

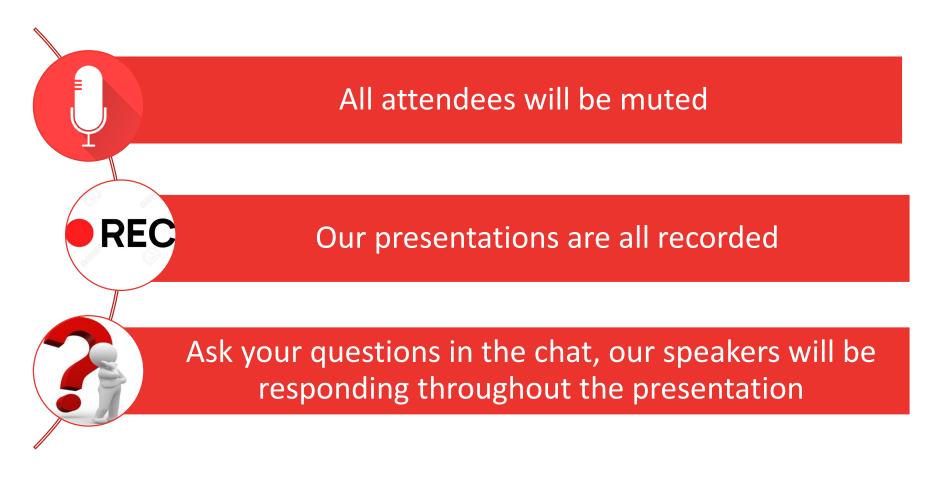
Welcome PIC Nutrition Seminar 2021

PIC Global Technical Services Team June, 30th





Housekeeping





Presenters

PIC[®]



Uislei Orlando PIC Global Nutrition Team



Ronan Casserly PIC Global Nutrition Team

Never Stop Improving Nutrition & Wean-to-Finish Technical Services



Carine Vier PIC Global Nutrition Team



Steve Dritz PIC Global Technical Services



Ilia Zubtsov PIC Russia Technical Services



Isaac Huerta PIC Europe Technical Services



Agenda

- 1. Nutrition and feeding guidelines update
- 2. Nutrition updates for hyper-prolific farms (gilts/sows)
- 3. Nutrition updates Wean-Finish
- 4. Question and answer session





PIC Global Nutrition and Technical Services PIC Nutrition Seminar – June, 30th







Global customer support in nutrition Nutrition team structure

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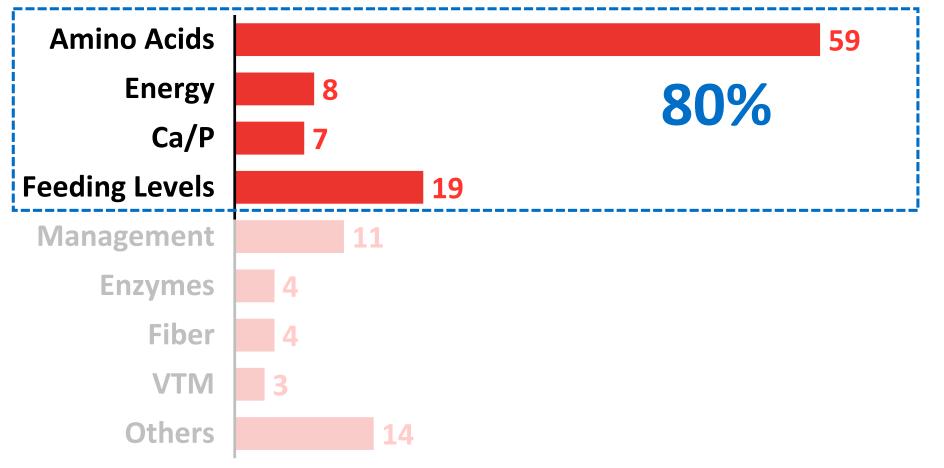
Science driven recommendations Never Stop Improving Nutrition trials (2016-2021) Nutrition Technical Services A total of 116 trials involved with 124,239 PIC animals 60 76437 **49** 30926 40 41 20 15,143 933 15 800 9 0 **Gilt/Sow** Developing **Grow-Finish Boar** Nursery **PIC**[®] Gilts © Pig Improvement Company. | 7



Science driven recommendations Focus in the most impactful areas



Topics









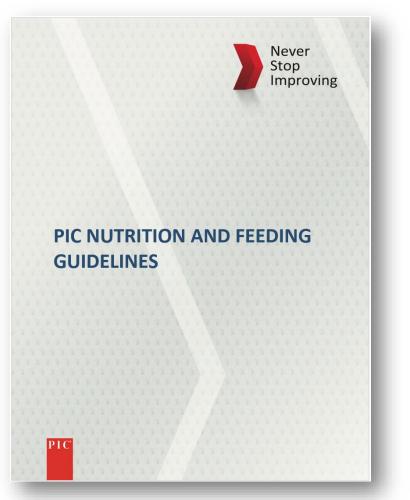
Strong industry and academic relationships Thank you to our research partners

