Voluntary Report – Voluntary - Public Distribution  

Date: May 27, 2020  

Report Number: TH2020-0075  

Report Name: Economic Impact of the Ban on Paraquat and Chlorpyrifos on Thai Industries  

Country: Thailand  

Post: Bangkok  


Prepared By: Sakchai Preechajarn, Agricultural Specialist  

Approved By: Russell Nicely  

Report Highlights:  

Responsible government agencies in Thailand are revising their rules and regulations to ban the use of paraquat and chlorpyrifos. The Thai Food and Drug Administration (TFDA) is going to apply a zero-tolerance MRL for residues of these two substances in food and food products, which will disrupt imports of agricultural commodities from several countries, including the United States, Canada, Brazil,
Argentina, and Australia. The United States’ potential agricultural export losses, if this new rule comes into effect as currently proposed, will be approximately U.S. $0.9-1.1 billion per annum.

Executive Summary:

The National Hazardous Substance Committee (NHSC) agreed on April 30, 2020, to prohibit the use, trade, manufacturing, and possession of these two substances with an effective date of June 1, 2020. As a result, three responsible government agencies need to develop/revise their own regulations to comply with the NHSC’s decision including the Ministry of Industry (MOI), the Ministry of Agriculture (MOAC), and the Ministry of Public Health (MOPH).

The Minister of Industry endorsed a notification on May 15, 2020, to re-categorize the two substances from the Level-3 (allowable but subject to permission) to the Level-4 (prohibited for production, importation, exportation, and possession). The notification is effective on June 1, 2020 (Attachment I).

The MOAC’s Department of Agriculture is reportedly working on the disposal procedures for any remaining stocks of the banned substances in the country and measures to cover dramatically higher costs of pest control for farmers who are troubled by this ban.

In the meantime, on May 19, 2020, the Thai Food and Drug Administration (TFDA) under the MOPH posted its drafted notification Re: Food Containing Pesticide Residues on its official website for public comments until June 15, 2020 (Attachment II). Thailand also notified TFDA’s draft notification to the WTO, published on WTO’s website on May 20, 2020 (Attachment III). In the notification, Thailand states its intention to provide 30 days comment period for WTO country/economy members. However, Thailand in less than a week forwarded another notification on May 25, 2020 (released by WTO on May 26) to WTO to correct the May 20 notification and extend a comment period from 30 days to 60 days. The new deadline for comments will be July 18, 2020. See Attachment IV.
After the comment period, there are two additional steps before the regulation becomes official, including the TFDA’s internal final review of the draft notification by the Food Committee and the endorsement of the notification by the Minister of Public Health. The main content of the notification is to regulate a zero-tolerance maximum residue limit (MRL) for residues of paraquat and chlorpyrifos in food and food products.

The TFDA’s notification generated great concern among several Thai food processing industries. The ban, through imposition of zero MRLs, will shut down any imports of agricultural commodities as raw materials originating from countries where paraquat and chlorpyrifos are still used for agricultural cultivation, such as the United States, Canada, Brazil, Argentina, and Australia. Thailand relies, almost entirely, on the importation of wheat grains, soybeans, and soybean meal from these countries. As a result, wheat flour milling, soybean oil processing, international trading of fruit and vegetable products will be immediately affected if the ban goes into effect. In addition, disruption in these industries will hit other industries that utilize these products, such as bakery manufacturers, the hotel and hospitality industries, and food processors.

The responsible Thai government office has not yet regulated the contamination of the two substances in feed production. If a zero-tolerance approach is applied, it will definitely hurt production of livestock, poultry, and aquaculture across the board, which will inevitably generate turbulence for the feed industry and animal production. Estimates of the impact on this section of the Thai economy are uncertain.

Post estimates that, if the ban impacts only food industries, then the ban will impact Thai Industrial output valued at U.S. $4.5 billion. A breakdown of the estimated value of each sector is the following: U.S. $1.3 billion for wheat-based food industry, U.S. $1.5 billion for soybean oil processing and soybean-based feed and food industry, U.S. $300 million for hotel and hospitality industry, and U.S. $1.4 billion for trading of imported fruit and vegetable products.

In the case that Thailand does apply a zero-tolerance approach for feed ingredients and feed products, the industries of livestock, poultry, aquaculture, and feed production, valued at U.S. $9.4 million, will be negatively impacted. As a result, if the ban impacts both food and feed industries, the total value of Thai impacted industries that rely on imported raw materials from countries where paraquat and chlorpyrifos are used for crop cultivation is U.S. $13.9 billion annually.

