

STANDARD GROSS MARGIN FOR CATTLE

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Abstract

Standard Gross Margin (SGM) of agricultural activities (crops or animal species) is the gross product of the activity (GP) minus corresponding specific costs directly proportional (standard) (SCD). SGM is unitary (per hectare, per animal) and expressed in RON or Euro. Standard gross margin value for cattle was calculated for two production levels, as follows: for cow's milk - 5000 and 6000 l / head / year, respectively; for young cattle for meat - 950 and 1200 g gain / head / day, respectively.

Gross margin share in gross product for milk production of 5000 l / head, is 28.58% and for 6000 l / head increases to 35.53%; for young cattle meet, the share of gross margin in gross product, for the first variant of growth is 15.48%, the second version is 23.78%.

Keywords: *Standard Gross Margin, cow's milk, young cattle meet, gross product, variable costs.*

Introduction

To facilitate the analysis of economic results achieved in agricultural activities carried out and structural characteristics of farms in our country, it is necessary to apply the Community methodology for determining the Standard Gross Margin (SGM), as a scientific support for technical and economic orientation of agricultural farms. Standard Gross Margin is an economic criterion, expressed in monetary terms, per hectare, for crop production, or per head, for animal production.

Standard Gross Margin (SGM) of agricultural activities (crops or animal species) is the **gross product** of the activity (**GP**) minus corresponding **specific costs directly proportional (variable) (SVC)**. SGM is unitary (per hectare, per animal) and expressed in RON or Euro, as follows:

$$\text{SGM} = \text{GP} - \text{SVC}$$

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Gross product (GP) of an activity includes: primary and secondary production value priced delivery - loco manufacturer, plus subsidies to business. The data used to calculate the total production value and specific variable costs, meet a production period of 12 months (either calendar year or agricultural production year). If the period of crop and animal production is more or less than 12 months, it must be transformed to represent a period of 12 months.

Specific costs directly proportional (variable) are directly linked to the specific activity and according to **Commission Decision 85/377/EEC** represent some of variable production costs that can be allocated directly to certain categories of crops or animal species eg seed, fertilizers, pesticides, feed, drugs, etc. Other variable costs such as fuel and lubricants, equipment and machinery maintenance and works with third parties are not included in variable expenses to calculate specific SGM.

Material and methods

In animal breeding, standard gross margin is calculated per capita, for adult animals and per built place for animal fattened, for each species and each category of animals of interest to obtain the efficiency of their production.

The standard gross margin calculation for cattle (dairy cows and young cattle for fattening) is based on the following technical and economic indicators:

- The average main production:*
 - liters of milk / head / year;
 - increase weight g / day;
- Secondary production:*
 - for dairy cows - calves, manure and meat from reform;
 - for young cattle for fattening - manure;
- Gross product:*
 - the result of adding primary and secondary production value of subsidies allocated per product and per animal, taken from the product budget;
- Variable specific costs:*
 - taken from the product budget, deducted from gross product value:
 - feed costs;
 - costs with biological material;
 - energy and fuel costs;
 - drugs and veterinary material costs;
 - other material costs;
 - insurance costs.

Results and discussion

Based on the above indicators, was obtained the gross margin as the difference between the gross product value and specific variable costs and standard gross margin share in the gross product. Standard gross margin value for cattle was calculated for two production levels, as follows: for cow's milk - 5000 and 6000 l / head / year, respectively (Tables 1 and 2); for young cattle for meat - 950 and 1200 g gain / head / day, respectively (Tables 3 and 4).

Table 1. Standard Gross Margin - unitary for cow's milk - the average production 5000 l / head

STANDARD GROSS MARGIN - UNITARY				
SPECIFICATION	l/head	Delivery price RON/l	RON	Euro (1Euro = 4,3 RON)
Average main production	5000	1,50	7500,00	1744,19
Secondary production			910,00	211,63
Gross product RON	Per head	per liter	Euro/head	Euro/l
	8825	1,77	2052,33	0,41
Subsidies RON	410,00	0,08	95,35	0,02
Variable costs RON	6302,60	1,26	1465,72	0,29
Gross margin RON	2522,40	0,50	586,60	0,12
Gross margin share in raw product%	28,58			
Variable costs	Quantity kg/head	Price RON/kg fodder	Total RON	Euro
Hay	1600	0,75	1200,00	279,07
Soilage	10800	0,15	1620,00	376,74
Succulent forages	4400	0,16	704,00	163,72
Concentrated feed	1100	1,00	1100,00	255,81
Bran	360	0,80	288,00	66,98
Roughage	420	0,14	58,8	13,67
Salt	40	0,34	13,60	3,16
Biologic material			866,70	201,56
Energy and fuel			127,20	29,58
Drugs and vet material			105,00	24,42
Other materials			150,00	34,88
Insurance			69,30	16,12
Total variable costs	x		6302,60	1465,72

Source: Own calculations

Table 2. Standard Gross Margin - unitary for cow's milk - the average production 6000 l / head