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- Divided in four main sections:
 - 1) Steps in formulation
 - 2) Feeding program for each phase of production
 - 3) Nutrient specifications tables
 - 4) Feeding PIC pigs within special topics





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Section A

Principles and Decision Making in Diet Formulation



PIC[®] genetics are selected with a focus on total economics to maximize profit for the pork value chain. An adequate nutrition program is necessary to unlock the genetic potential of PIC[®] pigs. We recognize multiple strategies can be successfully implemented for diet formulation. Production systems worldwide typically determine a balance of maximizing animal performance, minimizing cost of production, and maximizing profitability when designing a nutrition program. Our goal at PIC[®] is to help our customers be the most successful pork producers in the world. Since feed is the largest production cost our goal is to provide key diet formulation principles that can be used to optimize specific nutrition programs.

- In a space short system, when pigs are profitable, average daily gain has more value.
- In times of anticipated high profitability (such as summer in the US) implement strategies to increase market weight.
- Inadequate amino acid concentration may limit the pigs' response to energy.
- Income over feed cost is one of the most accurate ways to evaluate the feeding program.

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Divided in four main sections:

- 1) Steps in formulation
 - Principles and decision making in diet formulation
 - Energy
 - Proteins and amino acids
 - Macrominerals
 - Trace minerals and vitamins



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Boar feeding program objectives are to promote adequate growth, maximize reproductive performance, maintain structural soundness and enhance longevity.

- Feeding guidelines are based on body weight with adjustments for body condition and environment.
- The PIC® Optimum Boar Feeding tool calculates recommended nutrient levels for boars during quarantine and production.
- Feeding management is important for the success of a boar feeding program.

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Divided in four main sections:

2) Feeding program for each phase of production

- Mature boar
- Gilt development
- Gestating gilt and sow
- Lactating sow
- Weaned sow
- Nursery pigs
- Grow-finish pigs



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Section N

ITEM ^a		Body weight, kg		
	UNIT	23 to 60	60 to 90	90 to Breeding ^o
Standardized ileal digestible amino acid	s			
Lys:Calorie NE ^c	g/Mcal	4.29	3.46	2.51
Lys:Calorie ME ^c	g/Mcal	3.15	2.57	1.86
Methionine + Cysteine:Lys	Ratio	58	58	58
Threonine:Lys	Ratio	65	65	66
Tryptophan:Lys	Ratio	18	18	18
Valine:Lys	Ratio	68	68	68
Isoleucine:Lys	Ratio	56	56	56
Leucine:Lys	Ratio	101	101	102
Histidine:Lys	Ratio	34	34	34
Phenylalanine + Tyrosine:Lys	Ratio	94	95	96
L-Lys-HCI, max. ^d	%	0.40	0.32	0.27
Minerals				
STTD P:Calorie NE*	g/Mcal	1.64	1.37	1.09
STTD P:Calorie ME*	g/Mcal	1.23	1.04	0.84
Av. P:Calorie NE*/	g/Mcal	1.41	1.17	0.94
Av. P:Calorie ME*/	g/Mcal	1.05	0.89	0.73
Analyzed Ca:Analyzed P, range ⁸	Ratio	1.25 - 1.50	1.25 - 1.50	1.25 - 1.50
Sodium ^h	%	0.25	0.25	0.25
Chloride	%	0.25	0.25	0.25
Added trace minerals ⁱ				
Zinc	ppm	125	125	125
Iron	ppm	100	100	100
Manganese	ppm	50	50	50
Copper	ppm	15	15	15
lodine	ppm	0.35	0.35	0.35
Selenium	ppm	0.30	0.30	0.30
Added vitamins ^{ij}	per kg diet			
Vitamin A	IU/kg	9920	9920	9920
Vitamin D	IU/kg	1985	1985	1985
Vitamin E	IU/kg	66	66	66
Vitamin K	mg/kg	4.4	4.4	4.4
Choline ^k	mg/kg	660	660	660
Niacin	mg/kg	44	44	44

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N-1

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PIC® Nutrient Specifications for Developing Gilts (As-Fed)

- Divided in four main sections:
 - 3) Nutrient Specifications tables
 - PIC Nutrient Specifications for Mature Boars
 - PIC Nutrient Specifications for Gilt Development
 - PIC Nutrient Specifications for Gestating Gilts and Sows
 - PIC Nutrient Specifications for Lactating Gilts and Sows
 - PIC Nutrient Specifications for Pre-start Pigs
 - PIC Nutrient Specifications for Late Nursery and Finishing Gilts and Barrows



Manual Link: https://www.pic.com/resources/nutrition

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Section S

Feeding PIC[®] Pigs within Special Topics

Adjustments can be made to PIC® nutrition and feeding recommendations to accommodate special topics of pig production, which include specific regional legislation, different production environments, or different packing plant requirements.