The ban will not only negatively affect domestic industries who will face additional challenges while importing needed raw materials but would also hurt exporting countries that use paraquat and chlorpyrifos in crop cultivation. The table below illustrates Thailand’s imports of relevant agricultural commodities and products and major export countries that will be potentially disrupted from this substance ban. Based on this trade table, the United States’ potential market losses, if this new rule is in place, will be approximately U.S. $0.9-1.1 billion per annum.
### Thailand's Imports of Relevant Ag Commodities and Products in 2019 (Unit: U.S.$ million)

<table>
<thead>
<tr>
<th>Product</th>
<th>Total</th>
<th>U.S.A.</th>
<th>Canada</th>
<th>Brazil</th>
<th>Argentina</th>
<th>Australia</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food Ingredients:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat grains</td>
<td>796.4</td>
<td>210.8</td>
<td>85.4</td>
<td>0.0</td>
<td>0.0</td>
<td>107.0</td>
<td>393.2</td>
</tr>
<tr>
<td>Soybeans</td>
<td>1,270.4</td>
<td>605.5</td>
<td>27.9</td>
<td>624.0</td>
<td>0.0</td>
<td>0.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Fresh fruit</td>
<td>616.3</td>
<td>40.8</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>53.7</td>
<td>521.3</td>
</tr>
<tr>
<td>Dried fruit</td>
<td>88.1</td>
<td>6.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>81.8</td>
</tr>
<tr>
<td>Frozen Fruit</td>
<td>31.7</td>
<td>0.1</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>31.3</td>
</tr>
<tr>
<td>Fresh vegetables</td>
<td>328.8</td>
<td>4.1</td>
<td>4.6</td>
<td>0.0</td>
<td>0.0</td>
<td>14.6</td>
<td>305.5</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>3,131.7</td>
<td>867.6</td>
<td>118.7</td>
<td>624.0</td>
<td>0.0</td>
<td>175.3</td>
<td>1,346.1</td>
</tr>
<tr>
<td><strong>Feed Ingredients:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybean meal</td>
<td>1,251.1</td>
<td>45.5</td>
<td>0.0</td>
<td>846.3</td>
<td>312.6</td>
<td>0.0</td>
<td>46.7</td>
</tr>
<tr>
<td>DDGS</td>
<td>140.2</td>
<td>139.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Rapeseed meal</td>
<td>111.4</td>
<td>0.2</td>
<td>4.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>107.0</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>1,502.7</td>
<td>185.5</td>
<td>4.2</td>
<td>846.3</td>
<td>312.6</td>
<td>0.0</td>
<td>154.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>4,634.4</td>
<td>1,053.1</td>
<td>122.9</td>
<td>1,470.3</td>
<td>312.6</td>
<td>175.3</td>
<td>1,500.2</td>
</tr>
</tbody>
</table>
By virtue of Section 5 paragraph two and Section 18 paragraph two of the Hazardous Substance Act B.E. 2535, Minister of Industry and by the opinion of the National Hazardous Substance Act issues the notification as following:

Article 1 Cancel the list of Hazardous Substance as presented in the Annex of Ministry of Industry Notification on List of Hazardous Substances B.E. 2556, dated 28 August 2013, and replace the following list in the Annex:

List 1 which is under supervision of the Department of Agriculture

List 1.1. Restricted items No. 53 chlorpyrifos, No. 54 chlorpyrifos-methyl, No. 352 paraquat, No. 353 paraquat dichloride, and No. 354 paraquat dichloride [bis (methyl sulfate)]

Article 2 Manufacturers, importers, exporter, and possessors of hazardous substance in category 4 under this notification that have operations before effective date of this notification are to act in accordance with order of authorized officials within a determined period.

Article 3 This notification is in effective on June 1, 2020.

