

2021 - 2022 CATFISH

African sharptooth catfish are a source of high-quality proteins and omega-3 fatty acids. These qualities make the catfish extremely nutritious and tasty – perfect for a rapidly expanding global population.



Sinking feed



Floating feed



Semi-floating feed



Free from land animal protein



High digestibility



Omega-3 fatty acids



Designed for RAS



Sustainable fish feed



With astaxanthine



Low nitrogen and phosphorus emission



Improved resistance



CATFISH

AQUATE™

Innovative premix in all **Alltech Coppens'** feeds.

- + Optimizes growth
- + Supports immune response
- + Optimizes digestive function
- + Contributes to mucous barrier protection
- + Contributes to external barrier protection

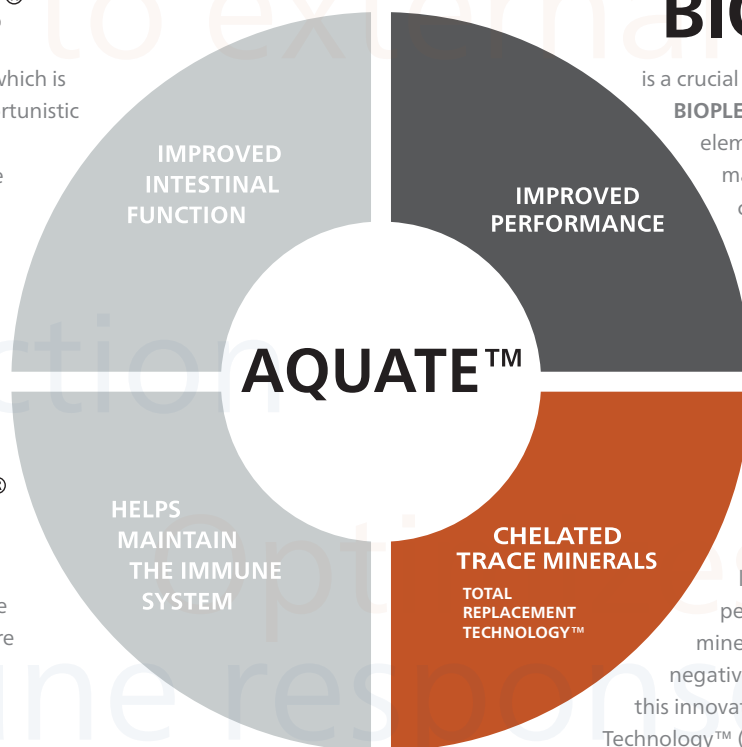


BIO-MOS®

is a mannan-oligosaccharide, which is known to bind and drain opportunistic bacteria. This can result in a significant improvement of the intestinal flora. Additionally, it can improve the structure and length of the microvilli in the gut through which the nutrient intake can increase. **BIO-MOS®** contributes to mucous barrier protection.

ACTIGEN®

is derived from yeast cell walls and supports the fish's immune response. **Actigen®** furthermore optimizes growth in fish.



BIOPLEX®

is a crucial element in our new premix. **BIOPLEX®** are organically bound trace elements such as zinc, copper, manganese & iron. With **BIOPLEX®** we can improve the health, growth & performance of the fish.

Break with tradition and feed your animals the modern way. Alltech has proven that chelated trace minerals in the form of Bioplex® and Sel-Plex® can be included at significantly lower levels while improving animal performance. This optimizes animal mineral requirements and reduces negative environmental impacts. We call this innovation Alltech's Total Replacement Technology™ (TRT).



