

Evaluation ‘Regional bioeconomy platforms’

Output:	<i>Regional bioeconomy platforms/partnerships established that facilitate green innovations.</i>
Activity:	<i>In 3 horticultural regions (Lea Valley-UK, Roeselare-BE and Westland- NL) regional platforms will be established (or adapted) in which triple helix parties cooperate in the field of bioeconomy. The platforms' objective is to see what is necessary to facilitate developing green innovations and bringing them to the market, e.g. Activities foreseen: matchmaking (+events) thematic presentations, workshops, advice, knowledge support, external expertise.</i>

Method

The lead partner municipality of Westland has prepared a questionnaire. This questionnaire has been completed by the regional coordinating partners: NIAB for the UK, INAGRO for Belgium and municipality of Westland for the Netherlands. The results were discussed in the BioBoost project meeting of 29 November 2019. The lead partner has drawn conclusions based on this discussion and checked these with the regional coordinating partners.

Conclusions

- If already platforms or other types of collaborations exist, who operate in the same field or sector, it is better to seek cooperation and to integrate aims and activities, instead of establishing new platforms or collaboration's. This is thought to be much more effective. Also it can save a lot of time because of less overlaps.
- As positive outcomes of the established new relationships, better access to organisations and persons that matter is mentioned, with as a consequence better exchange of information and visions, resulting in more influence. Also mentioned are improved awareness of the possibilities of using by products and 'green waste' for new valuable purposes. Finally it has directly led to new initiatives (R&D, innovations).
- The collaborations could improve their effectiveness with more proactive participation of us. Also the effectiveness could be improved if the collaborations actually can offer long term help to the initiators of new initiatives (guidance and financial support).
- All established collaborations will continue after the project period.
- As most successful activities were mentioned:
 - presentations and stands at large events organised by others (efficient and effective);
 - stakeholder events;
 - match making events (speed dates);
 - guided tours (insect breeding);
 - facilitating thematic entrepreneurs groups (tomato textile, diabetic tea..);
 - the awareness campaign which created a lot of buzz and evoked discussions.
- Various forms of support were given to SME's varying from advise and guidance to match making and financial support, however the general impression was, that much more help is necessary to actually help SME's bringing their ideas into practice and develop and implement economic viable innovations. Apart from technical issues (such as contamination of green residuals with plastics), it is often difficult to make a realistic business case (lack of insight in the market, lack of available knowledge, scale).

Questionnaire

Instead of establishing new platforms, cooperation is sought with existing platforms and collaborations.
Q1: Looking back, do you still think this is a better option than setting up a new platform? Why?
<p>UK:</p> <p>Yes, existing platforms are a much better option. For example, in the UK AHDB Horticulture are already a very well established platform, with a large network of grower and industry members, therefore they can be much more effective than we could by setting up a new platform from scratch.</p> <p>FoodWasteNet was a BBSRC funded Network in Industrial Biotechnology and Bioenergy (NIBB) active April 2014 - March 2019. They had 600 members were drawn from industry, universities, research organisations, NGOs and charities during this time as well as BioBoost on its platform. It organised events (which Bart presented at) and collaborative funding opportunities. Again this had good successful links already.</p> <p>Cambridge Network has been a networking organisation for many years and has a good reputation for networking.</p>

BE:

Yes, the bioeconomy is such a large concept, which includes a lot of different but quite specific themes. The needs of an insect entrepreneur are different than an entrepreneur who has interest in making paper from tomato stems. For some of the target groups there were already existing platforms, f.e. the strategic platform insects (<https://lv.vlaanderen.be/nl/dier/paarden-ezels-bijen-honden/insecten#Strategisch%20platform%20insecten>). Also in Flanders there is an existing partnership of government, companies, and research organisations, called Vlaanderen Circulair (Flanders Circular). They inspire lots of people. Try to do again, what already exist is not good, it's better to collaborate in a constructive way.

NL:

Yes we still do believe. A platform is built by the people (growers/entrepreneurs) who participate in it. Because the biobased community is still quite small (but growing), a new platform will claim double time of the growers and they are not willing to participate in two or more (almost) similar platforms; they will choose.

By cooperating with existing platforms and collaborations the time of the entrepreneurs is respected; it is more efficient.

Q2: What do you regard as the positive outcomes of the established cooperation?

UK:

A good example is the FoodWasteNet conference on the 12 November 2018 when speakers included Dr Lydia Smith, Dr Steve Taylor and Dr Bart Van Droogenbroeck (all participating in, or with links to BioBoost). This has led to further interaction with new SME's and industry activity plus further funding opportunities. NIAB also had a particularly good relationship with the network director who supported everything we suggested relating to BioBoost.

In addition, visits and tours have been established with a senior government official, Alex Skinner, and contacts have been made with local growers culminating in further BioBoost project trial collaborations.

Our work on BioBoost and in particular, the Inventory, enabled NIAB to work on a separate contract with WRAP, which included direct contact with the 'Courtauld 2015' stakeholder growers and retailers at the highest level.

