

Organic Knowledge Network on Monogastric Animal Feed OK-Net EcoFeed

Practice abstracts

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Document Versions

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Executive summary

This deliverable is part of the Horizon 2020 project – OK-Net EcoFeed. The overall aim of OK-Net EcoFeed is to help farmers, breeders and the organic feed processing industry in achieving the goal of 100% use of organic and regional feed for monogastrics, in particular pigs, broilers, laying hens and parents of broilers and laying hens. In the project, the existing OK-Net knowledge platform (organic-farmknowledge.org) is developed further and extended with information related to organic and regional feed for monogastrics and to promote the platform and its tools in Europe. Work packages 4 and 5 contribute especially to the tools on the platform as described in Task 5.2 "Toolbox with relevant tools and materials related to organic and regional feed".

As part of the activities, partners wrote fact sheets and helped selecting tools that are of relevance for farmers related to the goal of 100 % use of organic and regional feed for monogastrics. In total, 98 items were either produced in the framework of the project or collected by the project partners, and made available in the EIP common format for practice abstracts. All materials are also available on organic-farmknowledge.org. Themes covered include pigs, broilers, layers, feeding and ration planning and processing and handling of harvested feed.

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I. Introduction

As part of the deliverable 5.3 of Work Package 5, the Research Institute of Organic Agriculture FiBL was tasked to gather around 100 practice abstracts to be published on the Organic Farm Knowledge Platform in order to provide a toolbox with relevant tools and materials related to organic and regional feed. These practice abstracts consist of both fact sheets created by the partners and Innovation groups (IGs) of the OK-Net Eco-Feed project and of selected tools, which were collected by the French Institut de l'Agriculture et de l'Alimentation Biologiques (ITAB) until the end of Month 35 (November 2020) as part of Work Package 4. The OK-Net EcoFeed fact sheets summarise practical and technical recommendations for practitioners in easy-to-understand language based on the EIP common format for practice abstracts. The selected tools were created by other projects or institutions. They provide relevant information on pigs, poultry, feeding and handling of feed. All tools are made available on Organic Farm Knowledge, which is the knowledge platform that was created by OK-Net Arable and was developed further by OK-Net EcoFeed. At the time of submission of this deliverable, 98 tools are available on Organic Eprints.

Themes

The main themes that the tools (OK-Net EcoFeed fact sheets, videos and selected tools) address are:

- Pigs (45 tools)
- Broilers (24 tools)
- Layers (28 tools)
- Feeding and ration planning (59 tools)
- Processing and handling of harvested feed (33 tools).

The statistics above include double-counting as some tools cover more than one theme.

II. Process for the fact sheets

The fact sheets were written by project partners, using the fact sheet template, which was created by FiBL. It was based on the MS Word template¹ used in the Horizon 2020 project OK-Net Arable, where 43 fact sheets related to arable crops were produced (Micheloni et al. 2018).

Once a partner submitted a fact sheet, FiBL did a first quality check and then sent it to a partner of the project most knowledgeable about the topic who then reviewed it. Some fact sheets were reviewed by two experts. Once the review was done, the feedback was communicated to the author(s), who then implemented the reviewers' comments and adapted the fact sheets accordingly. In some cases, the reviewers were consulted a second time.

Once the review was done, a language check was carried out, and the layout was finalised.

Of the 31 fact sheets that were published so far:

- 3 were contributed by AIAB
- 7 were contributed by Aarhus University
- 3 were contributed by Bioland

¹ Currently, FiBL is experimenting with the uploading of fact sheets to Organic Farm Knowledge in HTML format, which should ease the automatic translation of the material.

- 4 were contributed by Donausoja
- 3 were contributed by Ecovalia
- 3 were contributed by FiBL
- 1 was contributed by ITAB
- 1 was contributed by Naturland
- 1 was contributed by Organic Research Centre
- 3 were contributed by SLU
- 2 were contributed by the Soil Association

The fact sheets and tools have already been submitted or will be submitted to EIP Agri in the common format in winter 2020. Furthermore, they are all disseminated via various channels (see following chapter).

