
SLU
SCIENCE AND EDUCATION FOR SUSTAINABLE LIFE

Swedish people are positive to plant breeding using genome editing techniques

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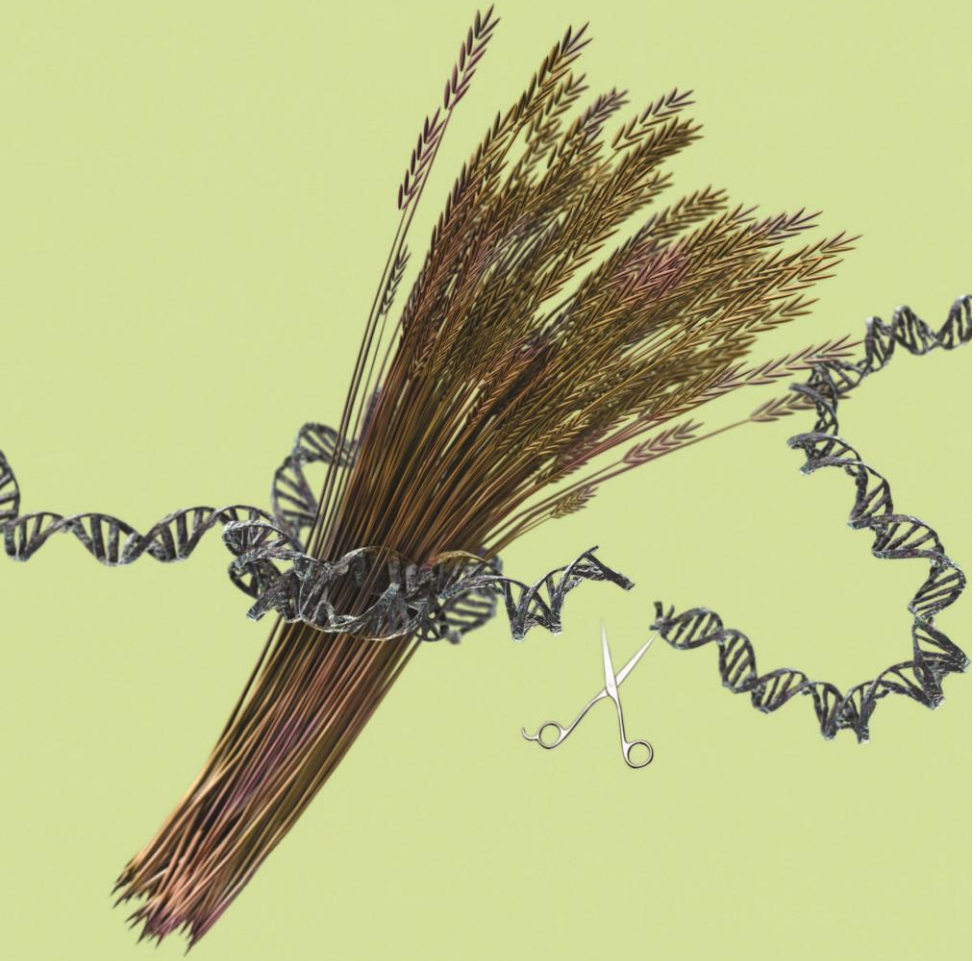


Genteknikämnden
The Swedish Gene Technology Advisory Board

Survey of attitudes among Swedish people towards applications of genome editing in agriculture.

