

FROM COLOSTRUM TO MATURE MILK: INSIGHT INTO NUTRITIONAL VALUES

While the first component of the colostrum (β -lactoglobulin) is produced around day 80 of gestation, the last week of pregnancy is very important for colostrum production.

Most of the colostrum is produced before birth, while transitional milk and mature milk are produced after birth.

There are major differences in the compositions of the sow's different **mammary secretions**. The proportions of its different components substantially and quickly **change**. The biggest difference in sow colostrum and mature milk is the concentrations of macronutrients and immunoglobulins.

In addition to providing energy, the protein portion of colostrum serves other purposes, including the **transfer of immunity** (immunoglobulins) and **stimulation of growth**.

The most pronounced changes in the protein fraction occur during the transition from early to late colostrum.

Late colostrum and transitional milk have higher nutritional (energy) values than early colostrum because they have a higher fat and lactose content.

		Early colostrum	Mid colostrum	Late colostrum	Transitional milk		Mature milk
	Time postpartum	0 h	12 h	24 h	36 h	72h	17 days
Chemical composition (g/100g)	Fat	5.1	5.3	6.9	9.1	9.8	8.2
	Protein	17.7	12.2	8.6	7.3	6.1	4.7
	Lactose	3.5	4.0	4.4	4.6	4.8	5.1
	Dry matter	27.3	22.4	20.6	21.4	21.2	18.9
Energy (kJ/100g)		260	276	346	435	468	409

Theil P.K., Lauridsen, Quesnel H. Neonatal piglets survival: impact of sow nutrition around parturition on fetal glycogen deposition and production and composition of colostrum and transient milk. *Animal*. 8(2014), pp. 1021-1030