III. Process for the selected tools

In addition to the fact sheets, the project partners were asked to send adequate tools, such as books, manuals, videos, etc., that fit into the overarching themes of the OK-Net EcoFeed project. With the help of a tool description Word template, the selected tools are adapted to fit into the general structure of Organic Eprints and consequently into Organic Farm Knowledge, which is based on the structure of Organic Eprints. The description is made in English, regardless of the language of the selected tool. A problem, solution and description sections provide a quick overview of the tool and its suitability for the users. Antoine Roinsard of the Institut de l'Agriculture et de l'Alimentation Biologiques (ITAB) was in charge of the selection process.

Once the tool descriptions were submitted to FiBL, they were language checked by the Research Institute of Organic Agriculture FiBL and by the Organic Research Centre. Once the language check was done, FiBL uploaded to the tools to Organic Farm Knowledge.

In order to be able to upload the full PDF version of a tool, permission is requested from the author/editor of the tool. These permissions are stored on the internal workspace of Organic Farm Knowledge for long-term access. The tools that do not yet have the permission are provided as a link and the full PDF will be added once permissions are obtained.

Further tools will be added to the toolbox in the coming weeks.

IV. Dissemination of the tools

Once finalised, the tools are uploaded (via the online archive Organic Eprints) unto the Organic Farm Knowledge platform (https://organic-farmknowledge.org).

A news item on the platform is created for each tool. Furthermore, a Tweet and a Facebook post are made with links to the tool entry to foster dissemination and facilitate discussion. The partners are then encouraged to share and retweet these social media entries on their own platforms, ideally with a short text in their respective languages.

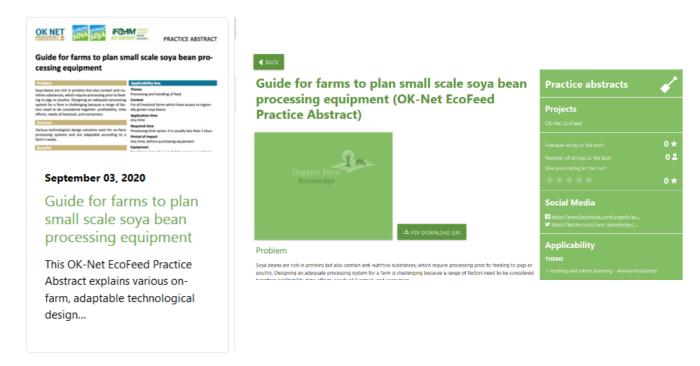


Figure 1: Example of a news item (left) and the tool view (right)

News items and social media posts are shared with the project partners to facilitate the dissemination among their networks and social media.

Recently, a monthly newsletter was created for Organic Farm Knowledge, which also features the tools (https://organic-farmknowledge.org/news-events/newsletter).

The partners were also encouraged to provide translations of both the fact sheets and the tools. See D4.1 "Overview of adapted and translated tools" more for details.

V. Conclusions

For the 98 tools that were compiled in the framework of OK-Net EcoFeed, existing knowledge in the field of feeding (organic) monogastrics was made accessible to a broader audience. This was made possible by utilising key communication channels, namely the Organic Farm Knowledge platform, as well as project and partners' social media accounts.

With the production of these practice abstracts, farmers and advisors in Europe and all over the world can profit from new and existing knowledge for organic animal husbandry, which can help them achieve the two aims of OK-Net EcoFeed: to achieve the goal of 100 % use of organic, regional feed and to exchange knowledge among each other.

VI. Reference

Micheloni, Cristina; Bortolussi, Stefano; Moeskops, Bram; Conder, Malgorzarta, Padel, Susanne and Willer, Helga (2018): Collection of end-user material. OK-Net Arable Deliverable Report 3.3. AIAB, IFOAM EU, https://orgprints.org/36333/

Basler, Andreas; De Simone, Ambra, Moeskops Bram and Willer Helga (2020): Fact sheets. OK-Net EcoFeed Deliverable Report 4.4. FiBL, <u>IFOAM Organics Europe</u>,

