers: flat, medium length  
   Head (neck) Attitude: turned down with slightly curved stem  
   Pollen Color: yellow  
   Seed Shape: ovoid elongated  
   Seed Outer Pericarp Color: dark brown  
   Stigma Anthocyanin: absent  
   Stigma Color: green  
   Pappi Color: green  
   Hypocotyl Anthocyanin: absent  
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: white

List and describe variants and expected frequency. If none, state “none”.

None

4. KSM7966R is resistant to Imidazolinone herbicide, and has no known disease or insect resistance.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2022  
   Certified seed production acreage can be published by AOSCA and certifying agencies.  
   Yes  
   No

7. KSM7966R will not be submitted for PVP. AOSCA may not provide descriptive information to the PVP database.

Date this application was submitted: March 12, 2021  
Date recommended by the VRB: June 9, 2021
Sunflower

SA454B

1. SA454B is an imidazolinone resistant, linoleic confectionary maintainer line developed by the pedigree and backcross method of selection from the cross SA9611B*3//SA443B/SA440B. SA9611B, SA443B, and SA440B are proprietary lines with preferred agronomic characteristics. The pedigree method of selection was used for the development of SA454B. It is a bulk of BC2F5 plants tracing back to a single BC2F4 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to imidazolinone herbicide.

2. Hybrids using SA454B are adapted to major sunflower growing regions of North America and Europe; the hybrids will be used primarily for human consumption.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: narrow triangular to broad triangular
   Leaf Serration: medium
   Leaf Attitude: medium
   Leaf Blistering: weak
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, narrow ovate
   flat, medium length
   Pappi Color: green
   Disk Flower Color: yellow
   Head (neck) Attitude: turned down with slightly curved stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Head Shape: weakly concave
   Seed Thickness: medium
   Seed Outer Pericarp Color: dark brown
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: none or very weakly expressed, color: white

List and describe variants and expected frequency. If none, state “none”.
None

4. SA454B is resistant to Imidazolinone herbicide, and has no known disease or insect resistance.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2022
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. SA454B will not be submitted for PVP. AOSCA may not provide descriptive information to the PVP database.

Date this application was submitted: March 12, 2021 Date recommended by the VRB: June 9, 2021
Sunflower
WSM3975R

1. WSM3975R is an imidazolinone resistant, linoleic confectionary restorer line developed by the pedigree method of selection from the cross SA440A/CR29/CR1082. SA440A, CR29 and CR1082 are proprietary lines with preferred agronomic characteristics. The pedigree method of selection was used for the development of WSM3975R. It is a bulk of F7 plants tracing back to a single F6 plant. Selection was based on uniform plant type, self compatibility, seed size, seed color, and resistance to imidazolinone herbicide.

2. Hybrids using WSM3975R are adapted to major sunflower growing regions of North America and Europe; the hybrids will be used primarily for human consumption.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): medium
   Branching Type: present, overall
   Distal Leaf Shape: narrow triangular to broad triangular
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: medium density, narrow ovate
   Leaf Serration: medium
   Leaf Blistering: weak
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: yellow
   Head (neck) Attitude: turned down with slightly curved stem
   Pollen Color: yellow
   Seed Shape: ovoid elongated
   Head Shape: weakly concave
   Seed Outer Pericarp Color: dark brown
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: white

   List and describe variants and expected frequency. If none, state “none.”
   None

4. WSM3975R is resistant to Imidazolinone herbicide, and has no known disease or insect resistance.

5. Breeders seed will be maintained by Nuseed Americas in nursery rows under bags, or by open pollination in isolated fields. Up to two generations beyond breeders seed will be allowed for production of foundation seed. Isolation and other requirements will be in accordance with the seed certification regulations of the state where it is produced.

6. Certified seed is expected to first be available in: 2022
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☒ No

7. WSM3975R will not be submitted for PVP. AOSCA may not provide descriptive information to the PVP database.

Date this application was submitted: March 12, 2021     Date recommended by the VRB: June 9, 2021
Sunflower

394021B

1. 394021B is a linoleic oil type maintainer line developed by Agrigenetics Inc. D/B/A Mycogen Seeds that derives from the cross H757B/DEKAS.3940. H757B is Agrigenetics Inc. D/B/A Mycogen Seeds line. DEKAS.3940 is a commercial hybrid from Dekalb. Selections were made for oil content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 394021B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous dominant for single heads.

2. Hybrids utilizing 394021B have been tested and are adapted to the growing regions of the North, Central and South of Argentina.

3. Flowering (relatively early, medium, or late?): very late

<table>
<thead>
<tr>
<th>Height (relatively short, medium or tall?)</th>
<th>tall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branching Type</td>
<td>absent</td>
</tr>
<tr>
<td>Distal Leaf Shape</td>
<td>broad triangular to rounded</td>
</tr>
<tr>
<td>Leaf Attitude</td>
<td>medium</td>
</tr>
<tr>
<td>Leaf Color</td>
<td>medium green</td>
</tr>
<tr>
<td>Ray Flowers</td>
<td>medium density, narrow ovate</td>
</tr>
<tr>
<td>flat, medium length</td>
<td></td>
</tr>
<tr>
<td>Pappi Color</td>
<td>green</td>
</tr>
<tr>
<td>Disk Flower Color</td>
<td>orange</td>
</tr>
<tr>
<td>Pollen Color</td>
<td>yellow</td>
</tr>
<tr>
<td>Head Shape</td>
<td>weakly concave</td>
</tr>
<tr>
<td>Seed Outer Pericarp Color</td>
<td>black</td>
</tr>
<tr>
<td>Hypocotyl Anthocyanin</td>
<td>present, weak</td>
</tr>
<tr>
<td>Seed Shape</td>
<td>ovoid elongated</td>
</tr>
<tr>
<td>Seed Thickness</td>
<td>thick</td>
</tr>
<tr>
<td>Head (neck) Attitude</td>
<td>half-turned down with curved stem</td>
</tr>
</tbody>
</table>

List and describe variants and expected frequency. If none, state “none”.

None.

4. The variety 394021B is not herbicide tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered ☑

Certified seed production acreage can be published by AOSCA and certifying agencies. ☑ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent).

AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 9, 2021

Association of Official Seed Certifying Agencies

Page 11 of 47 2021 SUNFLOWER VRB
Sunflower
CIT177311R

1. CIT177311R is linoleic oil type imidazolinone tolerant restorer line developed by Agrigenetics Inc. D/B/A Mycogen Seeds that derives from the cross CN2731R*2//CN2731R/OIN587R/6/CN2731R*2/5/ON6725R*4/BTI-1R/CNE922R/4/CNE922R//CNE922R//CNE922R/HA458. CN2731R, OIN587R, ON6725R, CNE922R, and CN2922R are Agrigenetics Inc. D/B/A Mycogen Seeds lines. BTI-1R is a CLHA + inbred licensed for use from BASF. BTI-1R is used as the donor for CLHA+ tolerance. HA458 is a maintainer high-oleic fatty acid germplasm line released by USDA-ARS and the North Dakota Agricultural Experiment Station. Selections were made for imidazolinone tolerance oil content, and yield. The pedigree method was used in the development of CIT177311R. It is a bulk of F4 seed tracing back to a single F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing CIT177311R have been tested and are adapted to the growing regions of the North, Central and South of Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): short
   Branching Type: present, only apical
   Distal Leaf Shape: broad triangular to rounded
   Leaf Attitude: high
   Leaf Color: light green
   Ray Flowers: medium density, narrow ovate
   flat, medium length
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: flat
   Seed Outer Pericarp Color: grey
   Stripe Appearance: marginal: weakly expressed, center: weakly expressed, color: white

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. The variety CIT177311R is imidazolinone tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered.
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent of a hybrid).
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 17, 2021   Date recommended by the VRB: July 19, 2021
Sunflower
CN8861R

1. CN8861R is linoleic oil type restorer line developed by Agrigenetics Inc. D/B/A Mycogen Seeds that derives from the self of the hybrid PARAISO-30. PARAISO-30 is a commercial hybrid from Nidera. Selections were made for oil content and yield, as assessed in hybrid combination. The pedigree method was used in the development of CN8861R. It is a bulk of F4 seed tracing back to a single F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing CN8861R have been tested and are adapted to the growing regions of the North, Central and South of Argentina.

3. Flowering (relatively early, medium, or late?): late
Height (relatively short, medium or tall?): tall
Branching Type: present, predominantly apical
Distal Leaf Shape: broad triangular to rounded Leaf Serration: medium
Leaf Attitude: medium Leaf Blistering: weak
Leaf Color: medium green Ray Flower Color: orange yellow
Ray Flowers: medium density, fusiform Stigma Anthocyanin: absent
flat, medium length Pappi Color: green
Disk Flower Color: orange Head (neck) Attitude: half-turned down with curved stem
Pollen Color: orange Seed Shape: ovoid wide
Head Shape: deformed Seed Thickness: medium
Seed Outer Pericarp Color: dark brown Hypocotyl Anthocyanin: absent
Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

List and describe variants and expected frequency. If none, state “none”.
None.

4. The variety CN8861R is not herbicide tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered ☒ Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent of a hybrid). AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 17, 2021 Date recommended by the VRB: July 19, 2021
Sunflower
CP2812B

1. CP2812B is linoleic oil type, imidazolinone tolerant maintainer line developed by Agrigenetics Inc. D/B/A Mycogen Seeds that derives from the backcross CN9811B*4/BTI-1B. CN9811B is an Agrigenetics Inc. D/B/A Mycogen Seeds line. BTI-1B is the CLHA + inbred licensed for use from BASF. BTI-1B is used as the donor of CLHA+ tolerance. Selections were made for imidazolinone tolerance, oil content and recurrent parent traits. The backcrossing method was used in the development of CP2812B. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous dominant for single heads.

2. Hybrids utilizing CP2812B have been tested and are adapted to the growing regions of the North, Central and South of Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): tall
   Branching Type: absent
   Distal Leaf Shape: narrow triangular
   Leaf Attitude: high
   Leaf Color: medium green
   Ray Flowers: medium density, narrow ovate
   flat, medium length
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: flat
   Seed Outer Pericarp Color: black
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: white
   Leaf Serration: coarse
   Leaf Blistering: medium
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Head (neck) Attitude: half-turned down with curved stem
   Seed Shape: ovoid elongated
   Seed Thickness: medium
   Hypocotyl Anthocyanin: absent

List and describe variants and expected frequency. If none, state “none”.

None.

4. The variety CP2812B is imidazolinone tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent of a hybrid). AOSCA may provide descriptive information to the PVP database.
Sunflower
CP8882R

1. CP8882R is linoleic oil type imidazolinone tolerant restorer line developed by Agrigenetics Inc. D/B/A Mycogen Seeds that derives from the backcross CN8882R*3/BTI-1R. CN8882R is an Agrigenetics Inc. D/B/A Mycogen Seeds line. BTI-1R is a CLHA + inbred licensed for use from BASF. BTI-1R is used as the donor for CLHA+ tolerance. Selections were made for imidazolinone tolerance, oil content, yield and recurrent parent traits. The pedigree method was used in the development of CP8882R. It is a bulk of BC2F4 seed tracing back to a single BC2F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing CP8882R have been tested and are adapted to the growing regions of the North, Central and South of Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to rounded
   Leaf Serration: isolated or very fine
   Leaf Attitude: medium
   Leaf Blistering: weak
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, narrow ovate
   flat, medium length
   Pappi Color: green
   Disk Flower Color: yellow
   Head (neck) Attitude: half-turned down with curved stem
   Pollen Color: yellow
   Seed Shape: ovoid elongated
   Head Shape: flat
   Seed Thickness: medium
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: present, medium
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

List and describe variants and expected frequency. If none, state "none".
None.

