CGIAR Innovation Packages and Scaling Readiness (IPSR)

INNOVATION PROFILE

Feed pellet production with locally availably products

Feed pellet production for ruminants using a small-scale pelletizer and locally available agricultural products and agroindustrial by-products to replace expensive imported concentrates and reduce production costs, For agro-pastoralists (improved feed) and farmer organizations (income generation).

2023
1st Edition

Compressing local agro-industrial by products into nutrient dense livestock feed pellets is a worthwhile innovation to compete with expensive and imported feed pellets or concentrates. Use of such pellets also alleviates pressure on rangelands or grasslands. This innovation consists of a small scale compressor 'pelletizer' and formulas to create qualitatively sufficient feed pellets with locally available inputs. In Tunisia, there are many agro-pastoralists that are dependent on expensive and imported livestock feed pellets to improve livestock quality and to supplement feed shortages. Risks of relative feed shortages are likely to increase due to climate change. Also there are many discarded by-products from local agro-food supply chains such as olive cakes, date kernels, and downgraded dates, which still contain nutrients. Feed pellet production with this small scale pelletizer producing 500 kg pellets / hour is also an interesting income generating activity for farmer organizations and creates employment.

INNOVATION TYPOLOGY

This innovation is characterized as

Technological Innovation

Innovations of technical/material nature, including varieties/breeds; crop and livestock management practices; machines; processing technologies; big data and information systems.

The nature of this innovation is

Incremental Innovation

Innovations that already exist and undergo constant, steady progress and improvement.

THIS INNOVATION IS EXPECTED TO CONTRIBUTE TO THE FOLLOWING IMPACTS

CGIAR Impact Areas and Collective Global Targets

- Nutrition, health & food security — 1
- Poverty reduction, livelihoods & jobs — 2
- Gender equality, youth & social inclusion — 3
- Climate adaptation & greenhouse gas reduction — 4
- Environmental health & biodiversity — 5

Learn more: https://www.cgiar.org/how-we-work/strategy

SDGs and SDG Targets

- End poverty in all its forms everywhere — 1
- End hunger, achieve food security and improved nutrition and promote sustainable agriculture — 2
- Achieve gender equality and empower all women and girls — 5
- Ensure availability and sustainable management of water and sanitation for all — 6
- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all — 8
- Take urgent action to combat climate change and its impacts — 13
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss — 15

Learn more: https://sdgs.un.org/goals

CGIAR INITIATIVES, PARTNERS AND GEOSCOPE

CGIAR Lead Initiative

Livestock and Climate

CGIAR Contributing Initiative

Agroecology - Transformational Agroecology across Food, Land, and Water systems

Partners involved

Office de l'Elevage et des Pâturages - Innovation partner

GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit - Innovation partner

This innovation is developed, tested and/or scaled for/in the following regions

CURRENT INNOVATION READINESS

9 — PROVEN INNOVATION
The innovation is validated for its ability to achieve a specific impact under uncontrolled conditions

8 — UNCONTROLLED TESTING
The innovation is being tested for its ability to achieve a specific impact under uncontrolled conditions

7 — PROTOTYPE
The innovation is validated for its ability to achieve a specific impact under semi-controlled conditions

6 — SEMI-CONTROLLED TESTING
The innovation is being tested for its ability to achieve a specific impact under semi-controlled conditions

5 — MODEL/EARLY PROTOTYPE
The innovation is validated for its ability to achieve a specific impact under fully-controlled conditions

4 — CONTROLLED TESTING
The innovation is being tested for its ability to achieve a specific impact under fully-controlled conditions

3 — PROOF OF CONCEPT
The innovation's key concepts have been validated for their ability to achieve a specific impact

2 — FORMULATION
The innovation's key concepts are being formulated or designed

1 — BASIC RESEARCH
The innovation's basic principles are being researched for their ability to achieve a specific impact

0 — IDEA
The innovation is at idea stage

Innovation Readiness justification

Feed pellet production using different formula and the small scale pelletizer has been tested succesfully with national partner OEP. Several pelletizers have been distributed to farmer organizations and agripreneurs to produce their own feed pellets. Monitoring of pellet business proved the benefit of this technology for farmer organizations. Detailed impact of pellets on animal growth rate still needs to be determined (in progress).

Evidence supporting the Innovation Readiness level

bit.ly/3ra76YY bit.ly/44fe2CG

ACKNOWLEDGEMENTS

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MORE INFORMATION

Websites and Documentation

- https://hdl.handle.net/10568/116751
- https://www.facebook.com/juhainaco/videos/2402457976531222

Contact Person

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https://hdl.handle.net/---