Alltech® COPPENS

Feeding protocol for African catfish fry:

The fry are fed to near satiation ($\geq 5,5$ %BM/day)

This feeding advice is a guideline only based on optimal water quality and a water temperature of 27-28 °C

| Feeding days | Average weight (g) | Feed size | Feed type |
|--------------|--------------------|---------------------------|-------------------|
| 1 | 0,0025 | Live feed | Artemia |
| 2 | 0,005 | Live feed | Artemia |
| 3 | 0,009 | 90% artemia + 10% 0.2-0.3 | Artemia + Essence |
| 4 | 0,015 | 75% artemia + 25% 0.2-0.3 | Artemia + Essence |
| 5 | 0,022 | 50% artemia + 50% 0.2-0.3 | Artemia + Essence |
| 6 | 0,032 | 75% 0.2-0.3 + 25% artemia | Essence + Artemia |
| 7 | 0,044 | 90% 0.2-0.3 + 10% artemia | Essence + Artemia |
| 8 | 0,059 | 95% 0.2-0.3 + 5% artemia | Essence + Artemia |
| 9 | 0,076 | 75% 0.2-0.3 + 25% 0.3-0.5 | Essence + Advance |
| 10 | 0,098 | 50% 0.2-0.3 + 50% 0.3-0.5 | Essence + Advance |
| 11 | 0,122 | 25% 0.2-0.3 + 75% 0.3-0.5 | Essence + Advance |
| 12 | 0,151 | 0.3-0.5 | Advance |
| 13 | 0,184 | 0.3-0.5 | Advance |
| 14 | 0,221 | 0.3-0.5 | Advance |
| 15 | 0,26 | 0.3-0.5 | Advance |
| 16 | 0,31 | 0.3-0.5 | Advance |
| 17 | 0,36 | 0.3-0.5 | Advance |
| 18 | 0,42 | 0.3-0.5 | Advance |
| 19 | 0,48 | 0.3-0.5 | Advance |
| 20 | 0,55 | 0.3-0.5 | Advance |
| 21 | 0,63 | 0.5-0.8 | Advance |
| 22 | 0,71 | 0.5-0.8 | Advance |
| 23 | 0,80 | 0.5-0.8 | Advance |
| 24 | 0,90 | 0.5-0.8 | Advance |
| 25 | 1,0 | 0.5-0.8 | Advance |
| 26 | 1,1 | 0.5-0.8 | Advance |
| 27 | 1,2 | 0.5-0.8 | Advance |
| 28 | 1,4 | 0.5-0.8 | Advance |
| 29 | 1,5 | 0.5-0.8 | Advance |
| 30 | 1,6 | 0.5-0.8 | Advance |
| 31 | 1,8 | 0.8-1.2 | Advance |
| 32 | 2,0 | 0.8-1.2 | Advance |
| 33 | 2,1 | 0.8-1.2 | Advance |
| 34 | 2,3 | 0.8-1.2 | Advance |
| 35 | 2,5 | 0.8-1.2 | Advance |
| 36 | 2,7 | 0.8-1.2 | Advance |
| 37 | 2,9 | 0.8-1.2 | Advance |
| 38 | 3,2 | 0.8-1.2 | Advance |
| 39 | 3,4 | 0.8-1.2 | Advance |
| 40 | 3,7 | 0.8-1.2 | Advance |
| 41 | 3,9 | 1,0 | Start Premium |
| 42 | 4,2 | 1,0 | Start Premium |
| 43 | 4,5 | 1,0 | Start Premium |
| 44 | 4,8 | 1,0 | Start Premium |
| 45 | 5,1 | 1,0 | Start Premium |
| 46 | 5,4 | 1,0 | Start Premium |
| 47 | 5,8 | 1,0 | Start Premium |
| 48 | 6,1 | 1,0 | Start Premium |
| 49 | 6,5 | 1,5 | Start Premium |
| 50 | 6,9 | 1,5 | Start Premium |
| 51 | 7,3 | 1,5 | Start Premium |
| 52 | 7,7 | 1,5 | Start Premium |
| 53 | 8,1 | 1,5 | Start Premium |
| 54 | 8,6 | 1,5 | Start Premium |
| 55 | 9,0 | 1,5 | Start Premium |
| 56 | 9,5 | 1,5 | Start Premium |
| 57 | 10,0 | 1,5 | Start Premium |

* The actual feed rate must be based on the appetite of the fry.