4. The variety CP8882R is imidazolinone tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered ☐
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent of a hybrid).
   AOSCA may provide descriptive information to the PVP database. ☐

Date this application was submitted: March 17, 2021 Date recommended by the VRB: July 19, 2021

Association of Official Seed Certifying Agencies
2021 SUNFLOWER VRB
Page 15 of 47
Sunflower

V15DS14197R

1. V15DS14197R is linoleic oil type restorer line developed by Agrigenetics Inc. D/B/A Mycogen Seeds that derives from the cross CN6798R/NK-50. CN6798R is an Agrigenetics Inc. D/B/A Mycogen Seeds line. NK-50 is a commercial hybrid from Syngenta. Selections were made for oil content and yield, as assessed in hybrid combination. The pedigree method was used in the development of V15DS14197R. It is a bulk of F5 seed tracing back to a single F4 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing V15DS14197R have been tested and are adapted to the growing regions of the North, Central and South of Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular
   Leaf Attitude: medium
   Leaf Color: dark green
   Ray Flowers: sparse, fusiform
   Ray Flower Color: orange yellow
   Stigma Anthocyanin: absent
   longitudinal recurved, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Pollen Color: orange
   Head (neck) Attitude: half-turned down with curved stem
   Seed Shape: ovoid elongated
   Seed Thickness: thin
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. The variety V15DS14197R is not herbicide tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered.
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ○ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent of a hybrid).
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 17, 2021     Date recommended by the VRB: July 19, 2021
Sunflower
7PAAJ14R

1. 7PAAJ14R is a linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross 7PADS21R (FEMALE) & IMI (MALE). 7PADS21R is a Pioneer proprietary line. IMI is a public line used as the donor for herbicide tolerance. Selections were made for imidazolinone tolerance, oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PAAJ14R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilising 7PAAJ14R have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): very tall
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: medium density, narrow ovate
   flat, short
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: flat
   Seed Outer Pericarp Color: medium brown
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

   List and describe variants and expected frequency. If none, state "none".
   None.

4. The variety 7PAAJ14R is imidazolinone tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered ☐
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold because the variety is a parent.
   AOSCA may provide descriptive information to the PVP database.

   Date this application was submitted: March 17, 2021    Date recommended by the VRB: July 19, 2021
Sunflower
7PAAK77R

1. 7PAAK77R is a linoleic oil type, imidazolinone tolerant restorer line developed by Pioneer Hi-Bred International that derives from the cross 7PADS21R/BT1-M1. 7PADS21R is a Pioneer proprietary lines. BT1-M1 is a public line used as the donor for herbicide tolerance. Selections were made for imidazolinone tolerance, oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PAAK77R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilising 7PAAK77R have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): very tall
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: medium density, fusiform
   flat, medium length
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: weakly convex
   Seed Outer Pericarp Color: medium brown
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. The variety 7PAAK77R is imidazolinone tolerant.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: The seed of the variety will not be offered ☐
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☑ Yes ☐ No

7. The application will be submitted for protection under the U.S. Plant Variety Protection Act, but the seed of the variety name will never be sold (because the variety is a parent). AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 17, 2021 Date recommended by the VRB: July 19, 2021
Sunflower
7PAJA76R

1. 7PAJA76R is a tribenuron-methyl tolerant linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the backcross U09RF5ULM*5/PH5000R. Both U09RF5ULM & PH5000R are Pioneer proprietary lines. U09RF5ULM and PH5000R are a tribenuron-methyl tolerant lines. Selections were made for tribenuron-methyl tolerance, earlier flowering, shorter plant height, oil and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PAJA76R. It is a bulk of BC4F4 seed tracing back to a single BC4F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PAJA76R have been tested and are adapted to the growing regions of the South and Eastern Europe.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): tall
   Branching Type: present, overall
   Distal Leaf Shape: narrow triangular to broad triangular
   Leaf Attitude: high
   Leaf Color: medium green
   Ray Flowers: medium density, broad ovate
   flat, medium length
   Leaf Serration: fine
   Leaf Blistering: weak
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: flat
   Head (neck) Attitude: half-turned down with curved stem
   Seed Shape: elongated
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. This variety is resistant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021  Date recommended by the VRB: June 3, 2021
Sunflower
7PECE07B

1. 7PECE07B is a triburon-methyl tolerant oleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the cross PH1023B/T1330HG. PH1023B & T1330HG are all Pioneer proprietary lines. PH1023B is a triburon-methyl tolerant line used as the donor for herbicide tolerance. Selections were made for triburon-methyl tolerance, earlier flowering, shorter plant height, oil & fatty acid content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PECE07B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 5 generations of backcrossing. It is homozygous dominant for single heads.

2. Hybrids utilizing 7PECE07B have been tested in and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): early
   Height (relatively short, medium or tall?): very short
   Branching Type: absent
   Distal Leaf Shape: narrow triangular
   Leaf Attitude: medium
   Leaf Color: dark green
   Leaf Serration: medium
   Leaf Blistering: weak
   Ray Flowers: medium density, narrow ovate
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: orange
   Pollen Color: yellow
   Head (neck) Attitude: turned down with straight stem
   Seed Shape: ovoid elongated
   Seed Outer Pericarp Color: black
   Seed Thickness: thin
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

   List and describe variants and expected frequency. If none, state "none".
   None.

4. This variety is tolerant to triburon-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☒ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021    Date recommended by the VRB: June 9, 2021
Sunflower
7PFVU42B

1. 7PFVU42B is a tribenuron-methyl tolerant high oleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the backcross 7PPPU01B*4/7PEKD82B. 7PPPU01B and 7PEKD82B are Pioneer proprietary lines. 7PEKD82B & 7PPPU01B are tribenuron-methyl tolerant, high oleic oil type line used as the donor for herbicide tolerance, and oleic oil type. Selections were made for tribenuron-methyl tolerance, fatty acid content and recurrent parent traits. The pedigree method was used in the development of 7PFVU42B. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PFVU42B have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): late
Height (relatively short, medium or tall?): short
Branching Type: absent
Distal Leaf Shape: broad triangular to rounded Leaf Serration: fine
Leaf Attitude: high Leaf Blistering: medium
Leaf Color: light green Ray Flower Color: medium yellow
Ray Flowers: sparse, fusiform Stigma Anthocyanin: absent
flat, long Pappi Color: green
Disk Flower Color: orange Head (neck) Attitude: half-turned down with straight stem
Pollen Color: yellow Seed Shape: ovoid wide
Head Shape: weakly concave Seed Thickness: thin
Seed Outer Pericarp Color: black Hypocotyl Anthocyanin: present, weak
Stripe Appearance: marginal; strongly expressed, center: none or very weakly expressed, color: grey

List and describe variants and expected frequency. If none, state "none".
None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes  ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021
Sunflower
7PGUD11B