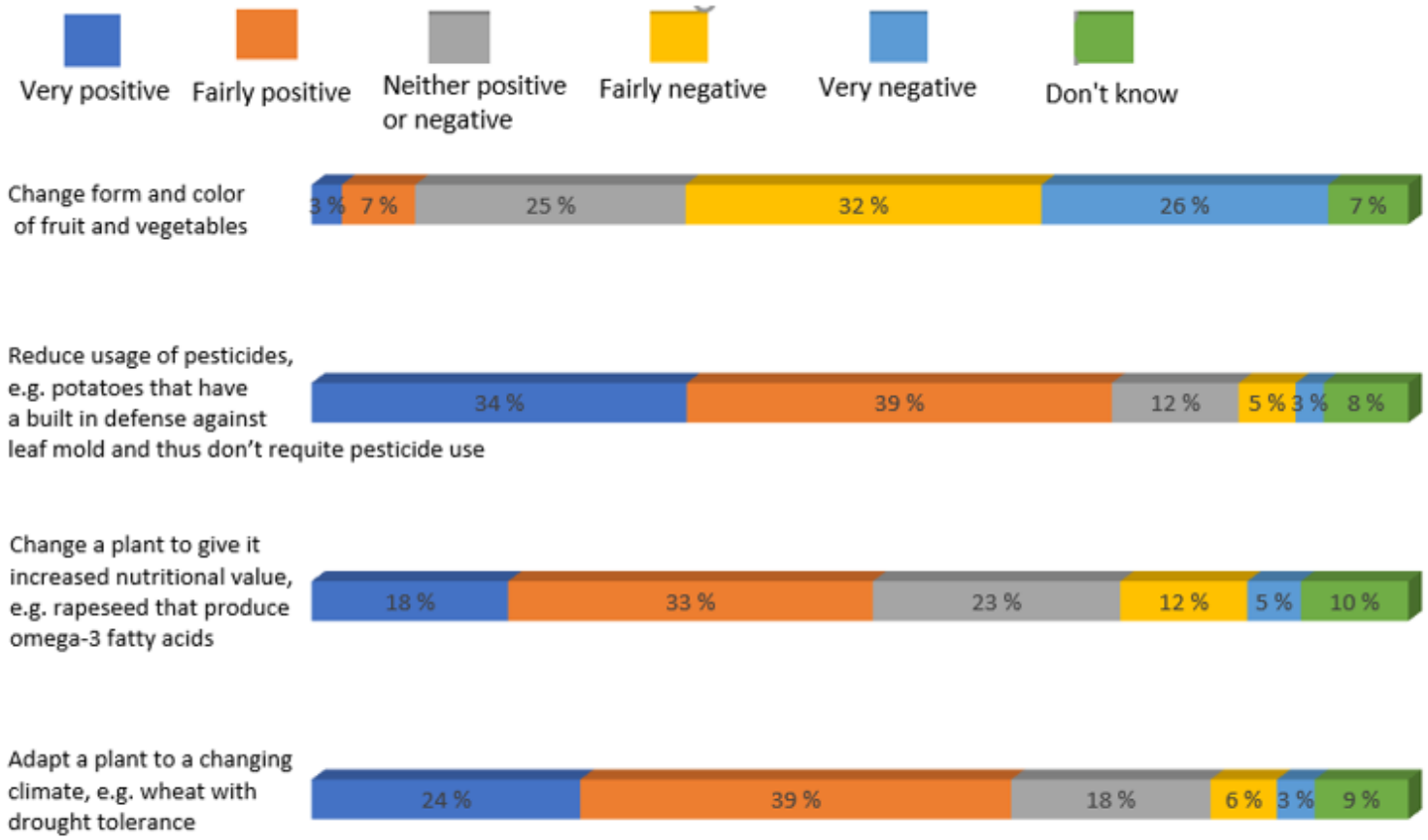
- Swedish Gene Technology Advisory Board
- Department of Plant biology (SLU)
- Novus

Genteknikämnden Dnr 3.1.1-2021-027

Info paragraph:

- **Plant breeding**
  - Means that the DNA (genome) of the plant is changed based off our needs so that it for example can withstand insect infestation or viruses. When the DNA is changed, so is the plant's properties. Below are three different methods to conduct plant breeding.
- **Classic genetic modification**
  - Means that a piece of DNA, for example a gene, in put into a plant a becomes a part of its own DNA. The plant breeder knows beforehand what property the DNA will add to the plant.
- **Traditional mutation breeding**
  - Means that substances that create changes in the plant's DNA (mutations) are used. The changes in DNA arise completely random and you then chose the plants that got some desired properties. No new DNA is being added.
- **Mutation breeding with genetic scissor**
  - Means that a genetic scissor, for example CRISPR/Cas9, is used to change the plant's own DNA. Unlike traditional mutation breeding, a genetic scissor can be targeted to a specific place in the plant's DNA. That means one can in advance decide where a change will occur. No new DNA is being added.