Announced on Date 15th May 2020

Suriya Juangroongruangkit
Minister, Ministry of Industry
A List of Hazardous Substances Annexed to the Notification of Ministry of Industry on List of Hazardous Substances (No. 6), B.E. 2563 (A.D. 2020)

List 1 which is under supervision of Department of Agriculture

List 1.1 List of controlled substances

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Hazardous Substance</th>
<th>CAS No.</th>
<th>Category</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>chlorpyrifos</td>
<td>2921-88-2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>54</td>
<td>chlorpyrifos-methyl</td>
<td>5598-13-0</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>352</td>
<td>paraquat</td>
<td>4685-14-7</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>353</td>
<td>paraquat dichloride</td>
<td>1910-42-5</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>354</td>
<td>paraquat[bis (methyl sulfate) or (paraquat methosulfate)]</td>
<td>2074-50-2</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>
ATTACHMENT II

(Unofficial Translation)

Ministry of Public Health Notification

No. _____ B.E. ______

By virtue of the Food Act B.E. 2522 (1979)

Re: Food Containing Pesticide Residues (No. 7)

It is deemed appropriate to revise the Ministry of Public Health notification entitled “Food Containing Pesticide Residues”.

By virtue of the provision of Section 5 in the first phase, and Section 6 (2) (3) and (9) of the Food Act B.E. 2522 (1979), the Minister of Public Health issues the notification as follows:

Clause 1 Add items number 83 to 87 into a list in Annex 1: Hazardous S Substance Type 4 under the Hazardous Act B.E. 2535 (1992) and the Hazardous Act (Amended), B.E. 2551 (2008) in Attachment of Notification of the Ministry of Public Health No. 387, B.E. 2560 (2017) Re: Food Containing Pesticide Residues, as follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>83</td>
<td>chlorpyrifos</td>
</tr>
<tr>
<td>84</td>
<td>chlorpyrifos-methyl</td>
</tr>
<tr>
<td>85</td>
<td>paraquat</td>
</tr>
<tr>
<td>86</td>
<td>paraquat dichloride</td>
</tr>
<tr>
<td>87</td>
<td>Paraquat methosulfate</td>
</tr>
</tbody>
</table>

Clause 2 Abolish item number 1 chlorpyrifos and item number 23 in Annex 2: Maximum Residue Limit is Attachment of Notification of the Ministry of Public Health No. 387, B.E. 2560 (2017) Re: Food Containing Pesticide Residues, dated August 18, B.E. 2560 (2017);

Clause 3 All manufacturers and importers of food products for commercial purpose must comply the following requirements:

(1) Any food products manufactured prior to June 1, 2020 must meet the requirement as described in Notification of the Ministry of Public Health No. 387, B.E. 2560 (2017) Re: Food Containing Pesticide Residues dated August 18, 2017; and comply to this notification within 30 days after the notification is effective.
(2) Any food products being exported from country of origin prior to June 1, 2020 must meet the requirement as described in Notification of the Ministry of Public Health No. 387, B.E. 2560 (2017) Re: Food Containing Pesticide Residues dated August 18, 2017; and comply to this notification within 30 days after the notification is effective.

Clause 4 This notification is effective on a day after the date of publishing in the Royal Gazette.

Notified on __________________
Attachment III

NOTIFICATION

1. Notifying Member: THAILAND
   If applicable, name of local government involved: 

2. Agency responsible: Food and Drug Administration (Thai FDA)

3. Products covered (provide tariff item number(s) as specified in national schedules deposited with the WTO; ICS numbers should be provided in addition, where applicable): Food products in general (ICS Code: 67.040)

4. Regions or countries likely to be affected, to the extent relevant or practicable:
   [X] All trading partners
   [ ] Specific regions or countries:

5. Title of the notified document: Draft MOPH Notification, No. ... B.E. ..., entitled "Re: Food Containing Pesticide Residues (No.3)". Language(s): Thai. Number of pages: 1
   [https://members.who.int/countryAttachments/2020/SPS/THA/20-3230_01_x.pdf]

6. Description of content: In order to protect human health and environment, the Thai government by the Ministry of Industry going to prohibit the use of chlorpyrifos and paraquat that will take effect on 1 June 2020, which has been circulated in G/TBT/N/THA/567. Therefore, the Ministry of Public Health (MOPH) proposes to revise Annex 1, List of hazardous substance type 4 (banned pesticide), and Annex 2, Maximum Residue Levels (MRLs), of Notification of the Ministry of Public Health, No. 387 (B.E. 2560) (2017) Re: Food Containing Pesticide Residues, Issued on 18 August 2017.
   This revised MOPH Notification shall be called the Notification of the Ministry of Public Health, No. ... B.E. ..., entitled "Re: Food Containing Pesticide Residues (No.3)", which are amended as follows:

   1. Add certain pesticides defined as hazardous substance type 4 under the Hazardous Substances Act B.E. 2535 (1992) in the annex 1 of the Notification of MOPH, No. 387, namely Chlorpyrifos, Chlorpyrifos-methyl, Paraquat, Paraquat dichloride, Paraquat bis (methyl sulphate) or paraquat methosulfate.