1. 7PGUD11B is a linoleic oil type, imidazolinone tolerant maintainer line developed by Pioneer Hi-Bred International that derives from the cross U1243IMLG/U1188IMLG//PH1015B/3/U1372CLLG. U1243IMLG, U1188IMLG, PH1015B & U1372CLLG are all Pioneer proprietary lines. U1372CLLG is CLHA + tolerance donor. Selections were made for imidazolinone tolerance, oil content, shorter plant stature, earlier flowering and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PGUD11B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 4 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PGUD11B have been tested in and are adapted to the growing regions of Southern, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): early  
   Height (relatively short, medium or tall?): medium  
   Branching Type: absent
   Distal Leaf Shape: broad triangular  
   Leaf Attitude: high  
   Leaf Color: dark green  
   Leaf Serration: coarse  
   Leaf Blistering: medium  
   Ray Flowers: sparse, narrow ovate  
   Ray Flower Color: medium yellow  
   Stigma Anthocyanin: absent  
   Undulated, long: green  
   Pappi Color: orange  
   Disk Flower Color: half-turned down with straight stem  
   Pollen Color: yellow  
   Head Shape: weakly concave  
   Seed Shape: rounded  
   Seed Thickness: medium  
   Seed Outer Pericarp Color: black  
   Hypocotyl Anthocyanin: absent  
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to imidazolinone.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021  Date recommended by the VRB: June 3, 2021

Association of Official Seed Certifying Agencies
Sunflower
7PHFT86B

1. 7PHFT86B is a linoleic oil type, imidazolinone tolerant, maintainer line developed by Pioneer Hi-Bred International that derives from the cross 7PNWF24B /U11881MLG/ PH1015B/3/1U1372CLLG. 7PNWF24B, U11881MLG, PH1015B & U1372CLLG are all Pioneer proprietary lines. U1372CLLG is CLHA + tolerant donor. Selections were made for imidazolinone tolerance, oil content, shorter plant stature, earlier flowering and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PHFT86B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 5 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PHFT86B have been tested in and are adapted to the growing regions of Southern, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: narrow triangular
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: medium density, fusiform
   Ray Flowers: undulated, medium length
   Leaf Serration: coarse
   Leaf Blistering: medium
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: turned down with slightly curved stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Head Shape: flat
   Seed Thickness: thin
   Seed Outer Pericarp Color: light brown
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

   List and describe variants and expected frequency. If none, state “none”.

   None.

4. This variety is tolerant to imidazolinone.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021

Association of Official Seed Certifying Agencies 2021 SUNFLOWER VRB
Page 23 of 47
Sunflower
7PJCQ56B

1. 7PJCQ56B is a linoleic oil type, imidazolinone tolerant, maintainer line developed by Pioneer Hi-Bred International that derives from the backcross 7PVDC41B*4/U1355CLLG. 7PVDC41B & U1355CLLG are all Pioneer proprietary lines. U1355CLLG is CLHA + tolerant donor. Selections were made for imidazolinone resistance, oil content, and recurrent parent traits. The pedigree method was used in the development of 7PJCQ56B. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous for single head.

2. Hybrids utilizing 7PJCQ56B have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): short
   Branching Type: absent
   Distal Leaf Shape: narrow triangular to broad triangle
   Leaf Attitude: high
   Leaf Color: medium green
   Ray Flowers: medium density, narrow ovate
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: flat
   Seed Outer Pericarp Color: black
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: grey

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. This variety is tolerant to Imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021     Date recommended by the VRB: June 3, 2021
Sunflower
7PJNG41R

1. 7PJNG41R is an oleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the backcross U09MYHM*4/T0788HM. Both U09MYHM & T0788HM are Pioneer proprietary lines. Selections were made for similar flowering, plant height, oil and fatty acid content than the base and similar yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PJNG41R. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PJNG41R have been tested in and are adapted to the growing regions of the Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): early
   Height (relatively short, medium or tall?): very short
   Branching Type: present, overall
   Distal Leaf Shape: narrow triangular to broad triangle
   Leaf Attitude: high
   Leaf Color: dark green
   Leaf Serration: medium
   Leaf Blistering: absent or very weak
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, narrow ovate
   Stigma Anthocyanin: absent
   Flat, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: half-turned down with straight stem
   Pollen Color: yellow
   Seed Shape: ovoid elongated
   Head Shape: flat
   Seed Thickness: thin
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: present, strong
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

List and describe variants and expected frequency. If none, state "none".
None.

4. None

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021       Date recommended by the VRB: June 3, 2021
Sunflower
7PJYH43R

1. 7PJYH43R is a tribenuron-methyl tolerant oleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross T0456LM*4/ PH5102R. Both T0456LM & PH5102R are Pioneer proprietary lines. PH5102R is a tribenuron-methyl tolerant oleic oil type line used as the donor for herbicide tolerance, and oleic oil profile. Selections were made for tribenuron-methyl tolerance, earlier flowering, shorter plant stature, oil and fatty acid content and yield, as assessed in hybrid combination.
   The pedigree method was used in the development of 7PJYH43R. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PJYH43R have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): early
   Height (relatively short, medium or tall?): very short
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to acuminate
   Leaf Attitude: medium
   Leaf Color: dark green
   Ray Flowers: medium density, narrow ovate
   Ray Floweers: flat, long
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: flat
   Seed Outer Pericarp Color: dark brown
   Hypocotyl Anthocyanin: absent
   List and describe variants and expected frequency. If none, state “none”.
   None.
   Seed Shape: ovoid wide
   Seed Thickness: thin
   Head (neck) Attitude: half-turned down with curved stem
   Pappi Color: rust

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database

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Date this application was submitted: March 15, 2021       Date recommended by the VRB: June 3, 2021
Sunflower

7PKAN75R

1. 7PKAN75R is a tribenuron-methyl tolerant, high oleic type restorer line developed by Pioneer Hi-Bred International that derives from the backcross T1370SUHM*5/U14MKLM. Both T1370SUHM & U14MKLM are Pioneer proprietary lines. T1370SUHM is a tribenuron-methyl tolerant line used as the donor for herbicide tolerance. Selections were made for tribenuron-methyl tolerance, fatty acid profile and recurrent parent traits. The pedigree method was used in the development of 7PKAN75R. It is a bulk of BC4F4 seed tracing back to a single BC4F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PKAN75R have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): early
   Height (relatively short, medium or tall?): very short
   Branching Type: present, overall
   Distal Leaf Shape: lanceolate to narrow triangular
   Leaf Serration: fine
   Leaf Attitude: low
   Leaf Blistering: weak
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: sparse, broad ovate
   Pappi Color: rust
   flat, medium length
   Disk Flower Color: orange
   Head (neck) Attitude: vertical
   Pollen Color: yellow
   Seed Shape: ovoid elongated
   Head Shape: flat
   Seed Thickness: thin
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021  Date recommended by the VRB: June 3, 2021
Sunflower
7PKEB40B