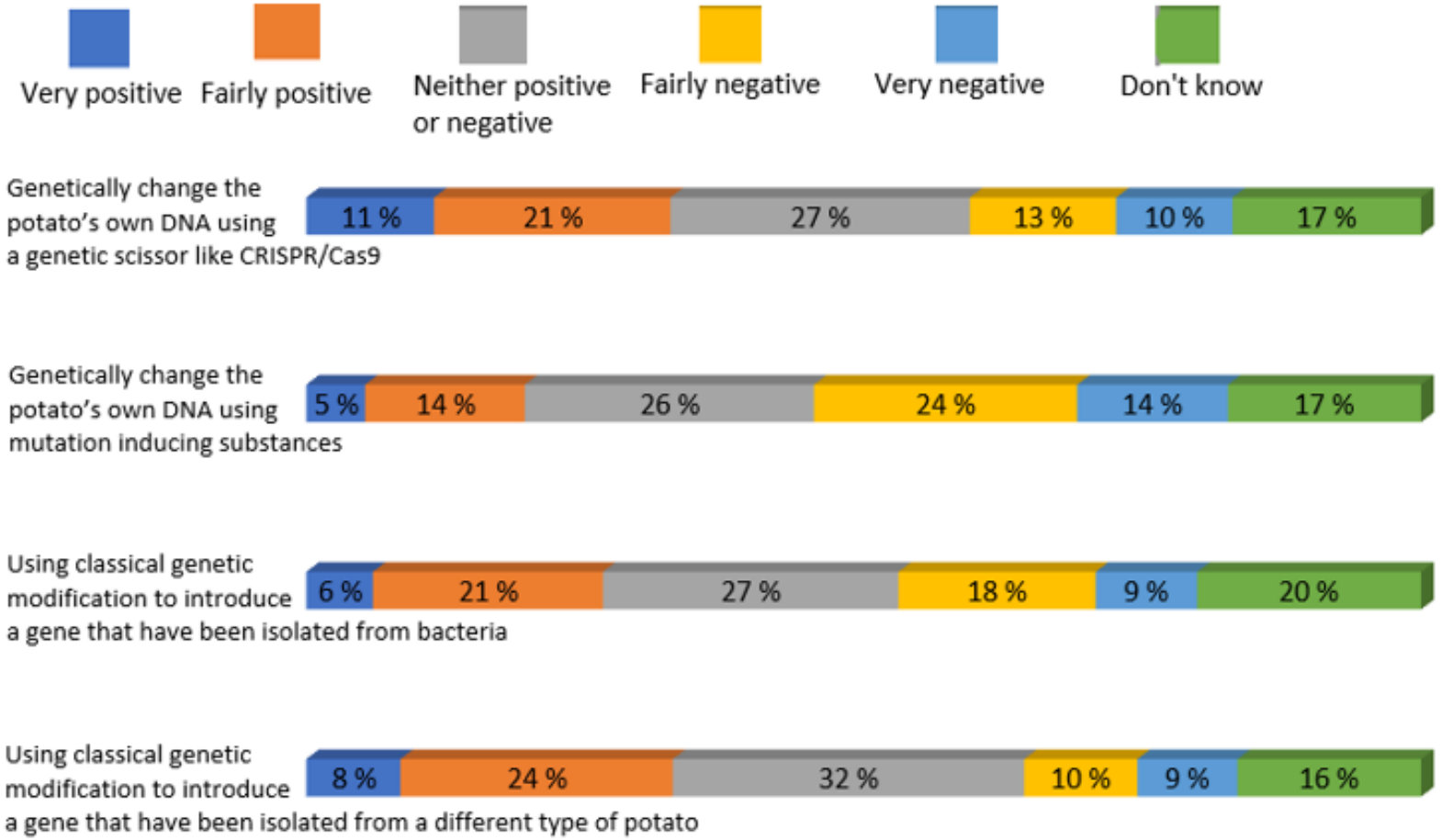
Based on what you know, how positive or negative are you towards using a genetic scissor like CRISPR/Cas9 in plants if the purpose is to:



