

FEEDING ADVISORY

The PFHBiPM Feeding Advisors Group specialises in helping farms by identifying optimal and modern solutions in the field of cattle nutrition and feed science. We always follow the actual needs of our clients. We diagnose the problem, depending on breeder's expectations and abilities, we offer individual remedial, corrective or informative actions. We are an independent and self-sufficient entity. We are not affiliated with any commercial feed company, our suggestions for nutritional solutions are fully objective.

We have been working for our clients for 10 years, since 2008. We base our work on knowledge of issues related to rearing and breeding, animal production, physiology and dairy cows health and welfare. We are reliable and professional, we have detailed specialist knowledge, practical experience and access to the best solutions beneficial to our customers. We work closely with animal feeding scientists. Thanks to this synergy and support, we achieve excellent results in our consulting work, we complement our competences, think and work innovatively. What is the most important, we share our developed experience with our clients.

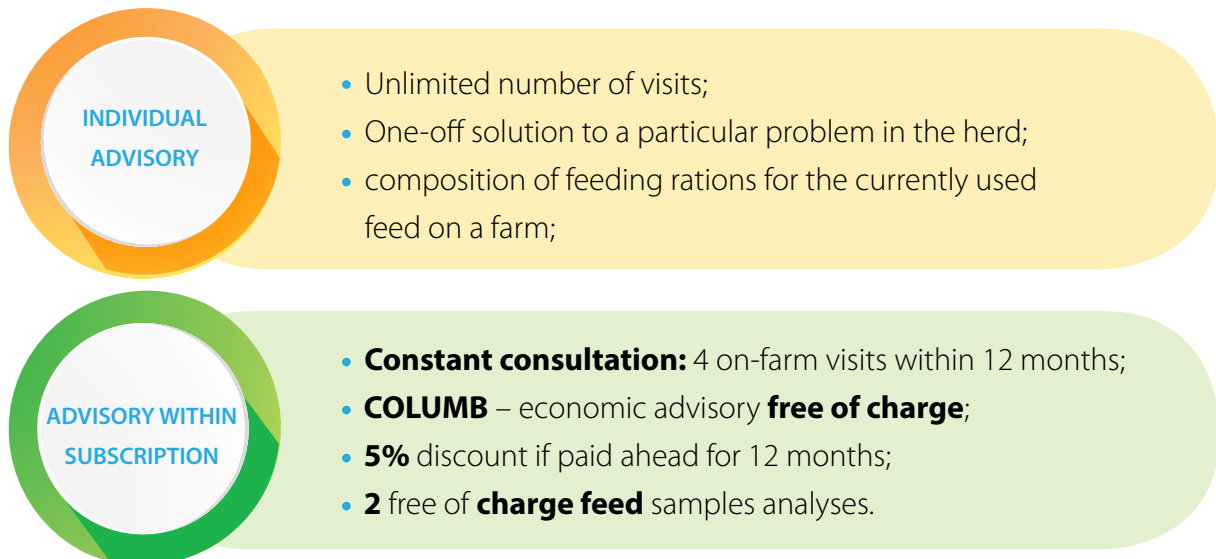
Our rules:

- Reliable evaluation of a farm conditions and animal potential, proposal of food rations based on available feeding base.
- Rational solutions and the highest efficiency of the service.
- Customer focus and respect for partners.
- Responsibility and work ethics.
- High level of competence, continuous improvement of skills and knowledge.
- Work with the support of computer programs like AMTS, INRA, COLUMB.
- Sharing our knowledge.
- High level of service, contact through direct visits on a farm, by phone, by e-mail.