1. 7PKEB40B is a linoleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the cross B0306LG/U0660LG. B0306LG and U0660LG are all Pioneer proprietary lines. Selections were made for earlier flowering, shorter plant height, oil & fatty acid content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PKEB40B. It is a bulk of F7 seed tracing back to a single F6 selection. The sterile analog derives from the CMS PET1 cytoplasm following 4 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PKEB40B have been tested in and are adapted to the growing regions of Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): late  
Height (relatively short, medium or tall?): tall  
Branching Type: absent  
Distal Leaf Shape: broad triangular to rounded  
Leaf Attitude: medium  
Leaf Color: dark green  
Ray Flowers: medium density, narrow ovate  
flat, long  
Disk Flower Color: orange  
Pollen Color: yellow  
Head Shape: flat  
Seed Outer Pericarp Color: black  
Stripe Appearance: marginal: weakly expressed, center: weakly expressed, color: grey  

Leaf Serration: coarse  
Leaf Blistering: strong  
Ray Flower Color: orange yellow  
Stigma Anthocyanin: absent  
Pappi Color: green  
Head (neck) Attitude: turned down with slightly curved stem  
Seed Shape: ovoid wide  
Seed Thickness: medium  
Hypocotyl Anthocyanin: absent  

List and describe variants and expected frequency. If none, state “none”.
None.

4. None

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021  
Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. State whether AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021  
Date recommended by the VRB: June 3, 2021

Association of Official Seed Certifying Agencies
Sunflower
7PLFC16R

1. 7PLFC16R is a linoleic oil type, imidazolinone tolerant restorer line developed by Pioneer Hi-Bred International that derives from the cross 7PAQB91R/7PKVL42R*3/U14LGCLLM. 7PAQB91R, 7PKVL42R & U14LGCLLM are all Pioneer proprietary lines. U14LGCLLM is the CLHA + tolerant donor. Selections were made for imidazolinone tolerance, recurrent parent trait and yield, as assessed in hybrid combination.

    The pedigree method was used in the development of 7PLFC16R. It is a bulk of F4 seed tracing back to a single F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PLFC16R have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): medium
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to acuminate
   Leaf Attitude: high
   Leaf Color: medium green
   Leaf Serration: fine
   Leaf Blistering: medium
   Ray Flower Color: medium yellow
   Ray Flowers: dense, broad ovate
   flat, medium length
   Discoloration: orange
   Head (neck) Attitude: vertical
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Seed Thickness: medium
   Seed Outer Pericarp Color: black
   Stigma Anthocyanin: absent
   Pappi Color: rust
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to Imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made.

   AOSCA may provide descriptive information to the PVP database

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021
Sunflower
7PNNR32B

1. 7PNNR32B is a tribenuron-methyl tolerant high oleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the cross PH1023B/T1330HG. PH1023B & T1330HG are all Pioneer proprietary lines. PH1023B is a tribenuron-methyl tolerant line used as the donor for herbicide tolerance. Selections were made for tribenuron-methyl tolerance, earlier flowering, shorter plant height, oil content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PNNR32B. It is a bulk of F7 seed tracing back to a single F6 selection. The sterile analog derives from the CMS PET1 cytoplasm following 6 generations of backcrossing. It is homozygous dominant for single heads.

2. Hybrids utilizing 7PNNR32B have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): early
   Height (relatively short, medium or tall?): short
   Branching Type: absent
   Distal Leaf Shape: broad triangular to acuminate
   Leaf Attitude: medium
   Leaf Color: light green
   Leaf Serration: medium
   Leaf Blistering: weak
   Ray Flowers: sparse, broad ovate
   Stigma Anthocyanin: absent
   flat, short
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: turned down with straight stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Seed Outer Pericarp Color: black
   Seed Thickness: medium
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal; strongly expressed, center: weakly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☒ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   State whether AOSCA may provide descriptive information to the PVP database

Date this application was submitted: March 15, 2021    Date recommended by the VRB: June 9, 2021
Sunflower

7PPLZ07R

1. 7PPLZ07R is a linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross 7PFFZD079/T1170LM. Both 7PFFZD079 & T1170LM are Pioneer proprietary lines. Selections were made for earlier flowering, shorter plant stature, oil content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PPLZ07R. It is a bulk of P8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PPLZ07R have been tested in and are adapted to the growing regions of Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Attitude: high
   Leaf Color: dark green
   Leaf Serration: medium
   Leaf Blistering: weak
   Ray Flowers: medium density, fusiform
   Stigma Anthocyanin: absent
   Undulated, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: vertical
   Pollen Color: yellow
   Seed Shape: elongated
   Seed Outer Pericarp Color: dark brown
   Hypocotyl Anthocyanin: absent
   Weakly concave
   Seed Thickness: thick
   Marginal: none or very weakly expressed, center: none or very weakly expressed

List and describe variants and expected frequency. If none, state “none”.
None.

