Pesticide Registration for Minor Crops and Crop Grouping Effort in Japan

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Chronology of Pesticide Regulation and Related Events

- 1945 End of WW II
- 1948 Pesticide Regulation Act
- 1962 “Silent Spring” by R. Carson
- 1971 Major Revision of Pesticide Regulation Act
- 1992 Environment-Friendly Agriculture
  Popular demand for organic agriculture
- 1997 “Our Stolen Future” by T. Colborn et al
- 2002 Extensive Use of Un-registered Pesticides Revealed
- 2003 Partial Revision of Pesticide Regulation Act
Trade Name of Pesticide: ダイアジン®
Active Ingredient: ダイアジン
Registration Number: 第8358号
<table>
<thead>
<tr>
<th>Crops</th>
<th>Pests</th>
<th>Rate</th>
<th>Interval</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>ニカメイチュウ第1世代、フタオピコヤガ</td>
<td>1,000〜1,500</td>
<td>21日*</td>
</tr>
<tr>
<td></td>
<td>ニカメイチュウ第2世代、イネカラバエ</td>
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<td>ツマグロヨコバイ、ウンカ類、イネハモグリバエ</td>
<td>1,000〜2,000</td>
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<td></td>
<td>キャベツはやさい</td>
<td>1,000</td>
<td>30日*</td>
</tr>
<tr>
<td></td>
<td>キスジノミハムシ</td>
<td>1,200</td>
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<tr>
<td></td>
<td>キボシマルトビムシ</td>
<td>700</td>
<td></td>
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<tr>
<td></td>
<td>アオミ、コナガ、アブラムシ類</td>
<td>1,000</td>
<td>14日*</td>
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<tr>
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<td>キスジノミハムシ</td>
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<td></td>
<td>はくさい</td>
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<td>アオミ、コナガ、アブラムシ類</td>
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<td>セルリーむれんそう</td>
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<tr>
<td></td>
<td>トマト</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>アブラムシ類、テントウシダマシ</td>
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Legal View on Use Pattern of Pesticides

Pre 2003 – **Recommended to follow**
  Pesticides registered for major crops could be applied on closely related minor crops

Post 2003 – **Must be followed strictly**
  Application of un-registered pesticides on minor crops is illegal, especially for food and feed use
Penalty for Violation

Sales of Un-registered Pesticides
   Individuals : Imprisonment of up to 3 years
                 Fine up to \1,000,000
   Dealers : Imprisonment of up to 3 years
             Fine up to \100,000,000

Use of Un-registered Pesticides
   Imprisonment of up to 3 years
   Fine up to \1,000,000
New Problems ! – only few or no registered pesticides for minor crops

Definition of Minor Crops
Japan : Annual yield less than 30,000 ton
US : Cultivation area less than 300,000 acre
( = ca. 120,000 ha)

Yield per 120,000 ha in Japan
Fruits (e.g. Grapes, Pears, Apples) : ca. 3,000,000 ton
Rice : ca. 600,000 ton
Cabbage : ca. 600,000 ton
## Cost for Label Expansion

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<thead>
<tr>
<th></th>
<th>Major Crops</th>
<th>Minor Crops</th>
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<tbody>
<tr>
<td><strong>Efficacy validation</strong>:</td>
<td>2 years, 6 field trials</td>
<td>1 year, 2 field trials</td>
</tr>
<tr>
<td></td>
<td>( $250,000 \times 6 = $1,500,000 )</td>
<td>( $250,000 \times 2 = $500,000 )</td>
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<tr>
<td><strong>Residue Analysis</strong>:</td>
<td>2 field trials, 2 analysis</td>
<td>2 field trials, 1 analysis</td>
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<tr>
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<td>( $2,000,000 \times 2 = $4,000,000 )</td>
<td>( $2,000,000 \times 1 = $2,000,000 )</td>
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<tr>
<td><strong>Registration Fee</strong>:</td>
<td>$97,500</td>
<td>$97,500</td>
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<tr>
<td><strong>Total</strong>:</td>
<td>$5,600,000</td>
<td>$2,600,000</td>
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Urgent Measures Taken by MAFF

1. Temporal permit to use un-registered pesticides
2. Promotion of pesticide registration for minor crops

• In response to request by Prefectural Governors, use of ca. 9,000 combinations of minor crops / un-registered pesticides approved by Minister of MAFF for two years beginning March, 2003

• Subsidizing the cost for Prefectural Government to conduct field trials for efficacy validation and residue analysis required for label expansion
Organizations Created to Promote Pesticide Registration for Minor Crops

Local Cooperative System
- Prefectural Governments / Research Institutes / Extension Centers / Agricultural co-ops

Regional Cooperative System
- Regional offices of MAFF / Inter-prefectural cooperative system / Research Institutes, etc

Central Cooperative System
- MAFF / Agricultural Chemicals Inspection Station / National Union of Agricultural co-ops / Related Organizations
Current Situation of Use Pattern Expansion for Minor Crops

• By December 2003, the Minister of MAFF gave a tentative use approval of ca. 9,000 combinations of un-registered pesticides.

• By March 2005
  Newly registered: 292 combinations
  Tentative use extended: 2963 combinations
  in which 600 was applied for registration
  Tentative use cancelled: 5564 combinations
Minor Crop Grouping in Japan

Approved
1. Wheat / Barley / Rye
2. Pulses
3. Legume vegetables (immature beans and peas)
4. Brassica leafy vegetables
5. Brassica (stems and immature inflorescences parts eaten)
6. Leaf lettuce
7. Cucurbitaceae for pickles
8. Citrus fruits
9. Small stone fruits
10. Berries
11. Peppers

Under consideration
1. Cucurbitaceous vegetables
2. Gramineous crops
3. Perilla vegetables
4. Umbellifereous vegetables
Issues Need to be Addressed on Minor Use Pesticides

1. Minor crops do need pesticides
2. Registration requires a large cost
3. National Government should be involved in cost sharing
4. Need for reexamination on registration system
   a. Further grouping of minor crops
   b. Efficacy data requirement on the same pests really necessary?
   c. Who is responsible for phytotoxicity?
   d. Flexible data requirement for registration for seeds, flowers, trees, and ornamental plants?