enterprise europe network

Partnering Opportunity

Profile status : Published

Research Development Request

PS Horizon2020 GreenDeal: Dutch coordinator seeks companies/farmers active on topic 6 of GreenDeal call

Summary

A Dutch SME is preparing a proposal in the Green Deal call topic 6. The company will act as coordinator of the project and is looking for several companies e.g. active in biological pesticides, smart farming, precise irrigation. Also RTO / University to conduct the neccesary studies to support the project. Furthermore, farmers/horticultural companies for infield demonstrations and consultancy to conduct socio-economic study. A research cooperation agreement is forseen with selected partners.

Creation Date	23 November 2020
Last Update	25 November 2020
Expiration Date	11 December 2020
Reference	RDNL20201123001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/cfd25c68-9277-4f74-89db-217e57d2a345

Details

Description

A Dutch SME in preparing a project proposal in the European Green Deal call, Area 6: Farm-to-Fork – testing and demonstrating systemic innovations in support of the Farm-to-Fork strategy.

The project aims to:
- demonstrate and validate innovative systemic solutions that have the potential to generate significant positive impacts with regards to:
- decreasing the dependency on the use of hazardous pesticides;

- reducing loss of nutrients from fertilisers and ultimately fertiliser use;
- increasing the efficiency of fertilisers;
- providing sufficient, safe, nutritious, healthy and affordable food for all;
- improving the overall sustainability of food systems (social/health, climate/environmental and economic);
- improving the resilience of food systems to shocks and stresses.

When addressing project goals, a multi-actor and cross sectoral approach (i.e. including producers, processors, consumers and both public and private institutions) on a European scale must be adopted.
This proposal unites a number of breakthrough technologies that help farmers to become less dependent on synthetic pesticides and mineral fertilizer, by reducing significantly the use of these inputs as well as the environmental footprint associated with their use.
The Dutch SME will provide its innovative solution for the avoidance of chemical pesticides and synthetic N-fertilisers. They will also coordinate the project.
The SME is looking for several project partners:
- A company specialised in biological pesticides to study how to apply, the efficacy and possible combination with for instance natural (leaf)-fertiliser proposed into a liquid product.
- RTO / University to study the effectiveness of Plasma technology to combine both fertilising feed water and disinfecting feedwater in one and the same process. Water properties must be also fine-tuned to target different crops / growing stages.
- A company specialised in smart farming to incorporate field sensors to assess soil and plant needs
- A company bringing precise irrigation system solutions and pesticides spraying tools.
- RTO / University to conduct the necessary studies to assess safety and how the product affects food quality (organoleptic properties, toxicity,…)
- several farmers / horticultural companies to carry out in-field demonstrations in green houses or controlled environments (i.e. aquaponics, vertical farming, …) growing fruits and/or vegetables. Focus on young professionals is desired.
- A farmer / horticultural company to carry out in-field demonstrations in open-field environments growing grapes or potatoes. Focus on young professionals is desired.
- A company / association to reach a wider market, leverage the market need and facilitate sales in different regions.
- Consultancy to carry out a socio-economic study to assess the impact of the innovation.
- Consultancy to conduct the necessary tasks to obtain and comply with all legal requirements and certifications and eco-labels to commercialize the product (both for the machine and for the final product)
- A company to prepare and execute a wide dissemination, communication and exploitation plan.

The Dutch SME is forseeing research cooperation agreements with all selected partners for this project.

Deadline for EOI is: 11th of December.
Call deadline is:26th of January 2021

Advantages and innovations

Proposals will test, pilot, and demonstrate innovative systemic solutions (TRL 5-7) to reducing the dependence on hazardous pesticides; reducing the losses of nutrients from fertilisers, towards zero pollution of water, soil and air and ultimately fertiliser use. Such proposals should focus on systemic innovations that maximize synergies and minimize trade-offs to deliver co-benefits on the three dimensions of sustainability (climate/environmental, economic, social/health), that enhance resilience of food systems to various shock and stresses, and that enable them to operate within a safe and just operating space and ensure sufficient, safe, healthy, nutritious, and affordable food for all.