2 ADVISORY MODELS - ONE-OFF SYSTEM AND SUBSCRIPTION

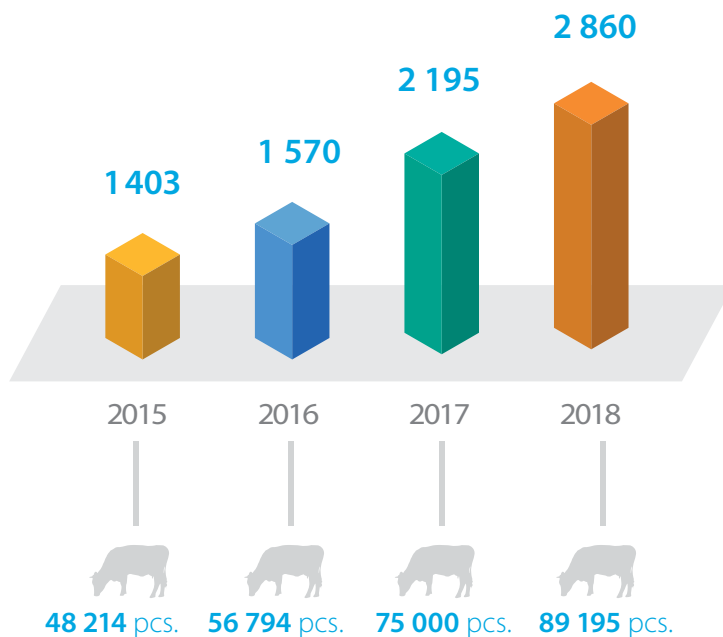
A BREEDER'S CHOICE



The main purpose of our service is to improve the production potential of dairy farms, and to make farmers aware that correct nutrition is crucial for the profitability of a herd. Thanks to our efforts, the number of breeders perceiving the benefits of cooperation with nutritional PFHBiPM's advisors grows year by year.

Figure 1. Summary of advisory services performed in 2018.



Chart 1. Advisory services in 2015-2018.

The above data show an increase in breeders' awareness and the importance of rational animal nutrition in the profitable running of cattle breeding.

PRACTICE MAKES A CHAMPION – 10 YEARS OF THE PFHBiPM'S FEEDING ADVISORY

Knowledge and skills are necessary to meet the tasks that have been set, but only practice and experience constitute the true value of an every profession. It is no different in the case of PFHBiPM's Feeding Advisors, who for more than a decade have been cooperating with breeders, and giving some advice on how to effectively feed dairy cows and produce high-quality forage. A lot has changed since the moment of launching the Group and the service.



Since 2008 the number of advisors has doubled, the tools they use have been improved, and, most importantly, „Nutritionists” earned the reputation of real professionals in their business. With a real pride, we can say that we have a team of outstanding specialists for whom the work is not only a profession, but also a real passion. The 10 years of existence of the Group of Feeding Advisors clearly showed how, we can change the picture of Polish herds, improve their profitability, take care of healthy and properly balanced animal feeding, with the help of knowledge and practice.

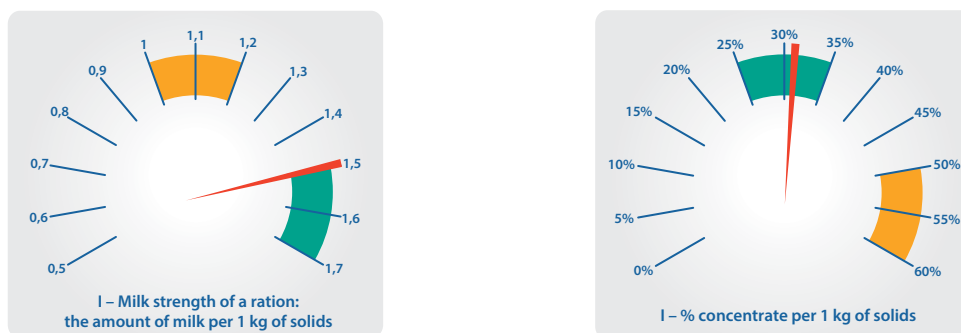
PROJECTS REALISED IN 2018

COLUMB

To discover a farm potential

Nutrition is a decisive factor in the profitability of a dairy farm. Production of roughage on the farm: its quality, value, yield; and the appropriate balance of the feeding ration are mainly responsible for profit or loss. Therefore, the monitoring of indicators characterising nutrition costs should be a constant element in an effective herd management. PFHBiPM's Feeding Advisors have created the first Polish program to calculate nutrition cost:

Figure 2. Farm economic indicators.