* The fry should ideally be fed 6 times per day e.g. 8.00 hr, 11.00 hr, 14.00 hr, 17.00 hr, 20.00 hr, 23.00 hr.

Feeding table for Grow-out:

Based on an optimal water quality and a water temperature of 26-28 °C

Feeding level for optimal FCR

| Feeding days | Average weight (g) | Feed level (%BW/day) | Feed size (mm) |
|--------------|--------------------|----------------------|----------------|
| 0 | 10 | 5,62 | 1.5 |
| 1 | 11 | 5,59 | 1.5 + 2.0 |
| 2 | 12 | 5,57 | 1.5 + 2.0 |
| 3 | 13 | 5,55 | 2.0 |
| 4 | 15 | 5,51 | 2.0 |
| 5 | 16 | 5,47 | 2.0 |
| 6 | 18 | 5,44 | 2.0 |
| 7 | 19 | 5,40 | 2.0 |
| 14 | 35 | 4,99 | 2.0 |
| 21 | 58 | 4,48 | 3.0 |
| 28 | 90 | 4,04 | 3.0 |
| 35 | 132 | 3,61 | 3.0 |
| 42 | 184 | 3,16 | 4.5 |
| 49 | 242 | 2,74 | 4.5 |
| 56 | 305 | 2,37 | 4.5 |
| 63 | 372 | 2,08 | 4.5 |
| 70 | 441 | 1,87 | 4.5 / 6.0 |
| 77 | 514 | 1,70 | 4.5 / 6.0 |
| 84 | 589 | 1,57 | 4.5 / 6.0 |
| 91 | 669 | 1,50 | 4.5 / 6.0 |
| 98 | 754 | 1,43 | 4.5 / 6.0 |
| 105 | 845 | 1,36 | 4.5 / 6.0 |
| 112 | 940 | 1,30 | 4.5 / 6.0 |
| 119 | 1040 | 1,24 | 4.5 / 6.0 |
| 126 | 1144 | 1,18 | 4.5 / 6.0 |
| 133 | 1251 | 1,12 | 4.5 / 6.0 |
| 140 | 1361 | 1,06 | 4.5 / 6.0 |
| 147 | 1473 | 1,02 | 4.5 / 6.0 |
| 154 | 1589 | 0,97 | 4.5 / 6.0 |
| 161 | 1706 | 0,92 | 4.5 / 6.0 |
| 168 | 1826 | 0,89 | 4.5 / 6.0 |
| 175 | 1948 | 0,86 | 4.5 / 6.0 |
| 178 | 2000 | 0,84 | 4.5 / 6.0 |

* This feeding protocol is only a guideline.

- Artemia replacer
- High survival
- Supports bone development



COMPOSITION:

Analyses (%)

| | | Sizes |
|-------------|------|------------|
| Protein | 45 | 0.2-0.3 mm |
| Fat | 11 | 0.3-0.5 mm |
| Crude fibre | 1,0 | 0.5-0.8 mm |
| Ash | 7,8 | |
| Total P | 2,10 | |

