

Table 5.3. Composition and food conversion ratio (FCR) of feeds widely used in carp polyculture and their recommended proportion in balanced feeds of common carp (*Cyprinus carpio*)¹

Name of Feed	Dry Matter (%)	Digestible Protein	Crude fat	FCR	Proportion in feed of common carp (%)	
		%			Min.	Max.
Grains						
• Wheat	87	10	1	4-5	30	80
• Rye	87	9	1	4-5	-	20
• Barley	87	8	2	4-5	-	40
• Oat					-	20
• Maize	87	8	4	4.5	10	25
• Millet	87	8	4	4-5		
• Sorghum	87	6	3	4.5-5		
Legumes²						
• Pea	87	19	1	3-4	-	8
• Bean	87	20	1	3-4		
• Soybean	90	28	16	2-3		
• Lupine (sweet)	87	33	6	2.5-3	-	20
• Lupine (bitter)	87	30	5	2.5-3.5	-	10
By-products of milling and processing industry³						
• Wheat bran	87	10	2	8-10	-	15
• Wheat germ					-	5
• Wheat starch					-	3
• Rice bran					-	10
• Milk powder					-	2
• Mill sweeping	87	10	-	5-15		
• Extruded sunflower	90	16	16	3-6		
• Extruded soya (46-48)					5	25
• Fish oil					1	5
• Sunflower oil					-	5
• Soya oil					-	4
• Raw fish	20	16	-	6-10		
• Raw meat cuttings	23	19	-	6-15		
• Protein-rich meals						
• Fishmeal	88	44	2	2-3	-	35
• Meat meal	89	64	-	2-3		
• Blood meal					-	5
• Meat meal (58-62)					5	20
• Offal (liver, heart, lung, kidney)					-	40
Green feeds						
• Grass	30	2	4	20-30		
• Reed	28	1	-	20-70		
• Lucerne	24	3	-	15-25	-	10
• Clover	18	3	-	20-30		
Others						
• Nutrition lime					-	1
• Salt					-	0.5

¹Source: Antalfi and Tölg (1971); Tasnádi (1983); Horváth (2000); Hancz (2000, 2007).

²Dry pea, bean and lupines should be ground and/or soaked well before use. Soybean should be steamed, boiled or roasted before use.

³Use of raw fish and meat in aquaculture is banned in the European Union. Therefore, they should be processed (steamed, boiled, etc.) before feeding them to fish.