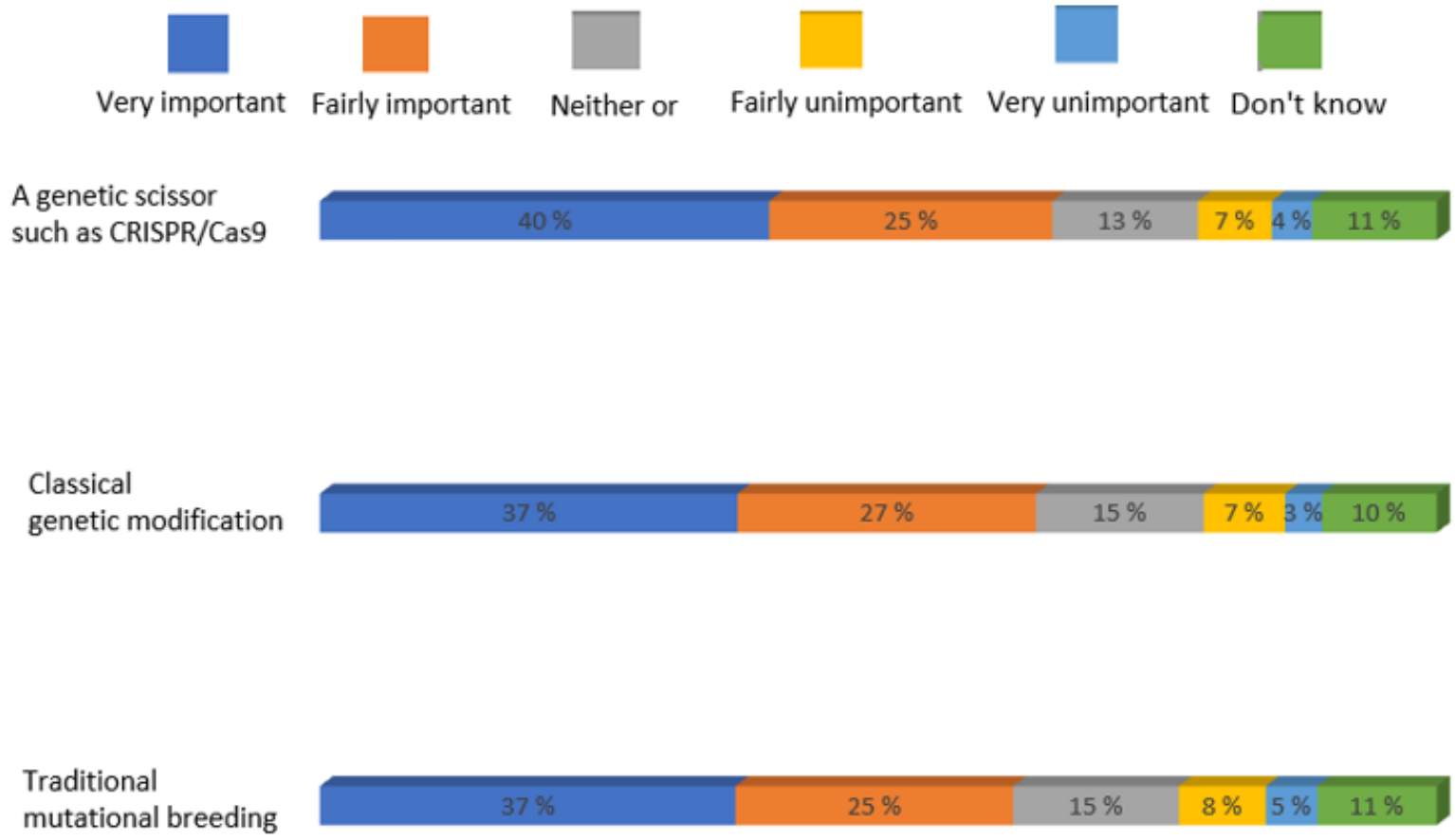
Reduced usage of pesticides

	Total	Know well	Never heard of	Men	Women	18-29	30-49	50-64	65-79
Very positive	34%	66%	28%	34%	35%	47%	32%	31%	29%
Fairly positive	39%	24%	36%	41%	37%	38%	42%	36%	37%
Niether or	12%	6%	12%	11%	12%	5%	11%	16%	14%
Fairly negative	5%	3%	7%	5%	6%	3%	4%	8%	7%
Very negative	3%	1%	4%	2%	3%	0%	2%	4%	4%
Don't know	8%	0%	12%	8%	8%	7%	9%	6%	9%