„Columb” - being developed by nutrition practitioners, allows quick analysis of a herd economic nutrition per lactation groups. Without unnecessary and complicated questionnaires and interviews, it clearly shows the key economic parameters of a feeding ration.

Chart 2. Daily gross profit (revenue minus feeding cost) 1 pcs.

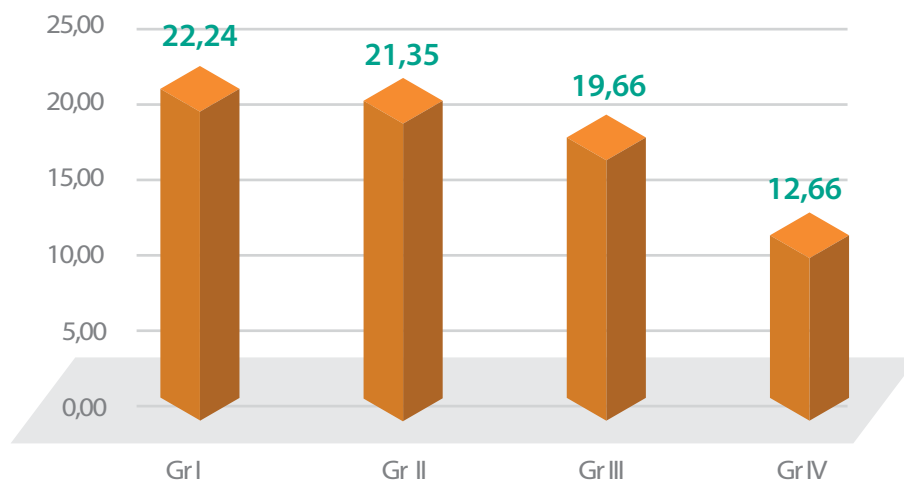
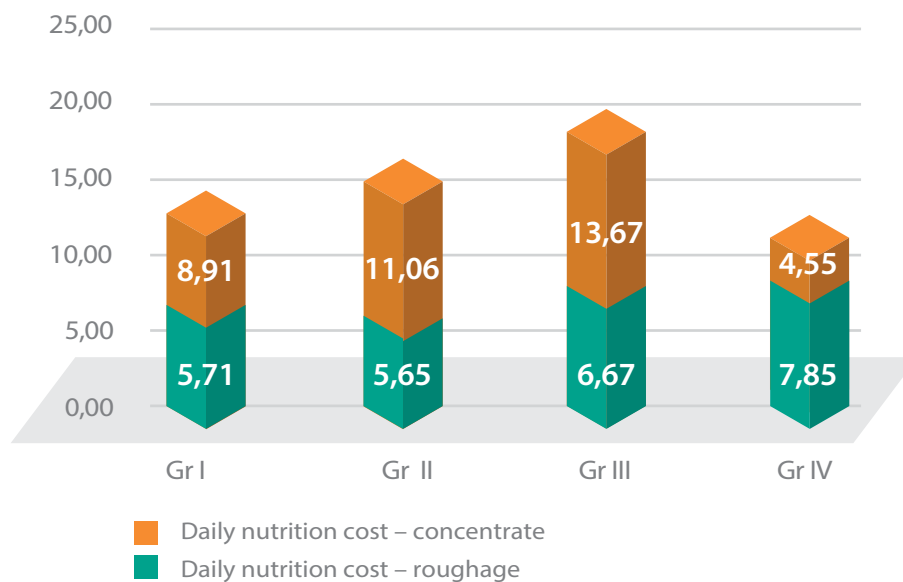


Chart 3. Daily nutrition cost.

