## 2024 - 2025 **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.



# **AQUATE**<sup>TM</sup>

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**<sup>®</sup>

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**<sup>®</sup> contributes to mucous barrier protection.

#### **BIO-MOS®**

Improves intestinal function

AQUATE™

### **ACTIGEN®**

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

#### **ACTIGEN**<sup>®</sup>

Helps maintain the immune system TOTAL REPLACEMENT TECHNOLOGY®

**BIOPLEX®** 

Improves

performance

## **BIOPLEX**<sup>®</sup>

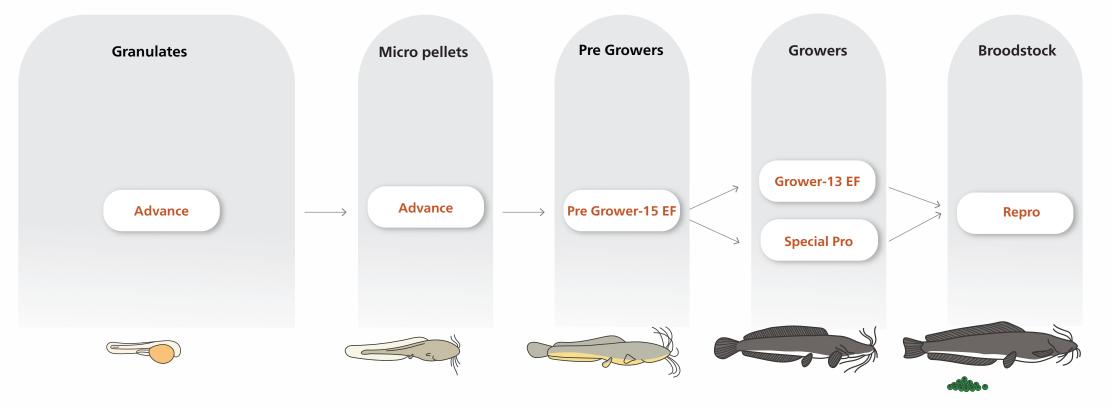
is a crucial element in our new premix. BIOPLEX<sup>®</sup> are organically bound trace elements such as zinc, copper, manganese & iron. With BIOPLEX<sup>®</sup> we can improve the health, growth & performance of the fish.

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).

Optimiz **Itech**<sup>®</sup> coppens









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	Average weight	Feed level	Feed size
days	(g)	(%BW/day)	(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.





Feeding protocol for African catfish fry: The fry are fed to near satiation (≥ 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	Average weight	Feed	Feed
days		size	
1	(g) 0.0025	Live feed	type Artemia
2	0.005	Live feed	Artemia
3	0.009	90% artemia + 10% 0.2-0.3	Artemia + Advance
4	0.015	75% artemia + 25% 0.2-0.3	Artemia + Advance
5	0.022	50% artemia + 50% 0.2-0.3	Artemia + Advance
6	0.032	75% 0.2-0.3 + 25% artemia	Advance + Artemia
7	0.044	90% 0.2-0.3 + 10% artemia	Advance + Artemia
8	0.059	95% 0.2-0.3 + 5% artemia	Advance + Artemia
9	0.076	75% 0.2-0.3 + 25% 0.3-0.5	Advance
10	0.098	50%% 0.2-0.3 + 50% 0.3-0.5	Advance
11	0.122	25% 0.2-0.3 + 75% 0.3-0.5	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 29	1.4	0.5-0.8	Advance
30	1.5	0.5-0.8	Advance Advance
30	1.8	0.5-0.8 0.5-0.8	Advance
32	2.0	1.0	Advance
33	2.0	1.0	Advance
34	2.3	1.0	Advance
35	2.5	1.0	Advance
36	2.7	1.0	Advance
37 38	2.9 3.2	1.0 1.0	Advance Advance
38	3.2	1.0	Advance
40	3.4	1.0	Advance
41	3.9	1.0	Advance
42	4.2	1.0	Advance
43	4.5	1.0	Advance
44	4.8	1.0	Advance
45	5.1	1.5	Advance
46	5.4	1.5	Advance
47	5.8	1.5	Advance
48	6.1	1.5	Advance
49	6.5	1.5	Advance
50	6.9	1.5	Advance
51	7.3	1.5	Advance
52	7.7	1.5	Advance
53	8.1	1.5	Advance
54	8.6	1.5	Advance
55	9.0	1.5	Advance
56	9.5	1.5	Advance
57	10.0	1.5	Advance

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

\* The fry should idealy 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.