VII. Annex

VII.1 Fact sheets

Table 1: Fact sheets of the OK-Net EcoFeed project

Fact sheet number	Title and link	Theme	Issuing organisation	Author(s)	Pub- lished on	Total count
001	Rotating pasture for pregnant sows https://organic-farmknowledge.org/tool/35449/	Pigs; Feeding and ration planning	Institut de l'Agricul- ture et de l'Alimen- tation Biologiques ITAB	Roinsard, Antoine	09 September 2019	1
003	Foraging of pigs in out-door areas https://organic-farmknowledge.org/tool/37100/	Pigs; Feeding and ration planning	Aarhus University	Kongsted, Anne Grete	22 Jan- uary 2020	2
004	Silage feeding for laying hens https://organic-farmknowledge.org/tool/35470/	Layers; Feeding and ration planning	Aarhus University	Steenfeldt, Sanna	12 No- vember 2019	3
005	Guide for assessing the protein quality in soya feed products https://organic-farmknowledge.org/tool/35520/	Processing and han- dling of harvested feed	Donau Soja	Rittler, Leo- pold	25 September 2020	4
006	Foraging of broilers in outdoor areas https://organic-farmknowledge.org/tool/35469/	Broilers; Feeding and ration planning	Aarhus University	Steenfeldt, Sanna	16 De- cember 2019	5
008	Maize germ cake https://organic- farmknowledge.org/tool/ 37794/	Processing and han- dling of harvested feed	Soil Association	Alford, Jerry	08 April 2020	6
009	Dry Forages: Process and techniques https://organic-farmknowledge.org/tool/37881/	Processing and han- dling of harvested feed	Associazione Italiana per l'Agricoltura Bio- logica AIAB	Papi, Eugenio	22 April 2020	7
011	Feeding strategies for broiler chicken	Broilers; Feeding and ration planning	Soil Association	Alford, Jerry	30 April 2020	8

Fact sheet number	Title and link	Theme	Issuing organisation	Author(s)	Pub- lished on	Total count
	https://organic- farmknowledge.org/tool/ 37940/					
013	Green protein from locally grown crops https://organic- farmknowledge.org/tool/ 37034/	Layers; Feeding and ration planning; Pro- cessing and handling of harvested feed	Aarhus University	Steenfeldt, Sanna; Ambye-Jen- sen, Morten; Lübeck, Mette	13 Jan- uary 2020	9
014	Nutrient digestibility in poultry https://organic-farmknowledge.org/tool/38640/	Layers; Broilers; Feeding and ration planning	Organic Research Centre	Lindsay Whistance	26 No- vember 2020	10
015	Phase feeding for growing and finishing pigs https://organic- farmknowledge.org/tool/ 35451/	Pigs; Feeding and ration planning	Swedish University of Agricultural Sci- ences (SLU)	Presto Aker- feldt, Mag- dalena	29 May 2020	11
016	Starfish as feedstuff https://organic- farmknowledge.org/tool/ 37559/	Processing and han- dling of harvested feed	Aarhus University	van der Heide, Marleen Elise; Værum Nørgaard, Jan	17 March 2020	12
018	Protein requirements for piglets https://organic-farmknowledge.org/tool/38395/	Pigs; Feeding and ration planning	Swedish University of Agricultural Sci- ences (SLU)	Akerfeldt, Magdalena; Früh Bar- bara, Roin- sard, An- toine	25 Sep- tember 2020	13
021	Relevance of roughage feeding to pigs https://organic-farmknowledge.org/tool/36930/	Pigs; Feeding and ration planning	Research Institute of Organic Agriculture (FiBL)	Früh, Bar- bara	16 December 2019	14
022	Blue mussels as feedstuff https://organic- farmknowledge.org/tool/ 37800	Processing and han- dling of harvested feed	Aarhus University	van der Heide, Marleen Elise; Værum Nørgaard, Jan	26 March 2020	15

Fact sheet number	Title and link	Theme	Issuing organisation	Author(s)	Pub- lished on	Total count
023	Seaweed as feed supplement https://organic- farmknowledge.org/tool/ 37244/	Processing and han- dling of harvested feed	Aarhus University	van der Heide, Marleen Elise; Værum Nørgaard, Jan	13 February 2020	16
024	Single-phase feeding and compensatory growth in growing and finishing pigs https://organic-farmknowledge.org/tool/	Pigs; Feeding and ration planning	Swedish University of Agricultural Sci- ences (SLU)	Akerfeldt, Magdalena	09 March 2020	17
025	Using raw soya beans with reduced content of trypsin inhibitors in organic pig fattening https://organic-farmknowledge.org/tool/38419/	Processing and han- dling of harvested feed	Donau Soja	Rittler, Leo	25 September 2020	18
026	Recommendations for using soy-based feedstuffs for poultry production https://organic-farmknowledge.org/tool/37896/	Layers; Broilers; Pro- cessing and handling of harvested feed	Bioland Beratung GmbH	Lindner, Christopher; Schmelzer, Elias	29 May 2020	19
027	Recommendations for using soya-based feedstuffs in pig husbandry https://organic-farmknowledge.org/tool/37897/	Pigs; Feeding and ration planning	Donau Soja	Rittler, Leo	30 April 2020	20
028	Sunflower oil cake https://organic- farmknowledge.org/tool/ 37801/	Processing and han- dling of harvested feed	Associazione Italiana per l'Agricoltura Bio- logica AIAB	Proietti, Lavinia	13 May 2020	21
029	Guide for farms to plan small scale soya bean processing equipment https://organic-farmknowledge.org/tool/38314/	Processing and han- dling of harvested feed	Donau Soja	Rittler, Leo- pold	02 September 2020	22

