

A green solution for the agricultural sustainability of processing tomato crop in a changing climate.

Patrícia Vidigal*, Diogo C. Torrão, João S. Silva, M. Manuela Abreu & Wanda Viegas

*pvidigal@isa.ulisboa.pt

The slide deck consists of 21 numbered slides, each containing a small image and text related to the agricultural sustainability of processing tomato crops in a changing climate. The slides are arranged in a grid:

- Row 1:**
 - Slide 1: A green solution for the agricultural sustainability of processing tomato crop in a changing climate.
 - Slide 2: Tomato paste production worldwide (Pie chart: EU 27% / Other countries 73%)
 - Slide 3: Tomato production (Diagram showing a plant growing from soil)
 - Slide 4: Consequences (Diagram showing a plant with arrows pointing to different parts)
 - Slide 5: Projections of future changes in climate (Map of Europe showing projected temperature increases)
 - Slide 6: European Union (Logo)
- Row 2:**
 - Slide 7: Consequences for tomato yield (Diagram showing yield reduction due to heat stress)
 - Slide 8: Key points to contribute for a resilient and competitive tomato production in long-term (List: Resilient cropping system, Resilient seed supplier, Resilient market opportunities, Resilient economic resilience, Resilient community resilience)
 - Slide 9: Why hyacinth bean? (Image of a field)
 - Slide 10: Lablab purpureus (L.) sweet (Image of plants)
 - Slide 11: Multi-purpose uses (List: Pulse, Vegetable (leaf and pod), Forage, Medicinal, Phyto pharmaceutical, Ornamental)
 - Slide 12: Origin and diversity (Map of the world showing genetic diversity)
- Row 3:**
 - Slide 13: Worldwide distribution and suitability (Map of the world showing distribution)
 - Slide 14: Why hyacinth bean? (List: Resistant to specific diseases, Extensive drought tolerance, Tolerance to salinity, Wide range of soil adaptability)
 - Slide 15: Why hyacinth bean? (Text: "All legumes have the ability to fix atmospheric nitrogen into their roots, which can then be taken up by the plant and used for growth. This process is called biological nitrogen fixation. It is a natural way to increase soil fertility without the need for synthetic fertilizers. This makes legumes an important crop for sustainable agriculture. In addition, legumes are often grown as cover crops to improve soil health and reduce erosion. They can also be used as animal feed or for biofertilization. Hyacinth bean is a good example of a legume that has many benefits for agriculture and the environment.")
 - Slide 16: Hyacinth bean green manure vs. NPK | Tomato (Diagram comparing green manure vs. NPK)
 - Slide 17: Hyacinth bean for tomato production (Text: "There are some questions that need answers about the use of hyacinth bean as a green manure for tomato production. Some people think that hyacinth bean will compete with tomato for nutrients, especially in the early stages of growth. Others believe that hyacinth bean can be a good option for the right production conditions. What do you think?")
 - Slide 18: SITECIL (Logo)
- Row 4:**
 - Slide 19: Fatty acid content of Hyacinth bean (Diagram showing fatty acid content)
 - Slide 20: Ending with a bit of trivia (Image of two people)
 - Slide 21: A green solution for the agricultural sustainability of processing tomato crop in a changing climate.