Stage of development

Proposal under development

Comments Regarding Stage of Development

Nitrogen (N) is considered a key resource for future farming and food security. It is a vital nutrient for plants growth and the most important fertiliser in crop production. However, N-fertilisers are currently produced by large petrochemical companies using the Haber-Bosch process which requires fossil-fuels (natural gas and coal) as feedstock and energy input. This leads to very energy intensive processes that also have a huge impact on climate change due to greenhouse gases (GHG) emissions; and are affected by natural gas' price volatility/availability. On top of this, synthetic fertilisers have a low nitrogen use efficiency (NUE) that ranges from 25% to 50%. The remaining amount not absorbed by plants is lost into the soil, resulting in soil and water pollution. N-pollution is considered a major challenge for the 21st century, costing the EU €70-320 billion a year.
At the same time, European agriculture is in great need of breakthrough innovations that decrease the dependency of harmful pesticides. Although the use of chemical pesticides has considerably increased productivity, their sustainability is being questioned, due to negative environmental and ecological impacts on among others insects, beneficial soil microorganisms and aquatic fauna. The concerns around toxicity of synthetic pesticides are also reflected in the fact that 1,000 EU-approved active substances in pesticides have been cut down by 50% over the past 25 years. In this regard, Health commissioner Stella Kyriakides has already announced the reduction of the use and risk of synthetic chemical pesticides by 50% by 2030.

Keywords

Technology

07001004	Crop Production
07001005	Horticulture
07001006	Pesticides
07001007	Precision agriculture

Market

09005	Agriculture, Forestry, Fishing, Animal Husbandry & Related Products

NACE

A.01.3.0	Plant propagation
A.01.6.1	Support activities for crop production

Network Contact

Issuing Partner

ZACHODNIOPOMORSKI UNIWERSYTET TECHNOLOGICZNY W SZCZECINIE

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Open for EOI: Yes

Dissemination

Relevant sector groups

Agrofood

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2014

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Dutch
German

Client Country

Netherlands

Experience

Partner Sought

Type and Role of Partner Sought

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- A company specialised in smart farming to incorporate field sensors to assess soil and plant needs
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- A farmer / horticultural company to carry out in-field demonstrations in open-field environments growing grapes or potatoes. Focus on young professionals is desired.
- A company / association to reach a wider market, leverage the market need and facilitate sales in different regions.
- Consultancy to carry out a socio-economic study to assess the impact of the innovation. So, Benefits to environment: reduction N pollution, cut on CO2 emissions, and how it affects wildlife, etc.Benefits to customers (farmers) due to cost savings in the supply chain and logistics, improved yield efficiency, indirect benefits of becoming “green” farms, etc). Benefits to consumers due to reduced costs, better quality products, less risks of potential diseases due to chemicals use. This should also help to understand behaviours, motivations and barriers with a view to maximizing the uptake of the solution, specially focused on legislation barriers and how the proposed project will facilitate the update of existing laws regarding pesticides and / or opening new regulatory pathways for biological pesticides in Europe.
- Consultancy to conduct the necessary tasks to obtain and comply with all legal requirements and certifications and eco-labels to commercialize the product (both for the machine and for the final product)
- A company to prepare and execute a wide dissemination, communication and exploitation plan. Collaboration from governments could be good (letters of support). I.e. Layman report.

The Dutch SME is forseeing research cooperation agreements with all selected partners for this project.

Type and Size of Partner Sought

SME 11-50,R&D Institution,SME <10,SME 51-250

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

H2020

Call title and identifier

Call:
Building a low-carbon, climate resilient future: Research and innovation in support of the European Green Deal (H2020-LC-GD-2020)
Topic: Testing and demonstrating systemic innovations in support of the Farm-to-Fork Strategy.ID: LC-GD-6-1-2020.

Submission and evaluation scheme

Type of action
IA Innovation action

Deadline model
single-stage

TOPIC ID: LC-GD-6-1-2020

Coordinator required

No

Deadline for EOI

11 Dec 2020

Deadline of the Call

26 Jan 2021

Weblink to the call

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/lc-gd-6-1-2020

Attachments