Fact sheet number	Title and link	Theme	Issuing organisation	Author(s)	Pub- lished on	Total count
030	Okara: Including a soya by-product into the poul- try diet	Processing and han- dling of harvested feed	Associazione Italiana per l'Agricoltura Bio- logica AIAB	Eugenio Papi	13 May 2020	23
	https://organic- farmknowledge.org/tool/ 37898/					
031	Feeding grass silage to fattening pigs https://organic-farmknowledge.org/tool/36454/	Pigs	Research Institute of Organic Agriculture (FiBL)	Holinger, Mirjam; Scheibler, Samuel; Früh, Bar- bara	16 September 2019	24
032	Utilisation of waste heat from biogas plants for drying fine-grained legumes https://organic-farmknowledge.org/tool/37511/	Processing and han- dling of harvested feed	Bioland Beratung GmbH	Lindner, Christopher; Schmelzer, Elias; Vogt- Kaute, Wer- ner	09 March 2020	25
033	Acorns for fattening free- range pigs https://organic- farmknowledge.org/tool/ 37476/	Pigs; Feeding and ration planning	Ecovalia - Asociación Valor Ecológico, Uni- versidad de Córdoba	Rodríguez- Estévez, Vi- cente; Díaz- Gaona, Ci- priano; Sanz-Fer- nández, San- tos; Reyes- Palomo, Ca- rolina; Sán- chez-Rodrí- guez, Ma- nuel	05 March 2020	26
034	Brewer's yeast for organic pigs https://organic-farmknowledge.org/tool/38116/	Pigs	Ecovalia - Asociación Valor Ecológico, Uni- versidad de Córdoba	Rodríguez- Estévez, Vi- cente	05 June 2020	27
035	Whey for fattening organic pigs https://organic-farmknowledge.org/tool/38117/	Pigs	Ecovalia - Asociación Valor Ecológico, Uni- versidad de Córdoba	Reyes-Pa- lomo, Caro- lina; Sanz- Fernández, Santos; Díaz- Gaona, Ci- priano; Sán- chez-Rodrí- guez, Ma-	05 June 2020	28

Fact sheet number	Title and link	Theme	Issuing organisation	Author(s)	Pub- lished on	Total count
				nuel; Rodrí- guez-Esté- vez, Vicente		
036	Focus on the amino acid content of energy feedstuff components https://organic-farmknowledge.org/tool/38082/	Layers; Broilers; Feeding and ration planning	Öko-Beratungsge- sellschaft mbH, Bio- land Beratung GmbH	Vogt-Kaute, Werner und Schmelzer, Elias	29 May 2020	29
037	Feeding insects for organic layers – video abstract https://organic- farmknowledge.org/tool/ 38429/	Layers; Feeding and ration planning	Research Institute of Organic Agriculture (FiBL)	Früh, Bar- bara	25 September 2020	30
038	Free choice feeding - an alternative feeding method for laying hens https://organic-farmknowledge.org/tool/38443/	Layers; Feeding and ration planning	Naturland – Verband für ökologischen Landbau e. V.	Olivia Müs- seler, Wer- ner Vogt- Kaute	28 September 2020	31