STANDARD GROSS MARGIN - UNITARY				
SPECIFICATION	l/head	Delivery price RON/l	RON	Euro (1Euro=4,3 RON)
Average production main	6000	1,50	9000,00	2093,02
Secondary production			910,00	211,63
Gross product RON	Per head	per liter	Euro/head	Euro/l
	10325	1,72	2401,16	0,40
Subsidies RON	410,00	0,07	95,35	0,02
Variable costs RON	6656,90	1,33	1548,12	0,31
Gross margin RON	3668,10	0,39	853,05	0,09
Gross margin share in raw product%	35,53			
Variable costs	Quantity kg/head	Price RON/kg fodder	Total RON	Euro
Hay	1600	0,75	1200,00	279,07
Soilage	10800	0,15	1620,00	376,74
Succulent forages	4200	0,16	672,00	156,28
Concentrated feed	1300	1,10	1430,00	332,56
Bran	500	0,80	400,00	93,02
Salt	40	0,34	13,60	3,16
Biologic material			866,70	201,56
Energy and fuel			130,30	30,30
Drugs and veterinary material			105,00	24,42
Other materials			150,00	34,88
Insurance			69,30	16,12
Total variable costs	x		6656,90	1548,12

Source: Own calculations

Table 3. Standard Gross Margin – unitary for young cattle meat - the average production 950 g / head / day

STANDARD GROSS MARGIN - UNITARY				
SPECIFICATION	Kg live weight / head	Delivery price RON/kg	RON	Euro (1Euro=4,3 RON)
Average main production 950 g/day	450	7,50	3375,00	784,88
Secondary production			90,00	20,93
Gross product RON	Per head	per kg	Euro/head	Euro/kg
	3465	7,70	805,81	1,79
Subsidies RON	0,00	0,00	0,00	0,00
Variable costs RON	2928,46	6,51	681,04	1,51
Gross margin RON	536,54	1,19	124,78	0,28
Gross margin share in raw product%	15,48			
Variable costs	Quantity kg/ head	Price RON/kg fodder	Total RON	Euro
Hay	375	0,75	281,25	65,41
Soilage	2465	0,15	369,75	85,99
Succulent forages	1985	0,16	317,60	73,86
Concentrated feed	1104	0,95	1048,80	243,91
Roughage	184	0,14	25,76	5,99
Biologic material			700,00	162,79
Energy and fuel			96,30	22,40
Drugs and veterinary material			18,00	4,19
Other materials			15,00	3,49
Insurance			56,00	13,02
Total variable costs	x		2928,46	681,04

Source: Own calculations

Table 4. Standard Gross Margin – unitary for young cattle meat - the average production 1200 g / head / day

STANDARD GROSS MARGIN - UNITARY				
SPECIFICATION	Kg live weight / head	Delivery price RON/kg	RON	Euro (1Euro=4,3 RON)
Average main production 1200 g/day	450	7,50	3375,00	784,88
Secondary production			90,00	20,93
Gross product RON	Per head	per kg	Euro/head	Euro/kg
	3465	7,70	805,81	1,79
Subsidies RON	0,00	0,00	0,00	0,00
Variable costs RON	2641,00	5,87	614,19	1,36
Gross margin RON	824,00	1,83	191,63	0,43
Gross margin share in raw product%		23,78		
Variable costs	Quantity kg/ head	Price RON/kg fodder	Total RON	Euro
Hay	294	0,75	220,50	51,28
Soilage	2044	0,15	306,60	71,30
Succulent forages	1620	0,16	259,20	60,28
Concentrated feed	1000	0,98	980,00	227,91
Biologic material			700,00	162,79
Energy and fuel			85,70	19,93
Drugs and veterinary material			18,00	4,19
Other materials			15,00	3,49
Insurance			56,00	13,02
Total variable costs	x		2641,00	614,19

Source: Own calculations

Conclusions

For cow's milk (5000 l / head), at a gross product of 8825 RON / head / year and a level of specific variable costs of 6302.6 RON / head / year, standard gross margin is € 586.6 / head, ie € 0.12 / l (1 € = 4.3 RON).

At a higher level of production of cow's milk (6000 l / head / year), increase the gross product at 10 325 RON / head and the specific variable costs 6656.9 RON / head. Standard gross margin increases to 45.4% per head, reaching 3668.1 RON / head, respectively € 853.05 / head.

Gross margin share in gross product for milk production of 5000 l / head, is 28.58% and for 6000 l / head increases to 35.53%.

At the meat of young cattle (950 g / head / day), for a gross product of 3465 RON / head / year and for a specific level of variable costs of 2928.46 RON / head / year, standard gross margin is 124,78 € / head, respectively 0.28 € / kg live weight.

For an average daily increase of 1200 g / head, standard gross margin increased by 53.6% to 191.63 € / head, respectively 0.43 € / kg live weight.

The share of gross margin in gross product, the first variant of growth is 15.48%, the second version is 23.78%.

Literature

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