4. None

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☑️ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021       Date recommended by the VRB: June 3, 2021
Sunflower  
7PQKW71R

1. 7PQKW71R is an imidazolinone tolerant oleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the backcross U14LGCLLM*4/7PMHP36R. Both U14LGCLLM & 7PMHP36R are Pioneer proprietary lines. U14LGCLLM is CLHA + tolerant donor used as the donor for herbicide tolerance and PMHP36R is an oleic oil type donor. Selections were made for imidazolinone tolerance, oil and fatty acid content and recurrent parent trait, as assessed in hybrid combination. The pedigree method was used in the development of 7PQKW71R. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PQKW71R have been tested in and are adapted to the growing regions of Southern, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium  
   Height (relatively short, medium or tall?): short  
   Branching Type: present, only apical  
   Distal Leaf Shape: rounded  
   Leaf Serration: fine  
   Leaf Attitude: low  
   Leaf Blistering: absent or very weak  
   Leaf Color: medium green  
   Ray Flower Color: orange yellow  
   Ray Flowers: sparse, fusiform  
   Stigma Anthocyanin: present, medium  
   longitudinal recurved, long  
   Pappi Color: green  
   Disk Flower Color: yellow  
   Head (neck) Attitude: inclined  
   Pollen Color: yellow  
   Seed Shape: ovoid elongated  
   Head Shape: weakly convex  
   Seed Thickness: medium  
   Seed Outer Pericarp Color: black  
   Hypocotyl Anthocyanin: present, medium  
   Stripe Appearance: marginal: weakly expressed, center: weakly expressed, color: brown

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to Imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021  
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021  
Date recommended by the VRB: June 3, 2021
Sunflower

7PQUC30B

1. 7PQUC30B is a tribenuron-methyl tolerant high oleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the cross PH1023B/T1207SULG. PH1023B & T1207SULG are Pioneer proprietary lines. PH1023B is high oleic oil type line used as the donor for oleic oil type. Selections were made for tribenuron-methyl tolerance, fatty acid content, shorter plant stature, earlier flowering and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PQUC30B It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 4 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PQUC30B have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): short
   Branching Type: absent
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: medium green
   Leaf Serration: fine
   Leaf Blistering: absent or very weak
   Ray Flower Color: medium yellow
   Ray Flowers: sparse, broad ovate
   Stigma Anthocyanin: absent
   flat, medium length
   Pappi Color: green
   Disk Flower Color: yellow
   Head (neck) Attitude: half-turned down with straight stem
   Pollen Color: yellow
   Seed Shape: ovoid elongated
   Head Shape: flat
   Seed Thickness: medium
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021
Date recommended by the VRB: June 3, 2021
Sunflower
7PTBT61R

1. 7PTBT61R is an oleic oil type, tribenuron-methyl tolerant restorer line developed by Pioneer Hi-Bred International that derives from the backcross 7PACJ80R*4/7PFDK23R. Both 7PACJ80R & 7PFDK23R are Pioneer proprietary lines. Selections were made for for tribenuron-methyl tolerance, fatty acid content, recurrent parent traits and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PTBT61R It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PTBT61R have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): very short
   Branching Type: present, overall
   Distal Leaf Shape: broad triangular
   Leaf Attitude: high
   Leaf Color: dark green
   Leaf Serration: medium
   Leaf Blistering: medium
   Ray Flowers: medium density, broad ovate
   Ray Flower Color: medium yellow
   Stigma Anthocyanin: absent
   flat, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: vertical
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Seed Outer Pericarp Color: black
   Seed Thickness: medium
   Hypocotyl Anthocyanin: present, strong
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☒ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021    Date recommended by the VRB: June 3, 2021
Sunflower
7PWDB95R

1. 7PWDB95R is a tribenuron-methyl tolerant oleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross PH6000R/PH5015R. Both PH6000R & PH5015R are Pioneer proprietary lines. PH6000R & PH5015R are tribenuron-methyl tolerant lines and PH6000R was used as the donor for fatty acid profile. Selections were made for tribenuron-methyl tolerance, earlier flowering, shorter plant height, oil and fatty acid content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PWDB95R. It is a bulk of F5 seed tracing back to a single F4 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PWDB95R have been tested in and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): _medium_
   Height (relatively short, medium or tall?): _short_
   Branching Type: _present, predominantly apical_
   Distal Leaf Shape: _broad triangular to acuminate_
   Leaf Attitude: _low_
   Leaf Color: _medium green_
   Leaf Serration: _fine_
   Leaf Blistering: _absent or very weak_
   Ray Flower Color: _medium yellow_
   Ray Flowers: _medium density, fusiform_
   Stigma Anthocyanin: _absent_
   flat, long
   Pappi Color: _green_
   Disk Flower Color: _orange_
   Head (neck) Attitude: _vertical_
   Pollen Color: _yellow_
   Seed Shape: _ovoid elongated_
   Head Shape: _flat_
   Seed Thickness: _thin_
   Seed Outer Pericarp Color: _black_
   Hypocotyl Anthocyanin: _present, weak_
   Stripe Appearance: _marginal: weakly expressed, center: none or very weakly expressed, color: grey_

_List and describe variants and expected frequency. If none, state "none"._
None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

_Date this application was submitted: March 23, 2021 Date recommended by the VRB: June 3, 2021_
Sunflower
7PWPB15B

1. 7PWPB15B is a linoleic oil type, imidazolinone tolerant maintainer line developed by Pioneer Hi-Bred International that derives from the backcross. T0916LG*4/U1355CLLG. T0916LG & U1355CLLG are all Pioneer proprietary lines. U1355CLLG is CLHA + tolerant donor. Selections were made for imidazolinone tolerance, and recurrent parent trait, as assessed in hybrid combination. The pedigree method was used in the development of 7PWPB15B. It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PWPB15B have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): short
   Branching Type: absent
   Distal Leaf Shape: acuminate
   Leaf Attitude: medium
   Leaf Color: light green
   Ray Flowers: medium density, narrow ovate
     flat, long
   Pappi Color: green
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: weakly concave
   Seed Shape: ovoid wide
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: grey

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. This variety is tolerant to Imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021    Date recommended by the VRB: June 3, 2021
Sunflower
7PWQJ53B

1. 7PWQJ53B is an oleic oil type, imidazolinone tolerant maintainer line developed by Pioneer Hi-Bred International that derives from the backcross. 7PNWF24B*4/7PADP34B. 7PNWF24B & 7PADP34B are all Pioneer proprietary lines. 7PNWF24B is CLHA + tolerant donor and 7PADP34B is an oleic oil donor. Selections were made for imidazolinone tolerance oleic oil type and recurrent parent trait, as assessed in hybrid combination. The pedigree method was used in the development of 7PWQJ53B It is a bulk of BC3F4 seed tracing back to a single BC3F3 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PWQJ53B have been tested in and are adapted to the growing regions of Southern, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: broad triangular to acuminate
   Leaf Serration: medium
   Leaf Attitude: high
   Leaf Blistering: medium
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, narrow ovate
   flat, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: half-turned down with curved stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Seed Thickness: thin
   Head Shape: weakly concave
   Hypocotyl Anthocyanin: present, strong
   Seed Outer Pericarp Color: grey
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. This variety is tolerant to Imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☑ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021
Sunflower

7PWWB08B

1. 7PWWB08B is a linoleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the cross U0954LG/U1161LG. U0954LG & U1161LG are all Pioneer proprietary lines. Selections were made for oil content, shorter plant stature, earlier flowering and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PWWB08B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 3 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PWWB08B have been tested in and are adapted to the growing regions of Southern, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: broad triangular to rounded
   Leaf Attitude: high
   Leaf Color: medium green
   Leaf Serration: fine
   Leaf Blistering: medium
   Ray Flower Color: medium yellow
   Ray Flowers: sparse, broad ovate
   Stigma Anthocyanin: absent
   undulated, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: turned down with straight stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Seed Outer Pericarp Color: black
   Seed Thickness: thin
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
None.