Vitamins added

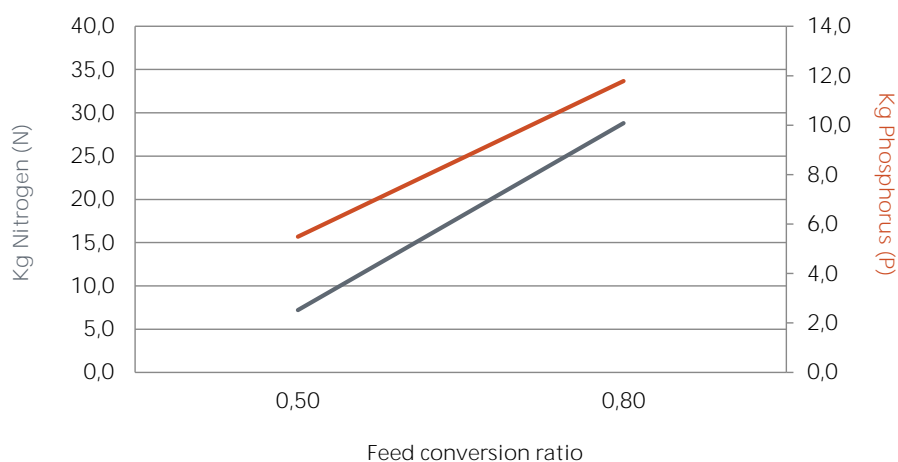
| | |
|-------------------|-------|
| Vitamin A (IE/kg) | 14000 |
|-------------------|-------|

Energy (MJ/kg)

| | |
|-------------------|------|
| Gross Energy | 20,1 |
| Digestible Energy | 17,7 |

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



The values of the nutrients and vitamins are from the time of writing.

These values can vary due to natural variation in the ingredients. We reserve the right to change our recipe.

For the exact values we refer to the label.

- High performance
- High survival



COMPOSITION:

Analyses (%)

| | | |
|-------------|------|------------|
| Protein | 56 | Sizes |
| Fat | 15 | 0.2-0.3 mm |
| Crude fibre | 0,3 | 0.3-0.5 mm |
| Ash | 11,6 | 0.5-0.8 mm |
| Total P | 1,75 | 0.8-1.2 mm |

Vitamins added

| | |
|-------------------|-------|
| Vitamin A (IE/kg) | 14000 |
|-------------------|-------|

Energy (MJ/kg)

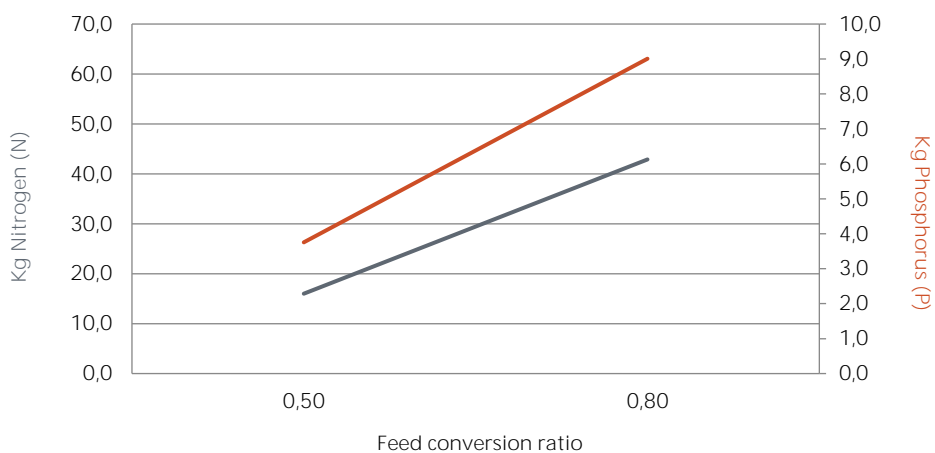
| | |
|-------------------|------|
| Gross Energy | 21,0 |
| Digestible Energy | 19,1 |

* The feeding advice is expressed in % biomass/day.

* This feeding table is a guideline only and based on optimal conditions.

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



The values of the nutrients and vitamins are from the time of writing.

These values can vary due to natural variation in the ingredients. We reserve the right to change our recipe.

For the exact values we refer to the label.

