



GM crops have contributed significantly to modern agriculture. Genetic modification techniques have led to improving crops in more targeted ways than conventional techniques. GM crops acquire desirable characteristics, including pest and herbicide resistance, enhanced robustness against diseases, drought or water tolerance, and healthier profiles that can enhance nutrition.

Approach

Research and commercialization of GM crops are unevenly regulated across countries. To measure the realization of the right to science with regard to GM crops, we looked at the various stages of knowledge production and benefit sharing—from research in the lab, to field trial, domestic commercialization and import/export.

Brazil, Canada, and Chile are countries in which scientist can study GMOs without the need to secure prior authorization. Field trials must be authorized in all countries we have researched. Chile is also particularly liberal with regard to commercialization.

Because of EU regulations, European countries have rather regulatory approaches when it comes to research but not with regard to cultivation—it is prohibited in 7 European countries even though the same countries cannot prohibit the commercialization of imported GM crops. One crucial difference among EU nations is the frequency to which instances of research and commercialization occur. In this regard, EU countries vary considerably.



Data sources

Data were collected by [EuropaBio](#), the European Association for Bioindustries.

Measurement questions

- Is research on GMOs permitted in the laboratories?
- Is notification to start research on GMOs in laboratories required?
- Is research on GMOs frequent?
- Are GM crop field trials (the limited release into the environment for research purposes) permitted?
- Is authorization to start a GM crop field trial required?
- Are GM crop field trials frequent?
- Is cultivation of GM crops (for commercial purposes) in open field permitted?
- Is authorization to start open field cultivation of GM crops required?
- Is open field cultivation of GM crops frequent?
- Can GM crop commodities harvested in other countries be imported?
- Is authorization to import GM crop commodities required?
- Is the import of GM crop commodities frequent?



| List Nations | Tot | % |
|----------------|-----|---------|
| Argentina | 80 | 100,00% |
| Australia | 80 | 100,00% |
| Austria | 50 | 100,00% |
| Belgium | 60 | 100,00% |
| Brazil | 85 | 100,00% |
| Canada | 85 | 100,00% |
| Chile | 70 | 100,00% |
| China | 75 | 100,00% |
| Colombia | 80 | 100,00% |
| Costa Rica | 80 | 100,00% |
| Czech Republic | 75 | 100,00% |
| France | 50 | 100,00% |
| Germany | 50 | 100,00% |
| India | 65 | 100,00% |
| Italy | 35 | 100,00% |
| Japan | 50 | 100,00% |
| Kenya | 35 | 100,00% |
| South Korea | 65 | 100,00% |
| Mexico | 60 | 100,00% |
| Netherlands | 60 | 100,00% |
| New Zealand | 50 | 100,00% |
| Philippines | 80 | 100,00% |

| List Nations | Tot | % |
|----------------|-----|---------|
| Poland | 55 | 100,00% |
| Portugal | 70 | 100,00% |
| Romania | 75 | 100,00% |
| Russia | 30 | 100,00% |
| South Africa | 80 | 100,00% |
| Spain | 75 | 100,00% |
| Taiwan | 50 | 100,00% |
| Thailand | 45 | 100,00% |
| Turkey | 50 | 100,00% |
| Ukraine | 30 | 100,00% |
| United Kingdom | 75 | 100,00% |
| United States | 80 | 100,00% |
| Vietnam | 70 | 100,00% |