4. None

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. Yes ☐ No ☐

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021
Sunflower

7PYAC51B

1. 7PYAC51B is a linoleic oil type, tribenuron-methyl tolerant maintainer line developed by Pioneer Hi-Bred International that derives from the cross T0916LG/PH1022B. T0916LG & PH1022B are all Pioneer proprietary lines. PH1022B is tribenuron-methyl tolerant donor. Selections were made for oil content, shorter plant stature, earlier flowering and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PYAC51B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 4 generations of backcrossing. It is homozygous dominant for single head.

2. Hybrids utilizing 7PYAC51B have been tested and are adapted to the growing regions of the Northern Plains of the U.S. and Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): medium
   Branching Type: absent
   Distal Leaf Shape: lanceolate to narrow triangular
   Leaf Serration: fine
   Leaf Attitude: high
   Leaf Blistering: weak
   Leaf Color: medium green
   Ray Flower Color: medium yellow
   Ray Flowers: medium density, narrow ovate
   Stigma Anthocyanin: absent
   flat, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: half-turned down with straight stem
   Pollen Color: yellow
   Seed Shape: ovoid wide
   Head Shape: strongly convex
   Seed Thickness: medium
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: grey

   List and describe variants and expected frequency. If none, state "none".

   None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies.  ☐ Yes  ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021
Sunflower
7PZNN09R

1. 7PZNN09R is a tribenuron-methyl tolerant linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross U09RFSULM / T1068LM. Both U09RFSULM & T1068LM are Pioneer proprietary lines. U09RFSULM is a tribenuron-methyl tolerant line used as the donor for herbicide tolerance. Selections were made for tribenuron-methyl tolerance, earlier flowering, shorter plant stature, oil content and yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PZNN09R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PZNN09R have been tested in and are adapted to the growing regions of Central, Eastern, and Western Europe.

3. Flowering (relatively early, medium, or late?): medium
   Height (relatively short, medium or tall?): medium
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular
   Leaf Attitude: high
   Leaf Color: dark green
   Leaf Serration: medium
   Leaf Blistering: medium
   Ray Flower Color: medium yellow
   Ray Flowers: sparse, broad ovate
   flat, long
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: vertical
   Pollen Color: yellow
   Seed Shape: elongated
   Seed Thickness: medium
   Seed Outer Pericarp Color: black
   Hypocotyl Anthocyanin: absent
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.

None.

4. This variety is tolerant to tribenuron-methyl herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from cage isolations or, on occasion, from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 3, 2021
Sunflower

7PAAW12R

1. 7PAAW12R is a linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross HS8096R/HS8133R. HS8096R and HS8133R are Pioneer proprietary lines. Selections were made oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PAAW12R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilizing 7PAAW12R have been tested and are adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to rounded
   Leaf Attitude: medium
   Leaf Color: dark green
   Leaf Serration: fine
   Leaf Blistering: weak
   Ray Flowers: sparse, fusiform
   Ray Flower Color: orange yellow
   flat, short
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: yellow
   Head (neck) Attitude: turned down with straight stem
   Pollen Color: orange
   Seed Shape: ovoid elongated
   Seed Outer Pericarp Color: black
   Seed Thickness: medium
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: white

List and describe variants and expected frequency. If none, state “none”.

None.

4. None.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021    Date recommended by the VRB: June 16, 2021

Association of Official Seed Certifying Agencies

Page 41 of 47 2021 SUNFLOWER VRB
Sunflower
7PABY83B

1. 7PABY83B is a linoleic oil type, imidazolinone tolerant, maintainer line developed by Pioneer Hi-Bred International that derives from the cross HS9036B/BT1-M1. HS9036B is a Pioneer proprietary line. BT1-M1 is a public line used as the donor for herbicide tolerance. Selections were made for imidazolinone tolerance, oil content, self fertility, recessive branching, acceptable plant stature and high yield, as assessed in hybrid combination.
   The pedigree method was used in the development of 7PABY83B. It is a bulk of F8 seed tracing back to a single F7 selection. The sterile analog derives from the CMS PET1 cytoplasm following 6 generations of backcrossing. It is homozygous dominant for single heads.

2. Hybrids utilising 7PABY83B have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): tall
   Branching Type: absent
   Distal Leaf Shape: rounded
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: medium density, broad ovate
   Disk Flower Color: yellow
   Pollen Color: orange
   Head Shape: weakly convex
   Seed Outer Pericarp Color: black
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: grey
   List and describe variants and expected frequency. If none, state “none”.
   None.

4. 7PABY83B is tolerant to imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes  ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 16, 2021
Sunflower

7PADZ20B

1. 7PADZ20B is a linoleic oil type maintainer line developed by Pioneer Hi-Bred International that derives from the cross PH516B/INTKLM. PH516B is a Pioneer proprietary line. INTKLM is a maintained population from INTA. Selections were made for oil content, self fertility, acceptable plant stature and high yield, and made against recessive branching, as assessed in hybrid combination. The pedigree methods were used in the development of 7PADZ20B. It is a bulk of F6 seed tracing back to a single F5 selection. The sterile analog derives from the CMS PET1 cytoplasm following 5 generations of backcrossing. It is homozygous dominant for single heads.

