Web Appendix

Table 1A. Frequencies for national regulatory GMO Framework and approval status

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Stage of GMO regulation** | **Freq** | **%** | **Approval Status** | **Freq** | **%** | **Renewal of approval** | **Freq** | **%** | **Previous approval** | **Freq** | **%** |
| 1.Non-existence of regulatory framework | 2 | 4.9 | 1.No approval for any use | 13 | 31.7 | 1. Not requirement for renewal | 26 | 63.4 | 1. Not required | 24 | 58.5 |
| 2. Country has partially adopted a regulatory framework | 12 | 29.3 | 2.Approval for feed only | 1 | 2.4 | 2. Requirement for renewal | 7 | 17.1 | 2. Required | 7 | 17.1 |
| 3. Country has totally adopted a regulatory framework | 27 | 65.9 | 3. Approval for food only | 4 | 9.8 | 3. Not implemented | 8 | 19.5 | 3. Not implemented | 10 | 24.4 |
| Total  | 41 | 100 | 4.Approval for food and feed | 23 | 56.1 | Total  | 41 | 100 | Total  | 41 | 100 |
|  |  |  | Total  | 41 | 100 |  |  |  |  |  |  |
| **Traceability** | **Freq** | **%** | **Coexistence** | **Freq** | **%** | **Labelling type** | **Freq** | **%** | **Labeling Orientation** | **Freq** | **%** |
| 1.No traceability requirement | 32 | 78.0 | 1.No coexistence rules | 30 | 73.2 | 1.Voluntary | 5 | 12.2 | 1.Finished product | 19 | 46.3 |
| 2. Traceability requirement | 3 | 7.3 | 2. Coexistence rules | 8 | 19.5 | 2.Mandatory | 21 | 51.2 | 2.Production process | 6 | 14.6 |
| 3. Not implemented | 6 | 14.6 | 3.Not implemented | 3 | 7.3 | 3. Not implemented | 15 | 36.6 | 3.Not implemented | 16 | 39.0 |
| Total  | 41 | 100 | Total  | 41 | 100 | Total  | 41 | 100 | Total  | 41 | 100 |
| **Labeling threshold** |  |  | **Coverage** | **Freq** | **%** | **Import Status** | **Freq** | **%** | **Monitoring and testing** | **Freq** | **%** |
| 1.Treshold >1% | 9 | 22 | 1.Food items | 15 | 36.6 | 1. Country allows import of GMO events | 17 | 41.5 | 1.There is no monitoring system | 22 | 53.7 |
| 2.Treshold <=1% | 12 | 29.3 | 2.Food and feed items | 10 | 24.4 | 2. Country allows only import of approved GMO event | 24 | 58.5 | 2. There is a monitoring system for imported products | 19 | 46.3 |
| 3. Not implemented | 20 | 48.8 | 3.Not implemented | 16 | 39 |  |  |  |  |  |  |
| Total  | 41 | 100 | Total  | 41 | 100 | Total  | 41 | 100 | Total  | 41 | 100 |
| **LLP threshold value** | **Freq** | **%** |  |  |  |  |  |  |  |  |  |
| 1.Treshold >=1% | 1 | 2.4 |  |  |  |  |  |  |  |  |  |
| 2.Treshold >=0.5% and <1% | 3 | 7.3 |  |  |  |  |  |  |  |  |  |
| 3.Treshold <0.5% | 9 | 22 |  |  |  |  |  |  |  |  |  |
| 4.Not specified | 17 | 41.5 |  |  |  |  |  |  |  |  |  |
| 5. Not implemented | 11 | 26.8 |  |  |  |  |  |  |  |  |  |
| Total  | 41 | 100 |  |  |  |  |  |  |  |  |  |

Source: Own calculation.

Table 2A: Stock of approved events and commercialised events in at least one country by year and product

|  |  |  |  |
| --- | --- | --- | --- |
| **Product** | **Year** | Stock – all GMO events | Stock - commercial GMO events |
| **Cotton** | 2000 | 14 | 4 |
|  | 2007 | 25 | 15 |
|  | 2013 | 34 | 19 |
| **Maize** | 2000 | 12 | 9 |
|  | 2007 | 36 | 29 |
|  | 2013 | 115 | 47 |
| **Soybean** | 2000 | 4 | 2 |
|  | 2007 | 7 | 3 |
|  | 2013 | 20 | 4 |

Source: Own calculation.

Table 3A Correlation matrix between all indices

|  |  |  |  |
| --- | --- | --- | --- |
| **Product** | **Cotton** | **Maize** | **Soybean** |
|  | four scores | three scores | binary | four scores | three scores | binary | four scores | three scores | binary |
| Correlation Matrix for DHIT indices |
| **2000** |  |  |  |  |  |  |  |  |  |
| four scores | 1 | 0.88 | 1 | 1 | 0.99 | 0.99 | 1 | 0.94 | 0.94 |
| three scores | 0.88 | 1 | 1 | 0.99 | 1 | 1 | 0.94 | 1 | 1 |
| binary | 1 | 1 | 1 | 0.99 | 1 | 1 | 0.94 | 1 | 1 |
| **2007** |  |  |  |  |  |  |  |  |  |
| four scores | 1 | 0.95 | 0.95 | 1 | 0.95 | 0.95 | 1 | 0.84 | 0.84 |
| three scores | 0.95 | 1 | 0.99 | 0.95 | 1 | 1 | 0.84 | 1 | 1 |
| binary | 0.95 | 0.99 | 1 | 0.95 | 1 | 1 | 0.84 | 1 | 1 |
| **2013** |  |  |  |  |  |  |  |  |  |
| four scores | 1 | 0.93 | 0.96 | 1 | 0.95 | 0.94 | 1 | 0.9 | 0.84 |
| three scores | 0.93 | 1 | 0.96 | 0.95 | 1 | 0.98 | 0.9 | 1 | 0.95 |
| binary | 0.96 | 0.96 | 1 | 0.94 | 0.98 | 1 | 0.84 | 0.95 | 1 |
| Correlation Matrix for HIT indices |
| **2000** |  |  |  |  |  |  |  |  |  |
| four scores | 1 | 0.98 | 0.98 | 1 | 0.99 | 0.99 | 1 | 0.98 | 0.98 |
| three scores | 0.98 | 1 | 1 | 0.99 | 1 | 1 | 0.98 | 1 | 1 |
| binary | 0.98 | 1 | 1 | 0.99 | 1 | 1 | 0.98 | 1 | 1 |
| **2007** |  |  |  |  |  |  |  |  |  |
| four scores | 1 | 0.96 | 0.96 | 1 | 0.95 | 0.95 | 1 | 0.93 | 0.93 |
| three scores | 0.96 | 1 | 0.99 | 0.95 | 1 | 1 | 0.93 | 1 | 1 |
| binary | 0.96 | 0.99 | 1 | 0.95 | 1 | 1 | 0.93 | 1 | 1 |
| **2013** |  |  |  |  |  |  |  |  |  |
| four scores | 1 | 0.95 | 0.96 | 1 | 0.97 | 0.97 | 1 | 0.93 | 0.91 |
| three scores | 0.95 | 1 | 0.98 | 0.97 | 1 | 0.98 | 0.93 | 1 | 0.98 |
| binary | 0.96 | 0.98 | 1 | 0.97 | 0.98 | 1 | 0.91 | 0.98 | 1 |

Source own calculation

Table 4A. HIT index by product, selected country pairs and year – all GMO events

# Source: Own calculation

Table 5A. DHIT index by product, selected country pairs and year – only commercial GMO events

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# Source: Own calculation. Exporters are shown in the columns and importers in the rows.