BE:

- SPI (Strategic Platform for Insect breeders) is a platform with a balanced representation of public agencies (Department of Agriculture and Fisheries, OVAM, FAVV, ...), researchers (Inagro, Vives, ILVO, ...) and insect breeders with valuable exchange of information.
- Farmers have more awareness about the possibilities of by-products produced in horticultural production.

NL:

- New initiatives (R&D and Business Development projects).
- A bigger impact on awareness inside and outside the platforms.

Q3: What would you like to improve in this way of working together?

UK:

The system and structure is already working very well. FoodWasteNet reached the end of its funding in 2019, but the new Network Platforms operating in this area; under phase 11 NIBB funding includes the Biomass Biorefinery Network (BBNet) will also fit the aims of BioBoost very well. It has yet to be fully tested, but NIAB has registered as a member and requested that BioBoost is adopted and has a link on their platform. There are no upcoming events yet advertised so it is currently hard to judge whether it will be as good as the FoodWasteNet network platform but the government and structure is very sound.

BE:

We made a slow start. People of governmental organisations are often difficult to reach and it took a while before we were in touch with the right people. It would be better to take up a more proactive role in the collaboration. Building up a network in new bio-economy activities is also something that goes slow. Farmers are not always aware of the possibilities or are not yet interested in it.

NL:

It would help if the initiators of new initiatives could be helped with more/long term availability of financial funding for their projects; Starting up a project, starts with gaining trust between the partners. In some cases it could last 1,5 to 2 years before there was enough trust to start a co-creation project together. From there a project idea has to be worked out into a project plan. A time frame from the first preliminary idea to start of a co-creation project, could easily take 2 to 3 years. After that period the project starts; so a long term approach is needed to help entrepreneurs during their complete 'journey'.

Q4: Do you expect to continue the cooperation on this subject after the BioBoost project period? Why?

UK:

We will definitely continue cooperation and interaction on this subject after the BioBoost project period.

This is because the sustainable future and biobased economy in Horticulture is of prime importance. We have made some very good contacts, collaborations and links via BioBoost and through using these platforms and it is important to continue them as part of the Eastern Agritech Innovation Hub. We hope that the BioBoost website will stay after the project ends or a new BioBoost platform in its place. If so, will use these existing UK platforms to link to the new one.

BE:

Yes, there is a need for continued consultation between government, research and industry in this growing sector. Valuable contacts are established.

NL:

Yes, definitely. The -mostly- fragile initiatives grow stronger with help from a non-commercial third party. Greenport West Holland will continue helping the initiatives after the BioBoost project.

In the framework of the established cooperation activities have been organised such as workshops, field visits, information markets etc.

Q5: About which activities are you most enthusiastic? Why?

UK:

At all of the FoodWasteNet event's we have made lots of useful contacts which have led onto further funding such as the BBSRC NIBS for continuation of cosmetic pigment research.

The Eastern Agri-Tech Innovation Hub is also a valuable platform for BioBoost and we have run several successful events during Agri-Tech Week, promoting BioBoost, each with approximately 80 attendees. 2 years ago this also included our triple helix partners from NL and BE who attended and participated in our waste event.

An important collaboration has been made between Vives, Inagro and AgriGrub through the platform activities. This link has enabled across border visits to learn more about each other's work and discussion about future work and projects together.

BE:

- Stakeholders meeting and official opening of the insect pilot of Inagro (30/01/2018). 170 participants and a lot of national media coverage.
- Matchmaking event (9/10/2018), 20 insect stakeholders participated in a speed date. There was a lot of positive feedback afterwards. All entrepreneurs were very enthusiastic about the contacts they made.
- Information evening for growers, farmers and SME's (17/10/2019). Initially we were expecting 50 applications, but we ended up with 100 participants.
- Monthly guided visits to the insect pilot of Inagro. It started as an initiative to combine all individual requests, but keeps attracting up to 15 visitors each month, even after two years.

NL:

The 'Diabetic Tea' a group of growers who're using residuals to make a healthy tea for diabetics.

The 'Tomato textile' project could grow to a disruptive change in (a niche of) the textile sector.

The awareness campaign created a lot of positive 'biobased buzz' in the region. Both online as well as offline.

The online platform; a lot of people is enthusiastic there is finally 1 place where you can find inspiration.

Q6: Have you held activities that you don't see as successful? Why?

UK:

No.

BE:

No. All activities could count on significant public interest.

NL:

The initiative with the national government: making hot drink cups from biomass residuals: technically feasible but anxiety for problems if the biomass isn't sourced from a non-existing ideal situation, made the initiative stranded in the initial phase.

Also foreseen was to support SMEs with their innovations with advice, match making, financially etc

Q7: Which help did you actually provide?

UK:

An important collaboration has been made between Vives, Inagro and AgriGrub through the platform activities. This link has enabled across border visits to learn more about each other's work and discussion about future work and projects together.