- Mini pellet
- High protein level
- High performance



COMPOSITION:

Analyses (%)

| | | | |
|-------------|------|-------|--------|
| Protein | 54 | Sizes | 1.0 mm |
| Fat | 15 | | 1.5 mm |
| Crude fibre | 0,3 | | |
| Ash | 11,4 | | |
| Total P | 1,77 | | |

Vitamins added

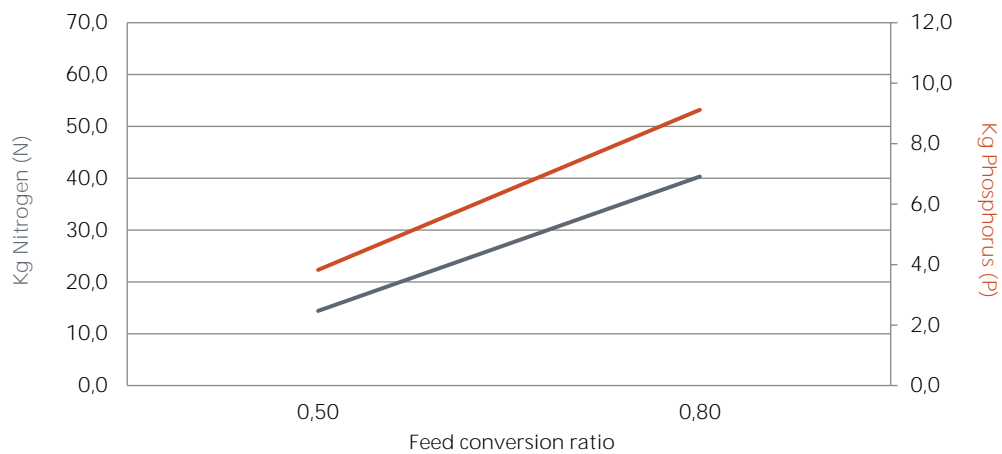
| | |
|-------------------|-------|
| Vitamin A (IE/kg) | 12000 |
|-------------------|-------|

Energy (MJ/kg)

| | |
|-------------------|------|
| Gross Energy | 20,9 |
| Digestible Energy | 18,9 |

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



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For the exact values we refer to the label.

- High performance
- Very palatable
- Optical feeding control



COMPOSITION:

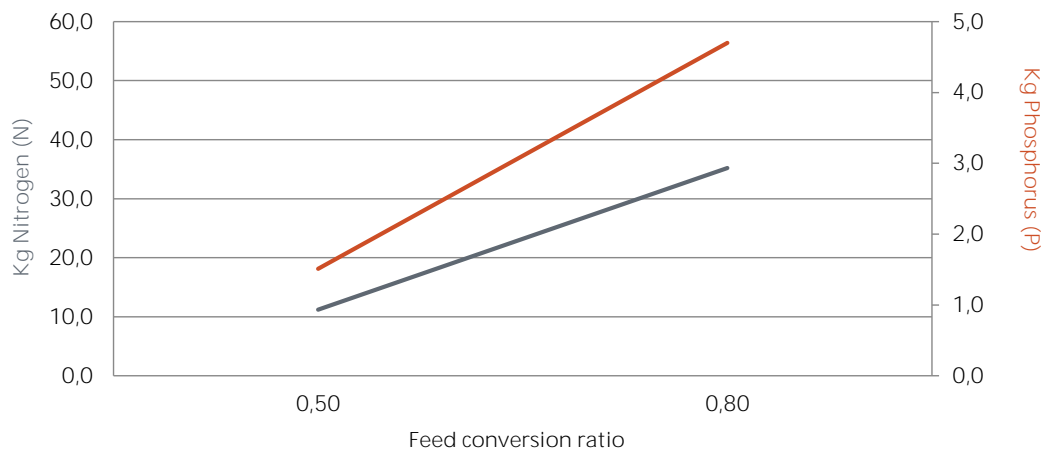
| Analyses (%) | | Sizes |
|--------------|------|--------|
| Protein | 50 | 2.0 mm |
| Fat | 15 | |
| Crude fibre | 0,5 | |
| Ash | 7,5 | |
| Total P | 1,11 | |

| Vitamins added | |
|-------------------|-------|
| Vitamin A (IE/kg) | 11000 |

| Energy (MJ/kg) | |
|-------------------|------|
| Gross Energy | 21,3 |
| Digestible Energy | 19,3 |

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



The values of the nutrients and vitamins are from the time of writing.

