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# Agroecological research in EC programmes

The European Commission's commitment to the organic sector is becoming stronger, with CSOs holding it to account. **Les Levidow** traces recent developments.

The European Commission (EC) has a history of funding research on organic production and certification issues, but it was marginal to the main priority on biotechnology within the EC's agri-food research programmes from the 1980s onwards.

However, there have been new opportunities for organics research since 2005, when the European Commission rebranded biotech as Life Sciences for a new agenda: The Knowledge-Based Bio-Economy (KBBE).<sup>1</sup>

The KBBE vision extended the post-2000 Lisbon agenda, which has sought greater R&D investment in a knowledge-based economy to make Europe 'the globally most competitive knowledge-based economy by 2010'. In practice, the term 'competitive' emphasised proprietary knowledge which could be inserted into global value chains.

The EC's dominant agenda for a bioeconomy envisages that natural resources provide renewable biomass which can be converted into industrial products via a diversified biorefinery. This approach horizontally integrates value chains across industrial sectors.<sup>2</sup> It is a capital-intensive agenda that has been driven by European Technology Platforms, and which links multinational companies, sectoral lobby organisations and research institutes.

The KBBE vision has shaped EC research priorities since Framework Programme 7 (between 2007 and 2013). It was broadly defined as 'the sustainable, eco-efficient transformation of renewable biological resources into health, food, energy and other industrial products'.

Organic research organisations seized the opportunity this afforded by forming a stakeholder network to

advocate organics and agroecosystems research for an alternative 'knowledge-based bioeconomy'.<sup>3</sup> They built broad stakeholder support, including relevant commercial actors across the agro-food value chain and environmental NGOs. Eventually they published a *Vision for an Organic Food and Farming Research Agenda to 2025*,<sup>4</sup> with the aim of setting up a Technology Platform Organics.

This was followed by a *Strategic Research Agenda*, which linked the term 'innovation' with public goods, efficiency, farmers' knowledge, learning and competitive advantage. It elaborated the concept of 'eco-functional intensification', i.e. 'more efficient use of natural resources, improved nutrient recycling techniques and agroecological methods for enhancing diversity and the health of soils, crops and livestock'.<sup>4,5</sup> This vision advocated horizontal integration between agriculture and energy production, partly from waste materials, as a means to shorten agricultural cycles and as a substitute for external inputs: 'Diversified land use can open up new possibilities for combining food production with biomass production and on-farm production of renewable energy from livestock manure, small biotopes, perennial crops and semi-natural non-cultivated areas'.<sup>5</sup>

Indirect support for this agenda came from changes in research policy. The EC's Food, Agriculture, Fisheries and Biotechnology (FAFB) research programme hosted expert foresight studies exploring wider knowledges for agricultural innovation. The exercises were commissioned by the EU's Standing Committee on Agricultural Research (SCAR), with support from some national agencies promoting farmers' knowledge of natural resources. According to the

first expert report, farmers often develop modest innovations, which are dismissed or ignored.<sup>6</sup> A more fundamental problem is that research agendas have become more distant from producers' knowledge, instead favouring specialist laboratory knowledge for agricultural inputs and processing methods.<sup>6</sup>

As ways forward, the expert group advocated agroecological approaches, *in situ* genetic diversity, farmers' knowledge, etc.<sup>7</sup> It also advocated new kinds of Agricultural Knowledge and Innovation Systems (AKIS) beyond the formal research system: 'The AKISs that have been developed outside the mainstream, to support organic, fair trade, and agroecological systems, are identified ... as meriting greatly increased public and private investment'.<sup>7</sup> Agroecological approaches should be given priority: 'Approaches that promise building blocks towards low-input high-output systems, integrate historical knowledge and agroecological principles that use nature's capacity and model nature's system flows, should receive the highest priority for funding'.<sup>8</sup> The report linked agroecology with a sufficiency perspective, a counterpoint to the dominant productivist agenda.

These expert reports gave greater force to Technology Platform Organics' agenda and its specific proposals for research themes. Framework Programme 7 eventually gave greater prominence to agroecological themes, though 'agroecology' remains implicit; only 'organic' relevance is explicit in the texts. Drawing on proposals from TP Organics, FP7 calls included the following production methods: ecological services based on eco-functional intensification, enhancing soil management and

recycling organic waste via mixed farming, replacing chemical or copper pesticides with bio-control agents, enhancing on-farm production of renewable energy, etc. – generally as substitutes for external inputs.

Some research topics have sought to facilitate knowledge-bases necessary for embedding agroecological methods within wider institutions, e.g. through community-supported agriculture, agricultural extension services, food retailers and territorial labels. Knowledge for and about closer producer-consumer relations was the focus of a new topic, ‘Short chain delivery of food for urban-peri-urban areas’ (food localisation). Another topic emphasises ‘sustainable solutions for water management and nutrient recycling’ as a task for institutional interactions, e.g. in ‘the relation between peri-urban pressures and the participation of farmers and other stakeholders in rural development measures’.

Despite modest success in influencing the KBBE programme, the European Commission’s senior officials continued to exclusively promote the Life Sciences vision of a bioeconomy. This dominated documents for a 2011 public consultation which was meant to inform future research priorities for a European bioeconomy. In responding to the public consultation, TP Organics criticised the Commission for favouring ‘specific new technologies (such as genetic modification) and capital-intensive “innovation” at the expense of agriculture’. Its intervention proposed agroecological methods and agro-food relocalisation for a different bioeconomy: government should value agricultural knowledges which have already been developed over many decades, especially in co-producing agriculture with public goods.

In all those ways, the intervention strategy has sought an explicit place for an agroecological vision in EU policy documents and long-term resources for stakeholder knowledge networks. Given the central role of ‘innovation’ in EU policy, agroecology was promoted as an innovative practice integrating and enhancing farmers’ knowledge.<sup>9</sup> The successor to Framework Programme 7, Horizon 2020 (2014-20), featured the

concept ‘ecological intensification’; it has included greater funds for research themes relevant to agroecological practices.

Alongside specific themes, TP Organics has also advocated multi-stakeholder involvement in research: ‘Stakeholders along the whole food chain ... [should be] ... able to participate in this development and civil society must be closely involved in technology development and innovation’.<sup>5</sup> This basic idea has been incorporated into the EC’s research agenda as the ‘multi-actor approach’, whereby research proposals should demonstrate how they will involve all relevant actors in the research process. Farmers’ and civil society organisations (CSOs) have been eligible for funds in the EU’s research programmes since Horizon 2020.

A multi-actor approach likewise informs the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-Agri). Its agenda encompasses all types of innovation, including capital-intensive Life Sciences and farmers’ knowledge of natural resources. It ‘pursues the “interactive innovation model” which focuses on forming partnerships: using bottom-up approaches and linking farmers, advisors, researchers, businesses, and other actors in Operational Groups that engage in practical projects’.<sup>10</sup> Those Groups have facilitated farmers’ joint knowledge-production with experts, including agroecological methods, resulting partly from proposals from TP Organics (2017).<sup>11</sup>

Beyond the agri-food sector, EU-wide CSOs have attempted to broaden the EC’s research agenda to encompass diverse alternatives, especially in the run-up to FP7.<sup>12</sup> CSOs are currently attempting to influence the post-2020 priorities.<sup>13</sup> CSOs have also promoted agroecological practices for transforming the European agro-food system.<sup>14</sup> Such initiatives offer an opportunity for UK groups to clarify and promote their own research priorities.

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