Newcotiana: Codebook

Nodes

Name	Description	Files	References
Barriers	This node codes for the perceived barriers to the development of the technologies associated with the Newcotiana project across a range of domains.	4	10
Certain expression systems have marketing problems		1	2
Producers face the double stigma of tobacco and NPBTs		1	1
Technological path dependence		2	5
The competitiveness of existing protein expression systems is a challenge		1	3
The newness of molecular farming is a challenge		1	1
Tobacco farmers are linked to traditional products		1	1

Name	Description	Files	References
The translation of basic biological science weak in academia		1	1
Engagement with other actors	This node codes for examples of stakeholder communication with other actors, such as the media or governmental and non-governmental organisations. It also includes the perceptions of stakeholders about those same bodies.	3	5
Facilitators	This node codes for factors that can facilitate the development of the technologies and products associated with the Newcotiana project.	8	27
Communication		7	12
Importance of describing alternative means of protein expression		3	3
The media can play a role in promoting NPBTs		1	1
The more people know about NPBTs, the more supportive they will be		4	5
There is a need to re-visit communication strategy for GMOs		1	2

Name	Description	Files	References
Downstream processing needs to be considered		1	1
The proof is in the product		4	6
Medicine as bridgehead for NPBT acceptability		3	3
Need for actual products to promote NPBTs		1	1
NPBTs must produce benefit to be accepted		1	1
Plant platforms have to prove their advantages		1	1
There are benefits of using a non-food platform		3	3
There are benefits of using a plant platform		3	5
GMOs Vs. NPBTs	This node codes for the dichotomy between more traditional genetic modification and new plant breeding techniques.	7	24
Fitter, happier, more natural	This node codes for factors that make NPBTs better than existing technologies.	5	10

Name	Description	Files	References
NPBTs more precise than existing technologies		2	2
Some applications of NPBTs mimic natural processes		4	7
The GMO 'situation' has changed		1	1
Once a transgenic, always a transgenic...		2	3
Scientists and key others see the difference between traditional GMOs and NPBTs		1	1
Some applications of NPBTs could be seen as GMO		1	1
The distinction between traditional GMOs and NPBTs is a technical one		1	1
Impact	This node codes for the expected impacts of the technologies, products or knowledge associated with the Newcotiana project.	7	24
Agronomic impact		4	10
There are uncertain agronomic impacts		3	4

Name	Description	Files	References
There is the threat of increased pest pressure		1	1
There may be increased need for pesticides		1	1
Socio-economic impact		7	10
Ability to change people's opinion of the tobacco plant		1	1
Molecular farming will make tobacco less controversial		4	4
NPBTs could make the tobacco plant more controversial		1	1
There is a cost reduction associated with molecular farming		1	1
There will be minimal impact on tobacco industry		1	1
There is possibility for NPBTs to provide environmental benefit		2	3

Name	Description	Files	References
Importance of other stakeholders	This node codes for considerations about other important actors in the development of the technologies and products associated with the Newcotiana project.	2	5
Past breeding justifies NPBTs		4	4
Process	This node codes for the experience and challenges of using technologies associated with the Newcotiana project.	6	9
Genome editing takes 'spotlight' amongst NPBTs		1	1
Product or application	This node codes for examples of products created by the Newcotiana project or how knowledge created by the Consortium might be applied. It also describes important things to consider about such potential products.	7	25
Examples of end-users		3	5
Knowledge output		1	1
Out in the fields...	This node codes for issues around field-scale production.	3	5
Concerns over field-scale relevance of molecular farming		2	4
Some products require field-scale production		1	1

Name	Description	Files	References
Scepticism about Big Tobacco's ideas		1	1
Project description, setting	This node codes for details about the participants role in the project, their institution and its deliverables.	8	13
Regulation	This node codes for important regulatory factors that might influence the development of the technologies and products associated with the Newcotiana project.	3	8
Other platforms already have regulatory approval		1	1
Outdoor production most suitable for cosmetic end-uses		1	1
There is a higher regulatory burden for plant-produced proteins		1	4
Smoking	This node codes for issues related to traditional tobacco production and smoking.	5	8
There is stigma around tobacco production		1	1
The Farmers	This node codes for the perceptions of stakeholders as to the attitude of farmers towards the technologies and products associated with the Newcotiana project.	4	6

Name	Description	Files	References
Favourable attitude amongst farmers due to new opportunities provided by NPBTs		1	1
The Public	This node codes for the perceptions of stakeholders about the public at large.	5	12
Imperative		1	1
NPBTs are treated with suspicion		1	1
The public's attitude towards plant breeding is changing due to global challenges		1	1
There is stigma around the tobacco plant		2	2