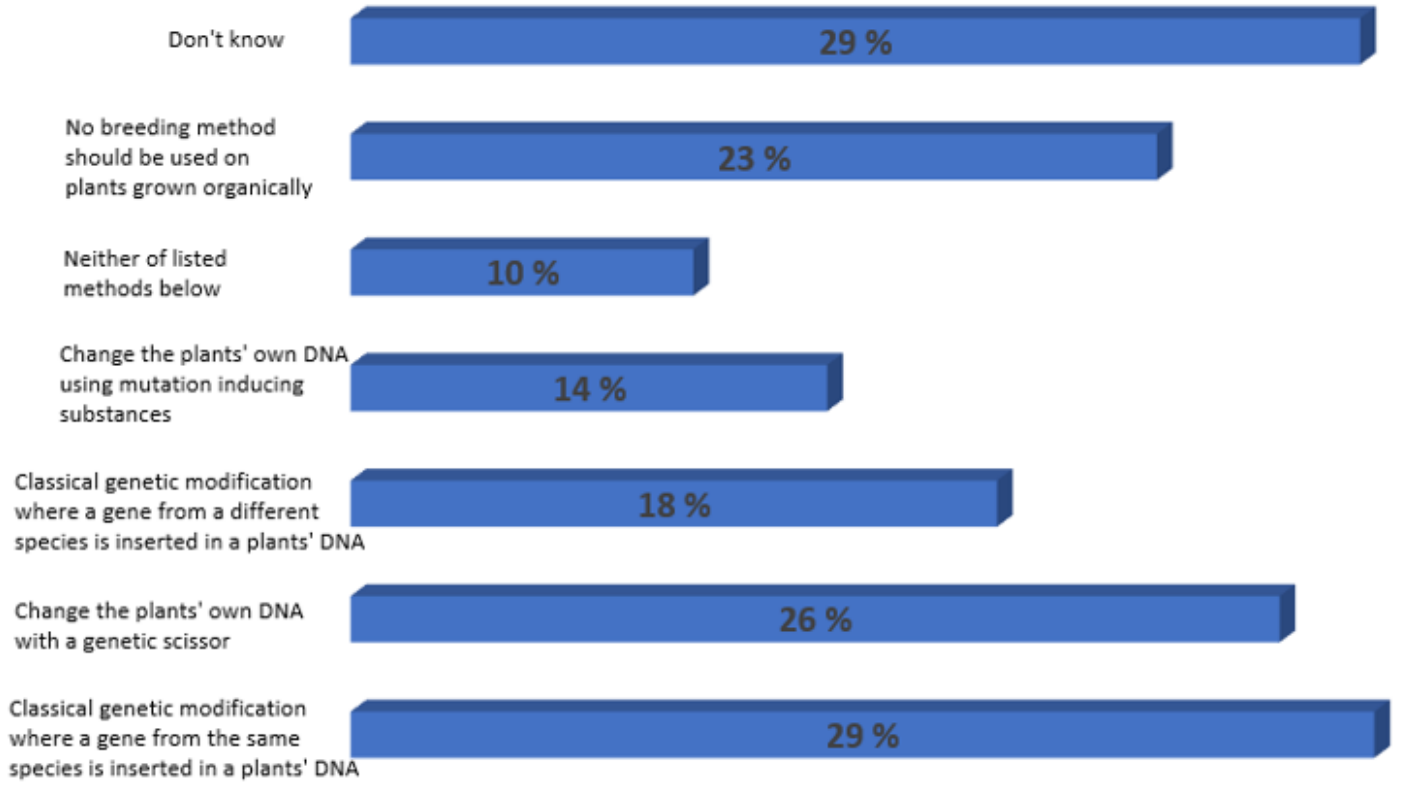
What is your general attitude to use the following methods to give a potato a new property by:



How important or unimportant is it that it is clear from the table of content that food products are produced with:



What/which of the following breeding methods do you think can be used on plants that is grown organic?”



Key takeaways

1) Greater knowledge of CRISPR/Cas9 is strongly correlated with increased positivity towards its societal uses.
2) Swedish people care more about the application and usage area of plant breeding than the method used.