Agrobiodiversity

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What is agrobiodiversity?

All the components of biological diversity of relevance to food and agriculture and that constitute the agro-ecosystem:
• animals, plants and micro-organisms,
• genetic, species and ecosystem levels,

Sustains the functions, structure and processes of the agro-ecosystem.

Managed by farmers, pastoralists, forest dwellers and fishers over many hundreds of generations,
• Reflects the diversity of both human activities and natural processes,
• Provides farmers and communities of indigenous peoples with stability, adaptability and resilience
• Constitutes a key element of their livelihood strategies.
### Disease resistance - potato

<table>
<thead>
<tr>
<th>Species</th>
<th>Disease or pest resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>S. demissum</em></td>
<td>Late blight, PLRV</td>
</tr>
<tr>
<td><em>S. acaule</em></td>
<td>PVX, PLRV, PSTVd, wart, <em>Globodera</em></td>
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<tr>
<td><em>S. chacoense</em></td>
<td>PVA, PVY, late blight, Colorado beetle, tuber moth</td>
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<tr>
<td><em>S. spegazzinii</em></td>
<td><em>Fusarium</em> wart, <em>Globodera</em></td>
</tr>
<tr>
<td><em>S. stoloniferum</em></td>
<td>PVA, PVY</td>
</tr>
<tr>
<td><em>S. vernei</em></td>
<td><em>Globodera</em></td>
</tr>
<tr>
<td><em>S. verrucosum</em></td>
<td>Late blight</td>
</tr>
<tr>
<td><em>S. bulbocastaneum</em></td>
<td>Late blight</td>
</tr>
</tbody>
</table>

Ross, 1986:

Genes from *S. microdontum*, *S. sparsipilum*, *S. verrucosum*, *S commersonii*, and *S. maglia* have also been used from time to time.

97 European cultivars contain genes from one or more of 11 different wild *Solanum* species.

Recent information:

Use of *S. fendleri*, *S. kurtzianum*, *S. toralapanum*

All potato varieties released in USA since 1965 have exotic germplasm (Love 1999)
Coffee and pollination

Example: *Coffea arabica* a.o. (Rubiaceae) – Coffee


Source
Mary Gikungu

No. of bee spp

(a)