VII.2 Selected tools

Table 2: Tools selected within the OK-Net EcoFeed project

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
005	Roughage for organic laying hens https://organic-farmknowledge.org/tool/3647 3/	Layers; Feeding and ration planning	Aarhus University	25 September 2019	32
007	Proteins from organically grown green crops are promising poultry feed https://organic-farmknowledge.org/tool/36474/	Layers; Broilers; Feed- ing and ration plan- ning; Processing and handling of harvested feed	Aarhus University	25 September 2019	33
800	Plants and planting designs for organic poultry ranges	Layers	Aarhus University	25 September 2019	34

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3647 6/				
012	Grass protein - a golden chance to improve organic farming https://organic-farmknowledge.org/tool/3647	Layers; Broilers; Feed- ing and ration planning	Aarhus University	25 September 2019	35
013	Feeding pigs silage https://organic- farmknowledge.org/tool/3692 7/	Pigs; Feeding and ration planning	Soil Association	11 December 2019	36
016	Feed in organic production https://organic- farmknowledge.org/tool/3647 7/	Feeding and ration planning	Swedish University of Agricultural Sciences (SLU)	25 September 2019	37
020	Soy with less anti-nutritional factors excellent for yields and rations https://organic-farmknowledge.org/tool/3752 5/	Feeding and ration planning; Processing and handling of har- vested feed	Associazione Italiana per l'Agricoltura Biolo- gica AIAB	10 March 2020	38
025	Making poultry feed more sustainable https://organic-farmknowledge.org/tool/3654 7/	Layers; Broilers; Feed- ing and ration planning	Soil Association	12 October 2019	39
029	Fulfilling 100 % organic poultry diets: roughage and foraging from the range https://organic-farmknowledge.org/tool/36526/	Processing and han- dling of harvested feed	Soil Association	08 October 2019	40
031	AVIFAF© https://organic- farmknowledge.org/tool/3653 8/	Layers; Broilers; Feed- ing and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	09 October 2019	41
032	Poultry feeding in organic farming	Layers; Broilers; Feed- ing and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	11 October 2019	42

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3654 5/				
035	Maize and beans – Organic roughage with benefits? https://organic-farmknowledge.org/tool/3654 4/	Pigs; Processing and handling of harvested feed	Soil Association	11 October 2019	43
036	Soybean processing technology https://organic- farmknowledge.org/tool/3654 3/	Feeding and ration planning; Processing and handling of har- vested feed	Donau Soja	11 October 2019	44
045	Feed for organic pigs https://organic- farmknowledge.org/tool/3693 4/	Pigs; Feeding and ration planning	Swedish University of Agricultural Sciences (SLU)	12 December 2019	45
046	Fulfilling 100% organic pig diets: Feeding roughage and foraging from the range https://organic- farmknowledge.org/tool/3706 0/	Pigs; Feeding and ra- tion planning	Soil Association	10 March 2020	46
049	Organic pig feeding. Feed, rations https://organic-farmknowledge.org/tool/3692 8/	Pigs; Feeding and ration planning	Donau Soja	11 December 2019	47
050	Feeding pigs in organic farming https://organic- farmknowledge.org/tool/3654 8/	Pigs; Feeding and ra- tion planning; Pro- cessing and handling of harvested feed	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	12 October 2019	48
052	Foraging sows on high-protein grassland https://organic-farmknowledge.org/tool/3651 8/	Pigs; Feeding and ra- tion planning; Pro- cessing and handling of harvested feed	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	07 October 2019	49
054	Feedstuffs for organic pigs https://organic- farmknowledge.org/tool/3693 5/	Pigs; Feeding and ra- tion planning; Pro- cessing and handling of harvested feed	Associazione Italiana per l'Agricoltura Biolo- gica AIAB	12 December 2019	50

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
055	Inclusion of some dehulled leg- ume grains as concentrates for broiler chicks	Pigs	Soil Association	10 March 2020	51
	https://organic- farmknowledge.org/tool/3693 2/				
061	Use of a robot to feed roughage, improving welfare of broilers https://organic-farmknowledge.org/tool/3693 3/	Layers; Broilers; Feed- ing and ration plan- ning; Processing and handling of harvested feed	Aarhus University	10 March 2020	52
064	Using local raw material for broiler feed in organic farming https://organic-farmknowledge.org/tool/36600/	Broilers; Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	25 October 2019	53
065	Towards 100 % organic diets for poultry https://organic-farmknowledge.org/tool/3694 2/	Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	13 December 2019	54
066	Organic Poultry Production: Providing Adequate Methionine https://organic- farmknowledge.org/tool/3694 3/	Broilers; Feeding and ration planning; Pro- cessing and handling of harvested feed	Associazione Italiana per l'Agricoltura Biolo- gica AIAB	13 December 2019	55
067	Profile of a farm with integrated soya production, processing and laying hen husbandry https://organic-farmknowledge.org/tool/3694 4/	Layers; Processing and handling of harvested feed	Donau Soja	13 December 2019	56
071	Organic pea production https://organic- farmknowledge.org/tool/3694 5/	Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	13 December 2019	57
073	Organic soybeans – Managing quality from field to feeding	Feeding and ration planning; Processing and handling of har- vested feed	Donau Soja	13 December 2019	58

