ROOTCAMP

Call for Best Practices in Livestock Farming

GUIDE

WHY
do we call for best practices?

- Livestock shows high emissions & inefficiency in feedstock
- Huge potential for increased efficiencies by using innovations
- Existing solutions lack visibility

➔ Need to facilitate application of innovations

What
is a best practice?

- Innovative solution solving an existing problem
- Proven to show impact in the industrial environment
- Measurable results
- Economically viable
- Can be adopted by other customers

How
to apply?

- Fill out the TEMPLATE below (page 2)
- Use maximum 2-3 pages
- Feel free to use any visualizations, bullet points or any other resources
- Submit TEMPLATE via this FORM
- Deadline: **12th July 2022**

What selected startups will get

Visibility	Presentation in front of the industry, awareness-raising, social media & blog post
Knowledge	Access to our entrepreneurial education platform
Network	Pitch during our big Networking Event on **30th of August**

Voting by the audience:
Most impactful startups get **coaching** with our Managing Director Dr. Philipp Rittershaus & participate at EuroTier

Apply Now!

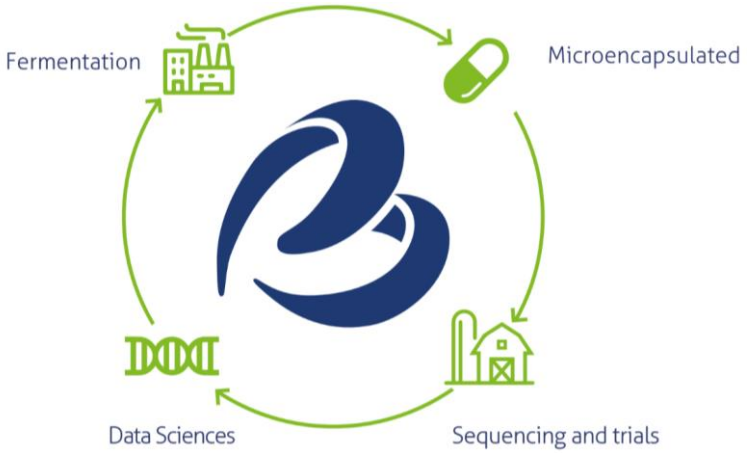
www.root.camp

Contact Person: Mario Verbeek, mario@root.camp

TEMPLATE

Feel free to use any visualizations, bullet points or any other resources you consider relevant **within** the template on 2-3 pages.

Submit your Best Practice by the 12th of July via our Form.

Element	*Guiding questions. Please delete the guiding questions and fill out your answers.*
Title	Improvements in piglet production by using microencapsulated microbiomes
Name of the Authors	Mauricio Agudelo (mauricio.agudelo@bialtec.co)
Involved organization(s) Website(s) Name(s) Email(s) *details are optional*	Mauricio Agudelo, IQ[1]; Andrés Acevedo IQ[1]; Juan Carlos Pareja Arcila MV[2]; Oscar Sáenz R. MSc[2]; Luis C. Veloza MV; MSc[2]; Juan F. Naranjo Zoot PhD[2]; Rene Ramírez García MV, MSc, PhD[2,3], [1]Animal nutrition and health research group - Bialtec SAS [2]INCA-CES research group, Faculty of Veterinary Medicine and Zootechnics - Universidad CES [3]Research group in basic sciences, Faculty of Medicine - Universidad CES.
Customer	The 3rd largest farm company in Columbia. The best practice was conducted in the El Rosario piglet farm based in Don Matias (Columbia), one of the 60 farms of the company. They cover the entire swine cycle: from birth to the fattening stage.
Problem	The problems of the farmers in the project, that needs to be treated sooner or later, are: 1. Antibiotic growth promoters: They are still in use - a global public health problem 2. Cost pressure: Animal feed is responsible for around 70 % of the costs associated with meat production 3. Feed pressure: The production of animal feed uses a lot of arable lands. Since the food demand increases significantly during the next decades, animal feed needs to be used more efficiently
Solution	 We reconfigure the intestinal microbiome towards a more efficient and healthier one, using **complex feed additives** called **precision microencapsulated microbiomes**
Methodology, Validation & Impact	*In what time period did the project take place?* *What were the key performance indicators (KPIs)?*

How have you measured the KPIs?
The Animals: 5104 Piglets from 21 to 70 days of life
Time horizon: over 8 months

We measured all variables for the treatment group & for a control group and run statistical analyses to see the differences.

Category	KPI	Control Group	Treatment Group	Difference*
Health	Mortality	285 cases	228 cases	- 20 %
	Use of Antibiotic growth promoters	100 %	2 %	- 98 %
Cost Pressure	Gross profit	83.260 €	85.062 €	+ 2,2 %
	Feed conversion ratio	1,592	1,536	- 3,5 %
Feed	Feed intake	34,3 kg	32,1 kg	- 6,4 %
	End weight	21,64 kg	21,24 kg	no statistical difference

$* p < 0.05$

Constraints	To prove that our solution worked, we needed to perform a comparative test with a control group and the treatment group. The framework conditions (two separated groups with exactly the same conditions except for the feed) to run those tests are needed to prove statistically the improvements to the farmer. Otherwise, because our product is not really feasible for most farmers, they are not going to adapt our solution. We are not restricted by the animals - our solution is suitable for swine, poultry, cattle and other animals.
Lessons learned	The farmer was afraid about mortality rate and animal health because we substitute antibiotics with our microbiomes. Thus, statistically proven improvements are the key to increasing the adoption rate of our solutions.

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