title	NASPA - Natural fungicides against air & soil borne pathogens in the Atlantic Area.
start year/day	2017-12-21
end year/number of months	2020
origin of funds	international funding
funding institution	EU - INTERREG ATLANTIC AREA 2014-2020
reference	EAPA_451/2016 (project number)
MARE Coimbra coordinator	L.Pereira
institutions involved in the project	MARE-UC (Pt), Emerald Crop Sciences (UK), UTAD (Pt), Biobab R&D, S.L.(Sp), Vegenov (Fr), CATE- Comité d'Action Technique et Economique (Fr), IPMA (Pt), Symington Vinhos SA (Pt), Waitrose (UK), BioAtlantis Ltd (Ireland)
leading institution	Bangor Univiversity (UK)

Natural fungicides against air & soil borne pathogens in the Atlantic Area.

Priority 2. Fostering resource efficiency

Objective 2.2. Fostering green growth, eco-innovation and environmental efficiency

Lead partner:

Bangor University

Summary

The Atlantic Area is characterised by high rainfall and high humidity, conditions which increase crop fungal infection and leaching of inputs from soil (EEA, 2009). Crop growers

counter these problems by applying high levels of synthetic fungicides and fertilizers. However, heavy rainfall can render these applications ineffective and leach these chemicals into waterways, resulting in increased emissions of the powerful greenhouse gas, nitrous oxide (N2O). The problem is compounded as many fungicides are toxic and face EU bans due to residue accumulation in food, which affects growers and retailer alike. NASPA will develop a new generation of products based on bioactive compounds from seaweed/fish waste/aquatic plants combined with key plant micronutrients. These will either induce crops to produce protective (antimicrobial, anti-oxidant) substances against fungal pathogens which infect them or improve plant health making crops less prone to diseases via better nutrition and biostimulation. Together, these have been shown to alter nitrogen cycling rate, reduce the need for nitrogen fertilisers, and associated leaching of nitrates into water streams, and of N2O emissions from agricultural soils. The products will increase marketable yield and shelf-life, providing Return on Investment for crop growers and retailers. NASPA will provide increases in food production, exports, employment and competition, whilst meeting regulatory requirements regarding food residues and environmental run-off.

Project website: www.bionaspa.com

Project - Natural fungicides against air & soil borne pathogens in the Atlantic Area

the Programme: 2014 - 2020 INTERREG VB Atlantic Area

Description

Description (EN): The Atlantic Area is characterised by high rainfall and high humidity, conditions which increase crop fungal infection and leaching of inputs from soil (EEA, 2009). Crop growers counter these problems by applying high levels of synthetic fungicides and fertilizers. However, heavy rainfall can render these applications ineffective and leach these chemicals into waterways, resulting in increased emissions of the powerful greenhouse gas, nitrous oxide (N2O). The problem is compounded as many fungicides are toxic and face EU bans due to residue accumulation in food, which affects growers and retailer alike. NASPA will develop a new generation of products based on bioactive compounds from seaweed/fish waste/aquatic plants combined with key plant micronutrients. These will either induce crops to produce protective (antimicrobial, anti-oxidant) substances against fungal pathogens which infect them or improve plant health making crops less prone to diseases via better nutrition and biostimulation. Together, these have been shown to alter nitrogen cycling rate, reduce the need for nitrogen fertilisers, and associated leaching of nitrates into water streams, and of N2O emissions from agricultural soils. The products will increase marketable yield and shelf-life, providing Return on Investment (ROI) for crop growers and retailers. NASPA will provide increases in food production, exports, employment and competition, whilst meeting regulatory requirements regarding food residues and environmental run-off.

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Expected Results (EN): NASPA will contribute to policy information for further development of EU objectives of Circular Economy, territorial social cohesion and rural economy development. This project will provide approaches for a) a global 50 % reduction in pesticide consumption, required by the Grenelle Agreement, fitting EU sustainable pesticide strategy and b) for a reduction in fertiliser use and associated losses to water, fitting the EU Water Framework, and specifically the Nitrates Directive policy targets, as well as national targets for reducing GHG emissions from the Agriculture sector. This project associates members (major market players) that will allow market pull of the novel eco-products, increasing rural jobs, and competitiveness, targeting 5% penetration for agri-products (current estimated EU market €2 billion).

Expected Outputs (EN): The outputs will be based on wide adoption of new business models, demonstrated by small-to-medium processes for the sustainable use of un-exploited marine resources (mostly seaweeds from poor parts of the South-West Atlantic coast) and fish discards that cannot re-enter in the food supply chain, to produce value-added eco-products that counteract fungal crop/tree diseases, increase marketable crop yield, and fruit & veg quality.

Project Summary

Project name (EN): Natural fungicides against air & soil borne pathogens in the Atlantic Area
Project name: Fongicides naturels contre des pathogènes transmis par le sol ou l'air dans la région Atlantique
Project name (Other language): Fungicidas naturales contra hongos patógenos en el Espacio Atlántico / Fungicidas naturais contra patogênicos transmitidos por ar ou solo na região Atlântica
Project acronym: NASPA

Web: http://www.atlanticarea.eu/

Project start date: 2017-12-21
Project end date: 2020-06-30
Project status: Ongoing

Total budget/expenditure: EUR 2.994.000,00
European Union funding: EUR 2.245.500,00

ERDF budget: EUR 2.245.500,00