These values can vary due to natural variation in the ingredients. We reserve the right to change our recipe.

For the exact values we refer to the label.

- Semi-intensive farming
- Good performance
- Very palatable
- Optical feeding control



COMPOSITION:

| Analyses (%) | | Sizes |
|--------------|------|--------|
| Protein | 42 | 3.0 mm |
| Fat | 13 | 4.5 mm |
| Crude fibre | 2,3 | 6.0 mm |
| Ash | 12,5 | |
| Total P | 1,33 | |

Vitamins added

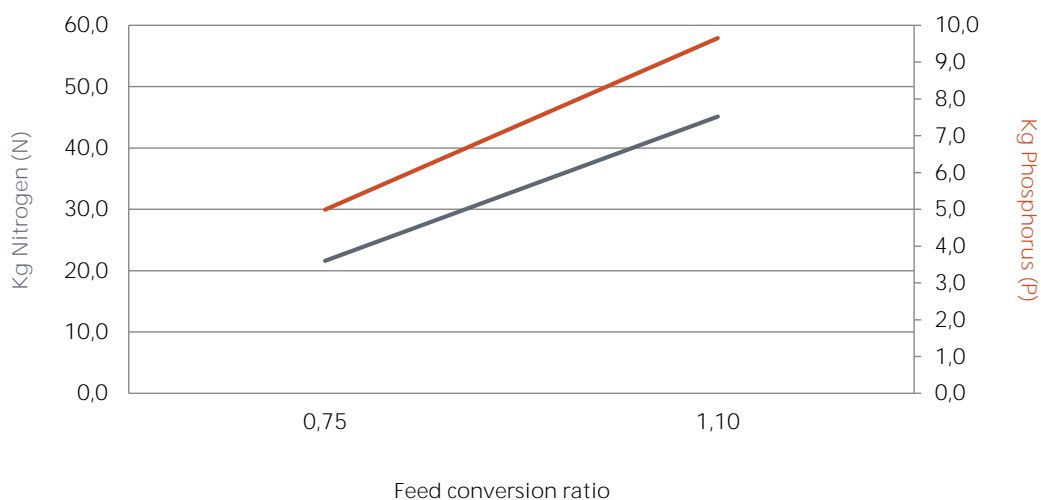
| | |
|-------------------|-------|
| Vitamin A (IE/kg) | 10000 |
|-------------------|-------|

Energy (MJ/kg)

| | |
|-------------------|------|
| Gross Energy | 19,5 |
| Digestible Energy | 16,2 |

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



The values of the nutrients and vitamins are from the time of writing.

These values can vary due to natural variation in the ingredients. We reserve the right to change our recipe.

For the exact values we refer to the label.

- Fast and efficient growth
- Very palatable
- High water quality
- Optical feeding control



COMPOSITION:

| Analyses (%) | 3.0 mm | 4.5 mm |
|--------------|--------|--------|
| Protein | 48 | 42 |
| Fat | 13 | 13 |
| Crude fibre | 1,4 | 1,6 |
| Ash | 9,4 | 7,9 |
| Total P | 1,35 | 1,13 |