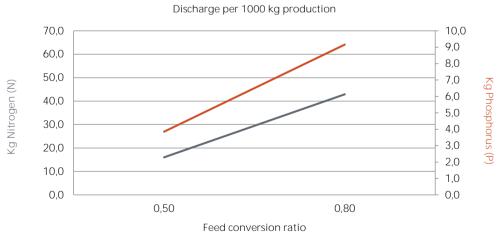
- For semi-intensive farming
- High performance
- High survival
- Medium energy starter diet



ADVANCE

	(	COMPOSITIC	DN:		
Analyses (%)	0.2-0.3 mm	0.3-0.5 mm	0.5-0.8 mm	1.0 mm	1.5 mm
Protein	56	56	56	54	54
Fat	15	15	15	15	15
Crude fibre	0,3	0,3	0,3	0,4	0,4
Ash	11,3	11,3	11,3	9,6	9,6
Total P	1,77	1,77	1,77	1,66	1,66
Vitamins added					
Vitamin A (IE/kg)	16667	16667	16667	11999	11999
Energy (MJ/kg)					

Energy (IVIJ/Kg)						
Gross Energy	21,2	21,2	21,2	21,0	21,0	
Digestible Energy	19,2	19,2	19,2	19,3	19,3	



### ECOLOGICAL FIGURES:

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

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



• High performance

Very pallatableOptical feeding control



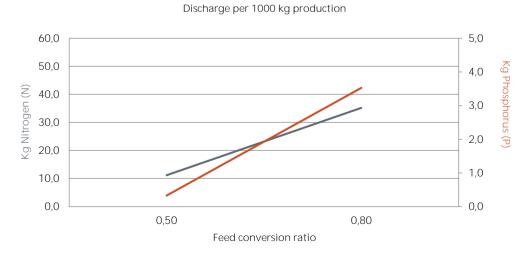
### COMPOSITION:

nalyses (%)		Sizes
rotein	50	2.0 mm
at	15	
rude fibre	0,7	
sh	6,3	
otal P	1,07	
itamins added		
itamin A (IE/kg)	11667	

#### Energy (MJ/kg)

0,		
Gross Energy	21,4	
Digestible Energy	19,0	





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

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#### • Semi-intensive farming

- Good performance
- Very pallatable
- Optical feeding control



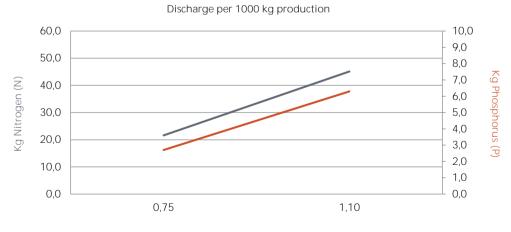


#### COMPOSITION:

Analyses (%)		Sizes	
Protein	42	3.0 mm	
Fat	13	4.5 mm	
Crude fibre	3,3	6.0 mm	
Ash	10,0		
Total P	1,03		
Vitamins added			
Vitamin A (IE/kg)	10000		

#### Energy (MJ/kg)

Gross Energy	19,5
Digestible Energy	15,8



#### ECOLOGICAL FIGURES:

Feed conversion ratio

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

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- Very pallatable
- High water quality
- Optical feeding control

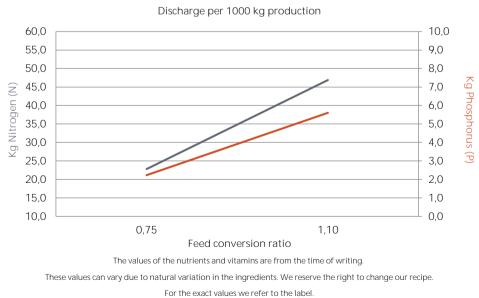


#### COMPOSITION:

Analyses (%)	3.0 mm	4.5 mm
Protein	48	43
Fat	13	14
Crude fibre	1,1	1,3
Ash	7,9	6,0
Total P	1,28	0,96
Vitamins added		
Vitamin A (IE/kg)	10003	10000

Energy (MJ/kg)				
Gross Energy	20,1	20,3		
Digestible Energy	17,4	17,5		









- 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	1,3	
Ash	10,5	
Total P	1,61	
Astaxanthin (mg/kg)	40	
Vitamins added		
Vitamin A (IE/kg)	25000	

Energy	(MJ/kg)
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Gross Energy	20,2	
Digestible Energy	17,6	

**ECOLOGICAL FIGURES:** 