INDEX "STADO" – Full Multidimensional Herd Rating

$$IS=0,15*PI_E+0,12*PI_M+0,25*PI_PŁ+0,15*PI_LKS+0,25*PI_WYD+0,08*PI_WYDŹIDŁW$$

Some parameters that are included in the Index	Herd I	Herd II
Annual productivity	9 870	9 100
First calving age	1 138	769
Calving interval	451	374
SCC	961	184
Life performance	20 500	30 111
Length of use (in years)	2,2	3,3
Index "STADO"	30,4	81,1

Nutritional practice shows that performance is not and can not be the only goal in a sustainable milk production. The full success is: high milk production while maintaining optimal fertility parameters (first calving age, calving interval), health (SCC, ketones) and correct protein and energy balance (protein and urea in milk).

Therefore, the PFHBiPM Feeding Advisors Group decided three years ago to develop an index that would take into account all key areas in a herd describing the level of management. And so the Index STADO was created - as a full multidimensional tool for a herd management assessment.

Areas described in the Index:

Area I: protein and energy balance

- The content of protein and urea per lactation groups
- The content of ketone bodies in milk (acetone, BHBA)

Area II: Health

- The content of somatic cells
- The content of ketone bodies in milk (acetone, BHBA)
- Longevity

Area III: Performance

- Milk yield in kg (yearly and lifespan)
- Fat and protein yield

Area IV: Fertility and calves and heifers rearing

- First calving age
- Calving interval



Chart 4. Index and sub-indexes values. Herd I - yield 9.870 kg of milk.

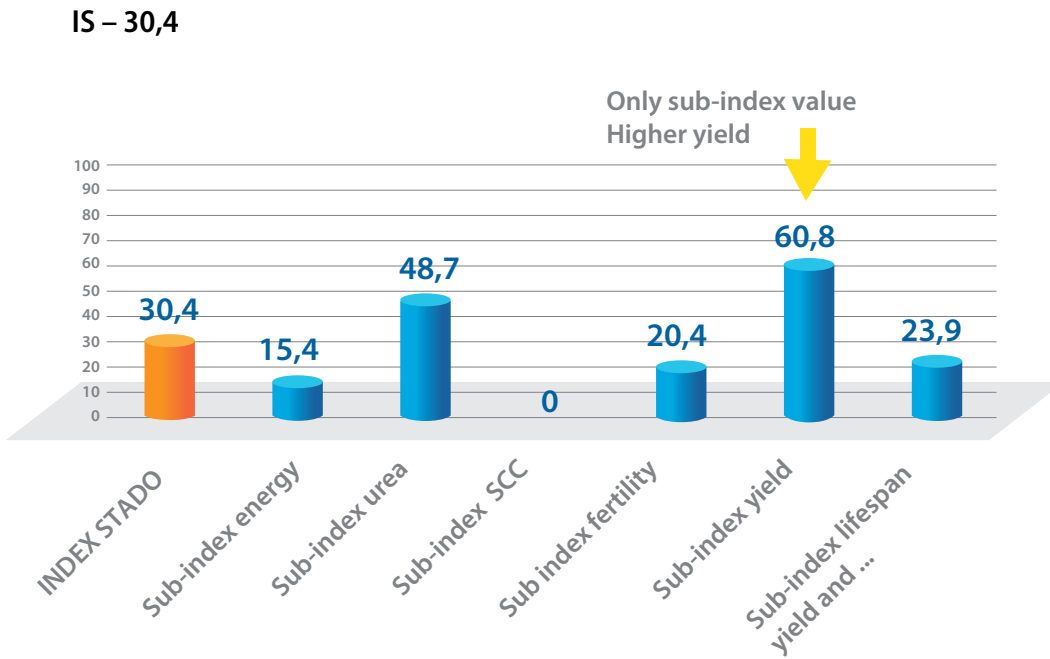
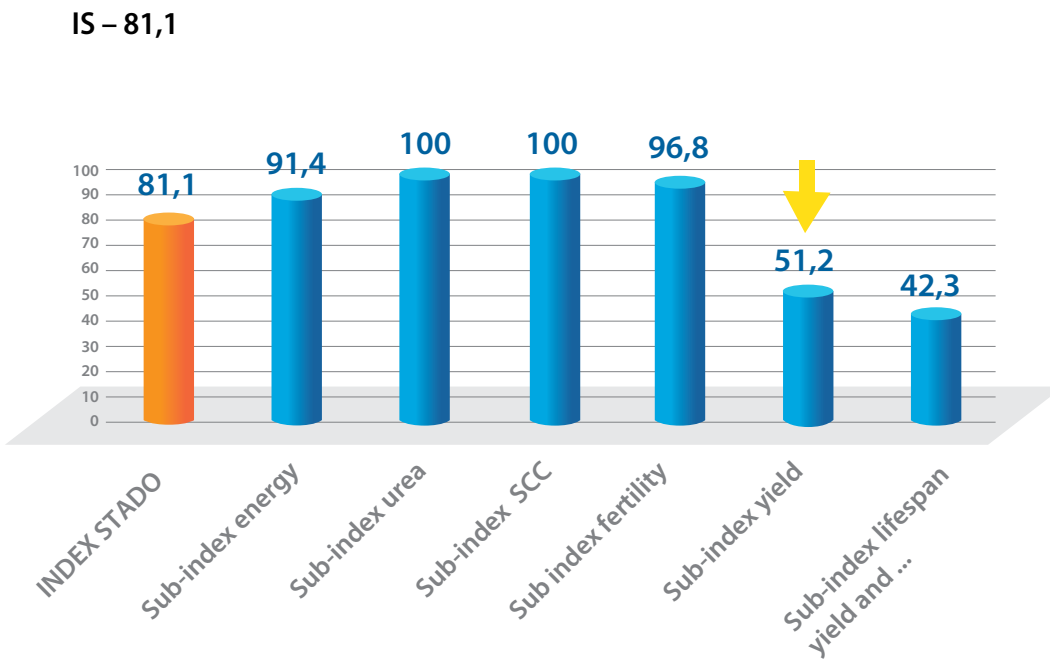