The help that NIAB via the Eastern Agri-Tech Innovation Hub made was to initiate the contact between the SME's and arrange a date for Inagro and Vives to visit the UK. I continued all of the arrangements and on the day of the visit took Carl and Thomas first to visit AgriGrub. During this meeting I suggested new collaborative new project ideas and gave advice. Then I took Carl and Thomas to see Entomics new premises and we were shown around by Miha. Carl and Thomas enjoyed their visit and had a lot of additional information to take back to Inagro and Vives.

Likewise a further visit was set up with Joe from AgriGrub visiting Inagro and Vives. Joe was able to see the automated feeding systems at Inagro and met the robotics team and mealworm team during the visit, resulting in the exchange of expertise on growing insects in a variety of ways. Collaboration between AgriGrub and Inagro and Vives has continued following the visits, with an ongoing of knowledge around insect rearing and a BSF eggs exchange with Inagro. Vives was instrumental in connecting AgriGrub with other Belgium and Netherlands based industrial partners including RFA and De Schanekamp, as well as several other insects producers and automatisers.

BE:

We gave advice about:

- insect breeding possibilities,
- alternative ropes and clips for cultivation of tomato's and cucumber,
- valorisation possibilities of Brussels sprout stems, rest streams of leek and rest streams of bell peppers

- usage of by-products of agriculture in paper production,
- the economics of valorisation of rest streams (purchase of new or adapting existing harvesting machines, alternative ropes and clips, storing rest streams, ...)

NL:

Both financially as well as qualitative advise/support (like project start up and matchmaking between potential partners).

Q8: Did the help offered meet the demands of the SME's? Why?

UK:

The help offered was much appreciated and met the demands of the SME's. For AgriGrub Ltd, the visit to Inagro and Vives give this SME new ideas for business and potential to automate their own system making it more efficient. An important collaboration was enabled between Vives, Inagro and AgriGrub through the platform activities. This link has enabled across border visits to learn more about each other's work and discussion about future work and projects together.

Making activities more efficient in terms of scale-up in the future: The work of Vives and Inagro on the costs-benefits of different scaling methodologies and on a range of processing methodologies has been instrumental in Agrigrub scaling production quickly and cost effectively, with little need for experimentation. Entomics also benefited from interaction with the partnership especially Vives. BioBoost enabled three NIAB scientists to set up their own company, which is now doing well as an independent entity (Microbiotech Ltd). Other companies have also benefited, including PlantWorks and AbbeyView Produce, who will soon set up a BSF plant to use crop waste on their site.

BE:

Yes and no. Some activities in the bio economy are already ready for implementation in practice, like insect breeding.

Valorisation of rest streams is often quite difficult to implement in practice. We can give a lot of advice about using rest streams as insect feed, but using it in f.e. paper production, is not yet possible. We know that some rest streams are valuable sources of fibres (tomato stems, brussels sprouts) but collecting, storing, cleaning, ... on bigger scale is quite challenging. In case of tomato stems it is also necessary to remove or replace the plastic ropes and clips before they can be used.

We also gave advice about economic consequences of valorising rest streams or by-products of horticultural production.

NL:

Yes, without the help the projects wouldn't be started at all.

The platforms/partnerships can also be important for exchanging information, ideas and visions

Q9: To what extent was this function realised in your region? Explain.

UK:

The platforms have been vital in enabling new links with SME's. One example is SME PRM Waste Systems via Paul Clark who was met at one of the platform events. Their innovation is anaerobic digestion, which can be used on a large or small scale by businesses with food waste which is digested and dried into high energy pellets. This technology is being considered for the Hub in the next stage green energy expansion plan. Steve Taylor from Celbius also used the PRM large scale press for extracting juice from blackcurrants for the BioBoost cosmetic work. Hence, giving Celbius a vision of how these processes could be carried out in the future commercialisation stage of his work.

BE:

SPI assembles two times each year for a general meeting. In addition there is an annual stakeholders meeting for a wider audience.

NL:

Co-creations were started wherein individual entrepreneurs exchange relevant ideas and information.

The online platform is a huge accelerator of exchanging ideas, visions and experience worldwide.

Q10: Did this influence policies of public authorities or company strategies? If yes, can you give an example?

UK:

Yes. At a platform event in London, contact was made with WRAP (Waste Resources Action Plan) which led to future work relating to reducing food waste along the whole supply chain, contacts in the industry and culminating in a report of recommendations by NIAB. A further contact was made at the event – Baroness Maggie Jones who was DEFRA shadow minister. The Baroness was invited and shown around the Hub and introduced to BioBoost. She has stayed in contact offering support and advice for the SME's. She was also valuable in providing information regarding DEFRA. In addition, writing the inventory involved contact with DEFRA which highlighted the lack of national food waste data in the UK. All above 3 examples have contributed to the beginning of changes in policy regarding collecting food waste data and addressing the problems along the whole supply chain. This has all been enabled with the support of BioBoost.

BE:

Yes: - A clear interpretation of the legislation was made for insect breeders.

- There is a manual in development that bundles all the information for (new) insect breeders.

NL:

We had a lot of meetings with the province of South Holland. Their circular strategy for Greenport industry is also based on these meetings. In what amount exactly isn't quite clear but several advises were included. A quantification is hard to make.