2. Hybrids utilising 7PADZ20B have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): tall
   Branching Type: absent
   Distal Leaf Shape: broad triangular
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: dense, fusiform
   flat, short
   Disk Flower Color: orange
   Pollen Color: yellow
   Head Shape: weakly convex
   Seed Outer Pericarp Color: black
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey
   Pappi Color: green
   Leaf Serration: medium
   Leaf Blistering: absent or very weak
   Ray Flower Color: orange yellow
   Stigma Anthocyanin: absent
   Head (neck) Attitude: turned down with straight stem
   Seed Shape: ovoid wide
   Seed Thickness: thick
   Hypocotyl Anthocyanin: present, weak

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. 7PADZ20B claims no resistance to the common sunflower diseases and insect pests.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☑ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021    Date recommended by the VRB: June 16, 2021
Sunflower
7PEMA68R

1. 7PEMA68R is a linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross HS8164R/P119RRM. HS8164R & P119RRM are Pioneer proprietary lines. Selections were made for oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PEMA68R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilising 7PEMA68R have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to rounded
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flowers: medium density, fusiform
   Ray Flower Color: orange yellow
   flat, short
   Leaf Serration: fine
   Leaf Blistering: weak
   Stigma Anthocyanin: absent
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: turned down with straight stem
   Pollen Color: yellow
   Seed Shape: ovoid elongated
   Seed Outer Pericarp Color: medium brown
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: white

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. 7PEMA68R claims no resistance to the common sunflower diseases and insect pests.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies.  ☐ Yes  ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database.

   Date this application was submitted: March 15, 2021   Date recommended by the VRB: June 16, 2021
Sunflower

7PKVN14R

1. 7PKVN14R is a linoleic oil type imidazolinone tolerant restorer line developed by Pioneer Hi-Bred International that derives from the cross HP2407RCL/FHRADEMEYER. Both HP2407RCL & FHRADEMEYER are Pioneer proprietary lines. Selections were made for imidazolinone tolerance, oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PKVN14R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilising 7PKVN14R have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): late
   Height (relatively short, medium or tall?): very tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular
   Leaf Attitude: low
   Leaf Color: medium green
   Leaf Serration: isolated or very fine
   Leaf Blistering: weak
   Ray Flowers: medium density, narrow ovate
   Ray Flower Color: orange yellow
   Stigma Anthocyanin: absent
   Pappi Color: green
   Virginial Color: orange
   Head (neck) Attitude: turned down with slightly curved stem
   Pollen Color: yellow
   Pollen Coloration: ovoid elongated
   Seed Shape: ovoid elongated
   Seed Outer Pericarp Color: dark brown
   Seed Thickness: thin
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: none or very weakly expressed, center: none or very weakly expressed

   List and describe variants and expected frequency. If none, state “none”.
   None.

4. This variety is tolerant to imidazolinone herbicide.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ☐ Yes ☑ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 16, 2021
Sunflower
7PPZE68R

1. 7PPZE68R is a linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross HS8161R/P2097RRM. Both HS8161R & P2097RRM are Pioneer proprietary lines. Selections were made for oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PPZE68R. It is a bulk of P8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilising 7PPZE68R have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): very tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to rounded
   Leaf Attitude: medium
   Leaf Color: medium green
   Ray Flower Color: orange yellow
   Ray Flowers: medium density, fusiform
   flat, medium length
   Disk Flower Color: orange
   Pollen Color: yellow
   Head (neck) Attitude: turned down with strongly curved stem
   Seed Shape: ovoid elongated
   Seed Outer Pericarp Color: medium brown
   Hypocotyl Anthocyanin: present, weak
   Stripe Appearance: marginal: strongly expressed, center: weakly expressed, color: white

   List and describe variants and expected frequency. If none, state “none”.

   None.

4. 7PPZE68R claims no resistance to the common sunflower diseases and insect pests.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies. ○ Yes ☐ No

7. Application for protection under the Plant Variety Protection Act will not be made. AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021 Date recommended by the VRB: June 16, 2021
Sunflower

7PRXY70R

1. 7PRXY70R is a linoleic oil type restorer line developed by Pioneer Hi-Bred International that derives from the cross HP2230R/HP2242R. Both HP2230R & HP2242R are Pioneer proprietary lines. Selections were made for oil content, self fertility, acceptable plant stature and high yield, as assessed in hybrid combination. The pedigree method was used in the development of 7PRXY70R. It is a bulk of F8 seed tracing back to a single F7 selection. It is homozygous for dominant fertility restoration of the CMS PET 1 cytoplasm.

2. Hybrids utilising 7PRXY70R have been tested in and adapted to the growing regions of Southern Africa and Argentina.

3. Flowering (relatively early, medium, or late?): very late
   Height (relatively short, medium or tall?): very tall
   Branching Type: present, predominantly apical
   Distal Leaf Shape: broad triangular to rounded
   Leaf Attitude: medium
   Leaf Color: medium green
   Leaf Serration: fine
   Leaf Blistering: weak
   Ray Flower Color: orange yellow
   Ray Flowers: medium density, fusiform
   flat, medium length
   Pappi Color: green
   Disk Flower Color: orange
   Head (neck) Attitude: turned down with strongly curved sten
   Pollen Color: yellow
   Head Shape: weakly convex
   Seed Shape: ovoid elongated
   Seed Thickness: thin
   Seed Outer Pericarp Color: medium brown
   Hypocotyl Anthocyanin: present, medium
   Stripe Appearance: marginal: strongly expressed, center: strongly expressed, color: grey

List and describe variants and expected frequency. If none, state “none”.
7PRXY70R is a linoleic type restorer line. Compared to the public line RH4274, 7PRXY70R is 40cm taller and blooms 12 days later. Anthocyanin coloration of stigma is absent. The type of branching is predominantly apical. Head attitude is

4. 7PRXY70R claims no resistance to the common sunflower diseases and insect pests.

5. Pioneer Hi-Bred International will be responsible for the maintenance of all seed stocks. Foundation seed will be produced in open pollinated field increases in isolation as prescribed by the state where the seed is grown. A maximum of two generations beyond breeder seed will be allowed. Breeder seed will originate from controlled bagging in nursery rows.

6. Certified seed is expected to first be available in: 2021
   Certified seed production acreage can be published by AOSCA and certifying agencies.  ○ Yes  ○ No

7. Application for protection under the Plant Variety Protection Act will not be made.
   AOSCA may provide descriptive information to the PVP database.

Date this application was submitted: March 15, 2021  Date recommended by the VRB: June 16, 2021