Vitamins added

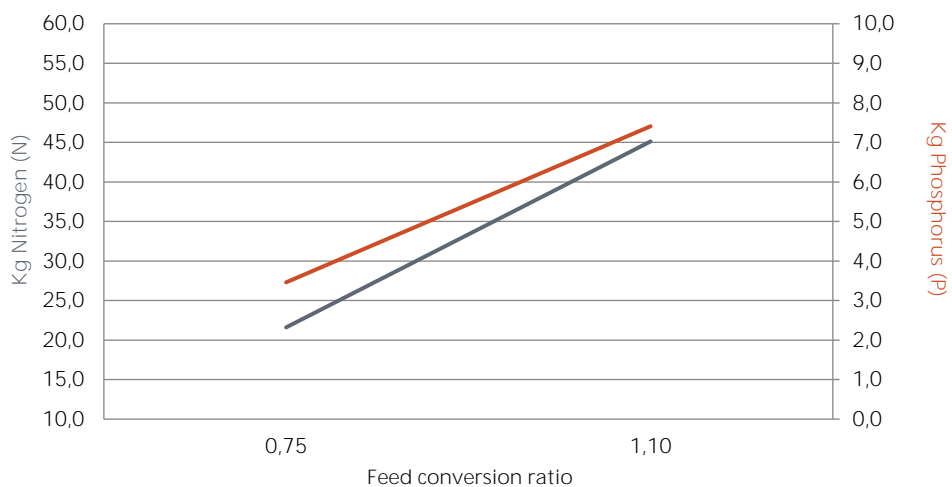
| | | |
|-------------------|-------|-------|
| Vitamin A (IE/kg) | 10000 | 10000 |
|-------------------|-------|-------|

Energy (MJ/kg)

| | | |
|-------------------|------|------|
| Gross Energy | 20,1 | 19,7 |
| Digestible Energy | 17,5 | 17,2 |

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



The values of the nutrients and vitamins are from the time of writing.

These values can vary due to natural variation in the ingredients. We reserve the right to change our recipe.

For the exact values we refer to the label.

- Broodstock diet
- Optimal egg development
- High egg quality and fry survival



COMPOSITION:

Analyses (%)

| | | Sizes |
|---------------------|------|--------|
| Protein | 48 | 6.0 mm |
| Fat | 15 | 9.0 mm |
| Crude fibre | 1,1 | |
| Ash | 10,1 | |
| Total P | 1,67 | |
| Astaxanthin (mg/kg) | 40,0 | |

Vitamins added

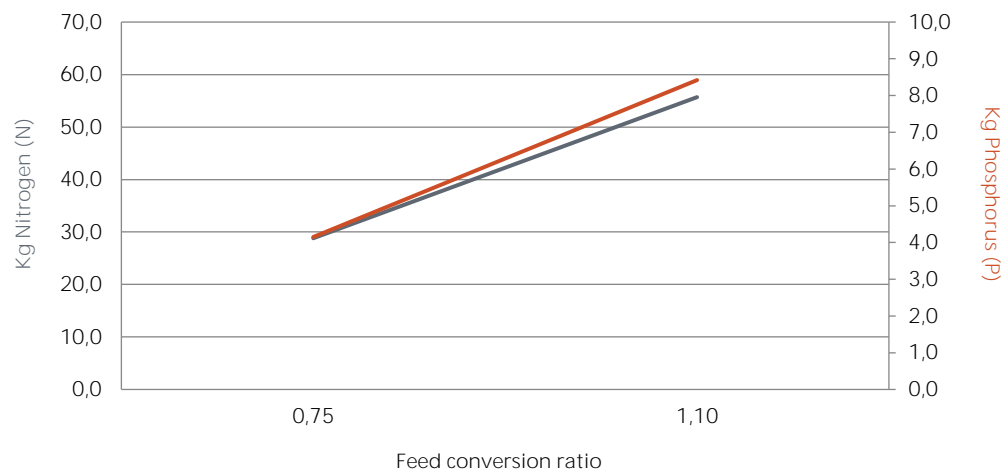
| | |
|-------------------|-------|
| Vitamin A (IE/kg) | 10000 |
|-------------------|-------|

Energy (MJ/kg)

| | |
|-------------------|------|
| Gross Energy | 20,1 |
| Digestible Energy | 17,9 |

ECOLOGICAL FIGURES:

Discharge per 1000 kg production



The values of the nutrients and vitamins are from the time of writing.

These values can vary due to natural variation in the ingredients. We reserve the right to change our recipe.

For the exact values we refer to the label.