Chart 5. Index and sub-indexes values. Herd II – yield 9.100 kg of milk.



AMTS.Cattle.Pro

Since January, we have been working with this extremely useful program for managing nutrition in dairy and beef cattle herds. AMTS is based on NRC nutrition standards based on the CNCPS biological model. The program is extremely useful in the case of an efficient use of information from the fogare laboratory (macro and microelements Ca, P, Mg, K, S, Na, Cl), ADIN, organic acids, pH, N-ammonia, alcohol. It helps in metabolic diseases prevention, it also ensures better use of NDF fiber in the balance of the ration.

With AMTS:

- we are able to make a feeding ration for cows with a milk yield higher than 10.000 in 305-day lactation;
- we can determine the need for feed and water;
- we can determine the production costs related to feeding;
- we can determine the level of forage mycotoxins contamination risk;
- we are able to present all information in the form of interesting visualizations and multiraports.

Figure 3. Example report.

CNCPS wyliczone		AMTS.Cattle.Professional		
FBW: 650 kg		DL: 65	Wprowadzone 28,04 kg	
BCS (1-5): 2,80		Mleko: 40,0 kg/dzień	Przewidywane PSM ²⁰⁻⁴⁴ 23,19 kg	
Średni dobowy 0,030 kg/dzień		Tłuszcz w mleku: 4,20%	PSM ¹	
		Białko mleka: 3,12% (Prawda) / 3,35% (Crude)		
Koszt (zł): 16,29	Dochód ponad koszt paszy (IOFC) (zł):			
PSM (kg/dzień): 28,04	Model: 23,19		% Model: 120,9	
ME Bal (MJ): 10,7	BO (%): 16,6		aNDFom (%SM): 37,9	
MP bilans (g): 20,3	RUP (%BO): 38,0		NDF z pasz objętościowych (%NDF): 76,3	
NP/MP (%): 67,0	LCFA (%): 2,9		NDF z pasz objętościowych (%SM): 28,9	
Bact. MP (%MP): 53,49	TS- tłuszcz surowy (%): 4,1		peNDF (%): 26,9	
			Lignina (%SM): 4,1	
			Lignina (%NDF): 10,9	
Bilans N zwiącza		Bilans aminokwasów		NFC (%): 36,4
Pept (g): 240	Pept & NH3 (g): 117	MET (g): -5,5	LYS (g): -10,4	Kwasy z kiszzonek (%): 4,7
% Zapotrzebowania: 222	% Zapotrzebowania: 150	MET (%Rqd): 92	LYS (%Rqd): 95	Cukier (%): 3,4
		MET (%MP): 2,2	LYS (%MP): 6,5	Skrobia (%): 23,6
		LYS:MET: 2,95		Rozpuszczalne Włókno (%): 4,7
				Fermentujące CHO (%CHO): 60,29
				Fermentable CHO (%DM): 43,92
Produkcja ME & MP				
	Mleko (kg)	Tłuszcz (%)	TP (%)	SM Dawki (%): 42,44
Trg:	40,0	4,20	3,12	SM Kiszonki (%): 66,08
ME:	40,0	Nie dotyczy	Nie dotyczy	
MP:	40,4	Nie dotyczy	Nie dotyczy	



PFHBiPM FEEDING ADVISORY – ARKADIUSZ KAŻMIERCZAK

MAREK KULIŃSKI'S FARM

SIEDMIOROGÓW, WOJ. WIELKOPOLSKA

Marek and Renata Kulińscy run a farm in the village of Siedmiorogów, Gostyń county. They keep a herd of about 30 dairy cows and 12 young stock. Heifers are for herd replacement, and bulls are kept in a modernized tie stall barn and fed for fattening. The herd has been in milk recording since 2007. Virtually the whole arable land there is used for the cattle forage production. The crop

is dominated by maize for silage (8 ha), grass (4.5 ha), alfalfa (1.5 ha), sugar beets (5 ha), and the rest for cereals. The animals are kept in a modernized tie stall barn and fed with the TMR system. Feeding Advisor Arkadiusz Kazmierczak has been cooperating with the farm for more than 6 months.



„The most important thing was the independence of the advisor’s opinion. Only this approach can guarantee that he will take care for my herd objectively and take into account real feeding costs of my cows. Following his recommendations, I observed an increase in milk production as well as improvement in cows’ reproduction parameters. Although, as with working with cattle, it takes time for everything. The big advantage for me is the fact that advisor monitors my herd constantly. Even if we do not see each other personally in a given month, I can be sure that my herd MR reports are analysed by him. I do not cease cooperation because I know that there is still some work ahead of us and a few things that I would like to focus on” – sums up Marek.

„We started our work from dairy cows, because they are the farm economic foundation. The full service and inspection of the herd was carried out. We checked the structure of the TMR mixture, cows’ dung evaluation and condition score using the BCS method. Later, based on the silage analysis, performed in Forage Laboratory in Kobierno, we created ration for dairy cows on the farm. First, I always try to use all forage components available on the farm, in order to have maximum control over the ration cost. We have also begun work on changing heifers feeding ratio, who are prepared for herd replacement. Another focusing point is the organisation of dry-off and perinatal periods. In my opinion it is the most crucial period in the whole production cycle, that determines virtually the entire lactation of an animal” – adds the adviser PFHBiPM.

MR results comparison

	No. cows	Milk kg	F+P kg	Calving interval	First calving age
2016	24,8	9 948	711	445	772
2017	26,7	9 107	657	466	710
2018	29,2	9 963	701	447	712

