NU Tech
Technology Partnership of Nagoya University, Inc.

(B-24)

Novel Delivery Method by Grafting

Background:

Application of biotechnological toolkits, including genome editing to crops and vegetables, are often hampered by difficulties in transformation and/or regeneration. Nagoya University researchers have invented a novel, general method for delivery using Nicotiana species.

Technology Overview:

The researchers have discovered that Nicotiana benthamiana (Tobacco) can be grafted with virtually all vascular plants. By using N. benthamiana, to which major biotechnological tools are easily applicable, as an injector, researchers achieved delivery of materials to the grafted partner plant.

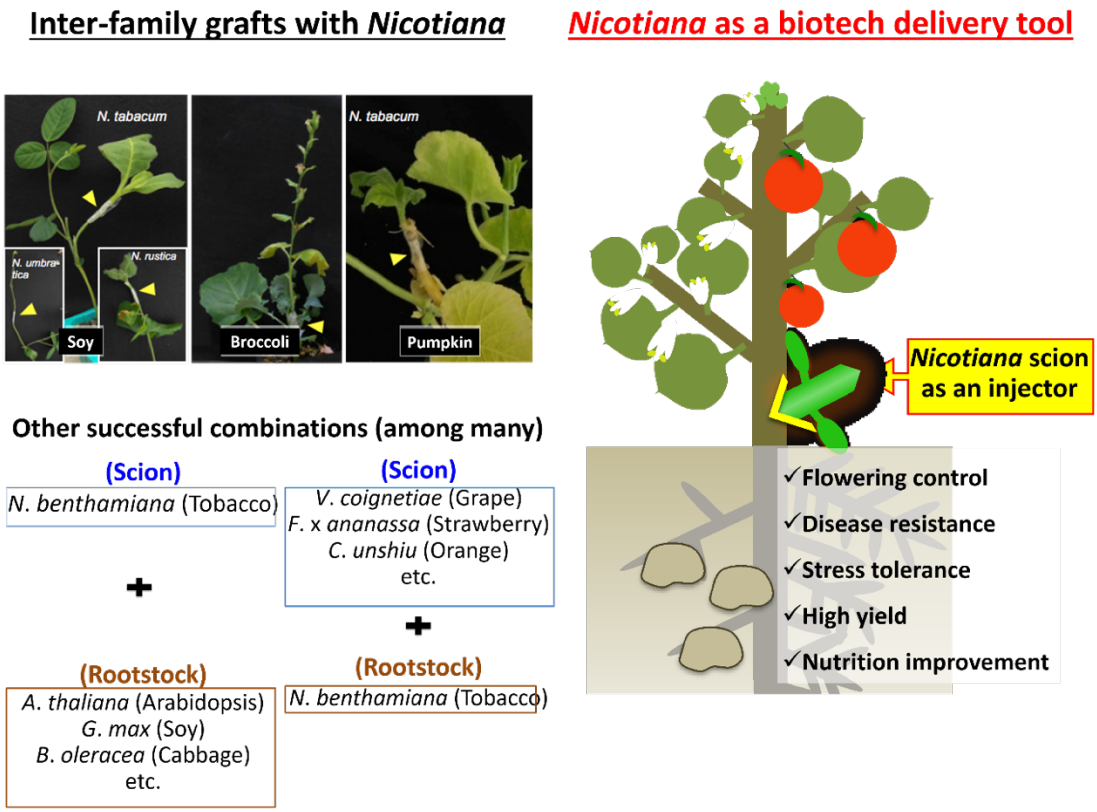

Figure 1: Inter-family grafts with Nicotiana (top left), Nicotiana as a biotech delivery tool (right) and other successful combinations (bottom left)

Benefits:

Could be a game changing technology for delivering biotechnological toolkits to any desirable plants, breaking the limitation of target species or cultivars.

Potential Applications:

New approaches to create crops and vegetables with novel traits.

Contact

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