For information regarding feeding PIC[®] pigs under specific programs reach out to your PIC[®] account team or click here:

- · Carcass yield and pork fat quality
- · Contingent considerations for urgent situations
- Feed additives
- Key points to consider when using Ractopamine in swine diets
- Feeding pigs in hot environments
- Feed manufacturing guidelines for PIC[®] pigs
- Ham production
- Immunocastrated pigs
- Intact finishing boar's requirements
- Liquid feeding
- Nutritional factors associated with abnormal behaviors
- Outdoor production
- Split sex feeding
- · Upper limits for feed ingredients use
- Water

Divided in four main sections:

Feeding PIC pigs within special programs 4)

Consists of several different topics (i.e. immunocastrated pigs, nutritional factors associated with abnormal behavior, split sex feeding, etc) that are released as separate factsheets.

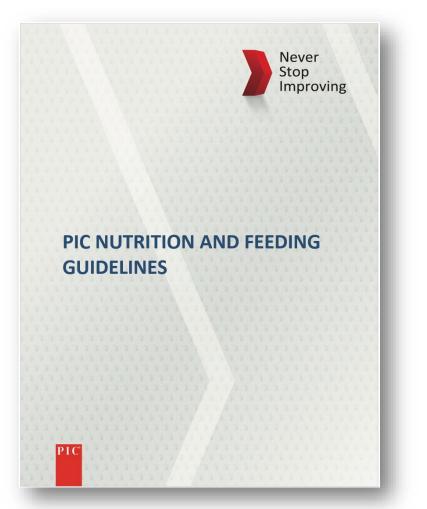
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• Main updates in boars, gilts, and sows feeding

- Feeding boars in isolation and production
- Gilt development recommendations
- Body condition management and performance
- Early gestation feeding
- Gilt feeding during late gestation
- Pre-farrow period
- Wean-to-estrus interval feeding
- Lactation feeding recommendations

• Main updates in wean-to-finish

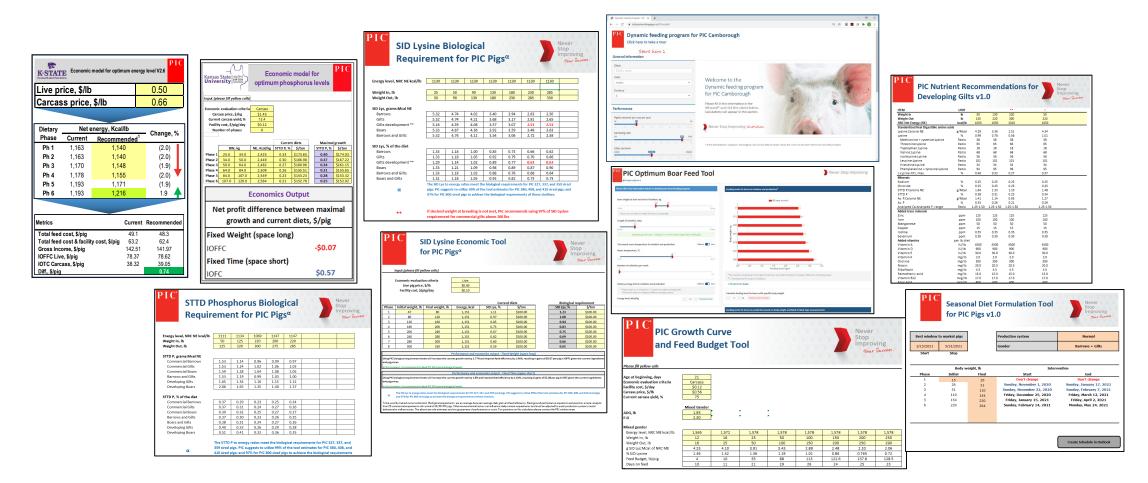
- Amino acid recommendations
- Calcium and phosphorus recommendations
- Vitamin and trace mineral recommendations



PIC Nutrition and Feeding Guidelines It is PIC's objective to make our customers the most successful pork producers globally

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Services



PIC[®] Link to access tools: https://www.dropbox.com/sh/kmf7e89dn0ssol6/AAAMzrP_ALJLECn5qUyt8HCma?dl=0



- Plan for dissemination of manual updates release moving forward:
 - Imperial and metric versions are available at PIC website
 - The most updated version of the manual will always be found at the following link:

https://www.pic.com/resources/nutrition

- The topics will be updated in the future by section.
- A date that specifies the latest version of the document can be found at the bottom of the manual pages.

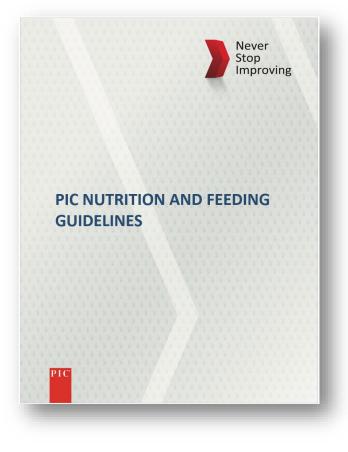
Metric Version 2021.04.14 For the most updated PIC[®] Nutrition and Feeding Guidelines visit https://www.pic.com/resources/nutrition

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• Major updates in the Nutrion and Feeding Guidelines will always be communicated.







Thank you!