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3694 6/				
080	Whey in pig feed https://organic- farmknowledge.org/tool/3695 4/	Pigs; Feeding and ration planning	Ecovalia - Asociación Valor Ecológico	16 December 2019	59
081	Strategy options for feeding 100% organic feed to organic monogastric livestock https://organic-farmknowledge.org/tool/36955/	Pigs; Processing and handling of harvested feed	Bioland	16 December 2019	60
083	Cultivation of faba beans https://organic- farmknowledge.org/tool/3695 6/	Feeding and ration planning	Bioland	16 December 2019	61
085	Cultivation of soybeans https://organic-farmknowledge.org/tool/3695 7/	Pigs; Layers; Broilers; Feeding and ration planning; Processing and handling of har- vested feed	Bioland	16 December 2019	62
087	Storage of soybeans https://organic- farmknowledge.org/tool/3864 6	Processing and han- dling of harvested feed	Donau Soja	27 November 2020	63
090	Feeding organic pigs: a hand-book of raw materials and recommendations for feeding practice https://organic-farmknowledge.org/tool/3859 0/	Pigs; Feeding and ration planning	Ecovalia - Asociación Valor Ecológico	12 November 2020	64
091	Traditional raw materials, alternative products and byproducts for organic pig feeding https://organic-farmknowledge.org/tool/3866 O	Pigs; Processing and handling of harvested feed	Ecovalia - Asociación Valor Ecológico	30 November 2020	65
092	List of weeds traditionally used to feed pigs https://orgprints.org/38645/	Pigs; Processing and handling of harvested feed	Ecovalia - Asociación Valor Ecológico	25 November 2020	66

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
093	Designing pasture subdivisions for practical management of hogs https://organic-farmknowledge.org/tool/3859	Pigs; Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	12 November 2020	67
	3/				
095	Farm system evaluated: pig farm in Centre region of France https://organic-farmknowledge.org/tool/3859 4/	Pigs	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	12 November 2020	68
096	Lucerne as pig feed https://organic- farmknowledge.org/tool/3860 3/	Pigs	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	13 November 2020	69
098	Simplifying feed management between weaning and culling process: impact on growth performance of organic pigs https://organic-farmknowledge.org/tool/3862 2	Pigs; Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	19 November 2020	70
099	Introducing nettle into organic pig feeding https://organic-farmknowledge.org/tool/3863 4	Pigs; Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	20 November 2020	71
101	Animal-friendly pig husbandry: an advisory tool for Swaziland https://organic-farmknowledge.org/tool/3809 1/	Pigs	Research Institute of Organic Agriculture (FiBL)	29 July 2020	72
102	Appropriate feed strategies for organic sows and their piglets https://organic-farmknowledge.org/tool/3819 5/	Pigs; Feeding and ration planning	Research Institute of Organic Agriculture (FiBL)	29 July 2020	73
103	Boar fattening on organic farms: animal-friendly alternative to castration	Pigs; Feeding and ration planning	Research Institute of Organic Agriculture (FiBL)	29 July 2020	74