   2. Delete the Maximum Residue Limit (MRLs) for the aforementioned pesticides in food from annex 2 of the MOPH Notification No. 387 which the amounts of pesticide residues in food shall be less than the limit of detection or not be detected.

   3. Manufacturers and importers who produce or import food products prior to 1 June 2020 can refer to the MRLs for such pesticides in annex 2 of the MOPH Notification, No. 387 or Codex MRLs and shall comply with the new requirement within 30 days as from the date on which this Notification comes into force.

   4. This draft notification shall come into force after the date of its publication in the Government Gazette.

7. Objective and rationale: [X] food safety, [ ] animal health, [ ] plant protection, [ ] protect humans from animal/plant pest or disease, [ ] protect territory from other damage from pests.
8. Is there a relevant international standard? If so, identify the standard:
   [ ] Codex Alimentarius Commission (e.g. title or serial number of Codex
        standard or related text):
   [ ] World Organization for Animal Health (OIE) (e.g. Terrestrial or Aquatic
        Animal Health Code, chapter number):
   [ ] International Plant Protection Convention (e.g. ISPM number):
   [X] None

   Does this proposed regulation conform to the relevant international standard?
   [ ] Yes  [ ] No

   If no, describe, whenever possible, how and why it deviates from the
   international standard:

   To comply with the notification of Ministry of Industry Re: list of hazardous
   substance type 4 under the Hazardous Substance Act B.E. 2535 (1992) which
   going to prohibit the importation, distribution, sale and purchase based on
   scientific information that these products can be harmful to humans (especially
   the farmer that cause adverse effect as a result of direct exposure) and the
   environment include contamination of water resources and soil that may
   lead to disruption of ecosystem functions. Moreover, according to the
   Notification of MOPH, No. 387, the requested MRLs for all hazardous substance
   type 4 are set the lower the limit of determination (LOD).

9. Other relevant documents and language(s) in which these are available:
   Notification of the Ministry of Public Health, No. 387 (B.E. 2560) (2017) Title :
   Food Containing Pesticide Residues, issued on 18th August 2017
   (available in Thai and English)

10. Proposed date of adoption (dd/mm/yyyy): To be determined.
    Proposed date of publication (dd/mm/yyyy): To be determined.

11. Proposed date of entry into force: [ ] Six months from date of publication,
    and/or (dd/mm/yyyy): The day after its publication in the Royal Thai
    Government Gazette.

12. Final date for comments: [ ] Sixty days from the date of circulation of the
    notification and/or (dd/mm/yyyy): 30 days from the date of circulation of the
    notification.

   Agency or authority designated to handle comments: [X] National Notification
   Authority, [X] National Enquiry Point. Address, fax number and e-mail address
   (if available) of other body:

   National Bureau of Agricultural Commodity and Food Standards (ACFS)
   50 Phaholyothin Road, Ladyao
   Chazuchak, Bangkok 10960
   Thailand
   Tel: +(662) 561 4204
   Fax: +(662) 561 4034
   E-mail: spsthailand@gmail.com
   Website: http://www.acfs.go.th
           http://www.spsthailand.net/
13. Text(s) available from: [X] National Notification Authority, [X] National Enquiry Point. Address, fax number and e-mail address (if available) of other body:

E-mail: spsthailand@gmail.com
Websites: http://www.acfs.go.th
http://www.spsthailand.net/
NOTIFICATION

Corrigendum*

The following communication, received on 25 May 2020, is being circulated at the request of the Delegation of Thailand.

Draft MSHP Notification, No., R.S., entitled "Rice: Food Containing Pesticide Residues (No.3)"

According to the Thailand’s notification, G/SPS/N/THA/313, circulated on 20 May 2020, final data for comments should be corrected to read as follows:

60 days from the date of circulation of the notification (16 July 2020)

Text(s) available from: [X] National Notification Authority, [X] National Enquiry Point. Address, fax number and e-mail address (if available) of other body:

National Bureau of Agricultural Commodity and Food Standards (ACFS)
50 Phaholyothin Road, Lad Yao
Charoennakor, Bangkok 10900
Thailand
Tel: +66 (2) 561 4204
Fax: +66 (2) 561 4024
E-mail: spthailand@gmail.com
Website: http://www.acfs.go.th
http://www.spthailand.net/

* In English only.
Attachments:

No Attachments.

End of Report.