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3821 7/				
104	Breeding sows in organic farming https://organic- farmknowledge.org/tool/3822 5/	Pigs; Feeding and ration planning	Research Institute of Organic Agriculture (FiBL)	4 August 2020	75
105	Fattening chickens in organic farming https://organic-farmknowledge.org/tool/3823 1/	Layers; Broilers; Feed- ing and ration planning	Research Institute of Organic Agriculture (FiBL)	29 July 2020	76
106	Controlling endoparasites in laying hens https://organic-farmknowledge.org/tool/3823 O/	Layers; Broilers	Research Institute of Organic Agriculture (FiBL)	4 August 2020	77
107	Free-range pigs: high animal welfare with appropriate infrastructure and management https://organic-farmknowledge.org/tool/38218/	Pigs; Feeding and ration planning	Research Institute of Organic Agriculture (FiBL)	4 August 2020	78
108	Free-range laying hens: providing species-appropriate and sustainable husbandry https://organic-farmknowledge.org/tool/38232/	Layers; Broilers; Feed- ing and ration planning	Research Institute of Organic Agriculture (FiBL)	4 August 2020	79
109	Group suckling in organic pig husbandry https://organic-farmknowledge.org/tool/3822 1/	Pigs	Research Institute of Organic Agriculture (FiBL)	4 August 2020	80
110	Hygiene management in organic pig husbandry https://organic-farmknowledge.org/tool/3822 2/	Pigs	Research Institute of Organic Agriculture (FiBL)	4 August 2020	81
111	Optimising weaning management in piglets	Pigs; Feeding and ra- tion planning	Research Institute of Organic Agriculture (FiBL)	4 August 2020	82

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3822 6/				
112	Free-range laying hens: animal and environment friendly https://organic- farmknowledge.org/tool/3822 9/	Layers; Broilers	Research Institute of Organic Agriculture (FiBL)	4 August 2020	83
113	Prevent tail biting: watching – thinking – acting https://organic-farmknowledge.org/tool/3822 0/	Pigs	Research Institute of Organic Agriculture (FiBL)	3 August 2020	84
114	Successful weaning of organic piglets https://organic-farmknowledge.org/tool/3821 9/	Pigs	Research Institute of Organic Agriculture (FiBL)	4 August 2020	85
115	Organic pig production in Europe: health management in common organic pig farming https://organic-farmknowledge.org/tool/38216/	Pigs	Research Institute of Organic Agriculture (FiBL)	29 July 2020	86
116	Avoiding too large of a litter and piglet losses https://organic-farmknowledge.org/tool/38227/	Pigs	Research Institute of Organic Agriculture (FiBL)	4 August 2020	87
117	Designing and optimising out- door areas in organic poultry farming https://organic-farmknowledge.org/tool/3862 4	Layers; Broilers	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	19 November 2020	88
118	Feeding phases of poultry: trial synthesis from Lycée Nature https://organic-farmknowledge.org/tool/3862 7	Broilers; Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	19 November 2020	89
119	Protein value of an outdoor area for poultry	Layers; Broilers; Feed- ing and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	13 November 2020	90

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3859 9/				
120	100% organic feeding for layers hens: is it feasible? https://organic-farmknowledge.org/tool/3860 0/	Layers; Feeding and ration planning	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	13 November 2020	91
122	Technical guide: tree-planning in poultry outdoor run https://organic-farmknowledge.org/tool/3860 2/	Layers; Broilers	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	13 November 2020	92
123	Feeding strategies for laying hens in free-range systems with pasture https://organic-farmknowledge.org/tool/3859 1/	Layers; Feeding and ration planning	Bioland	12 November 2020	93
124	Inducing moulting in organic hens https://organic-farmknowledge.org/tool/3823 3/	Layers; Broilers	Research Institute of Organic Agriculture (FiBL)	11 November 2020	94
125	Outdoor breeding of organic sows: a complete technical guide https://organic-farmknowledge.org/tool/3865 O	Pigs	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	27 November 2020	95
126	Fulfilling 100% organic poultry diets: Concentrates https://organic-farmknowledge.org/tool/3863 0	Layers; Broilers; Feed- ing and ration plan- ning; Processing and handling of harvested feed	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	19 November 2020	96
127	Fulfilling 100% organic pig diets: Concentrates https://organic-farmknowledge.org/tool/3863 7	Pigs; Feeding and ra- tion planning; Pro- cessing and handling of harvested feed	Institut de l'Agriculture et de l'Alimentation Biologiques ITAB	20 November 2020	97
128	Guidelines for certification - organic feed processing	Feeding and ration planning; Processing	Ecovalia - Asociación Valor Ecológico	27 November 2020	98

D5.3 – Practice abstracts

Number ID of the tool	Title and link	Theme	Selecting organisation	Published on	Total count
	https://organic- farmknowledge.org/tool/3865 2	and handling of harvested feed			