

Consequences of different national ZP equations in EU to estimate lean meat content in pig carcasses

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BASIS OF PIG CARCASS GRADING



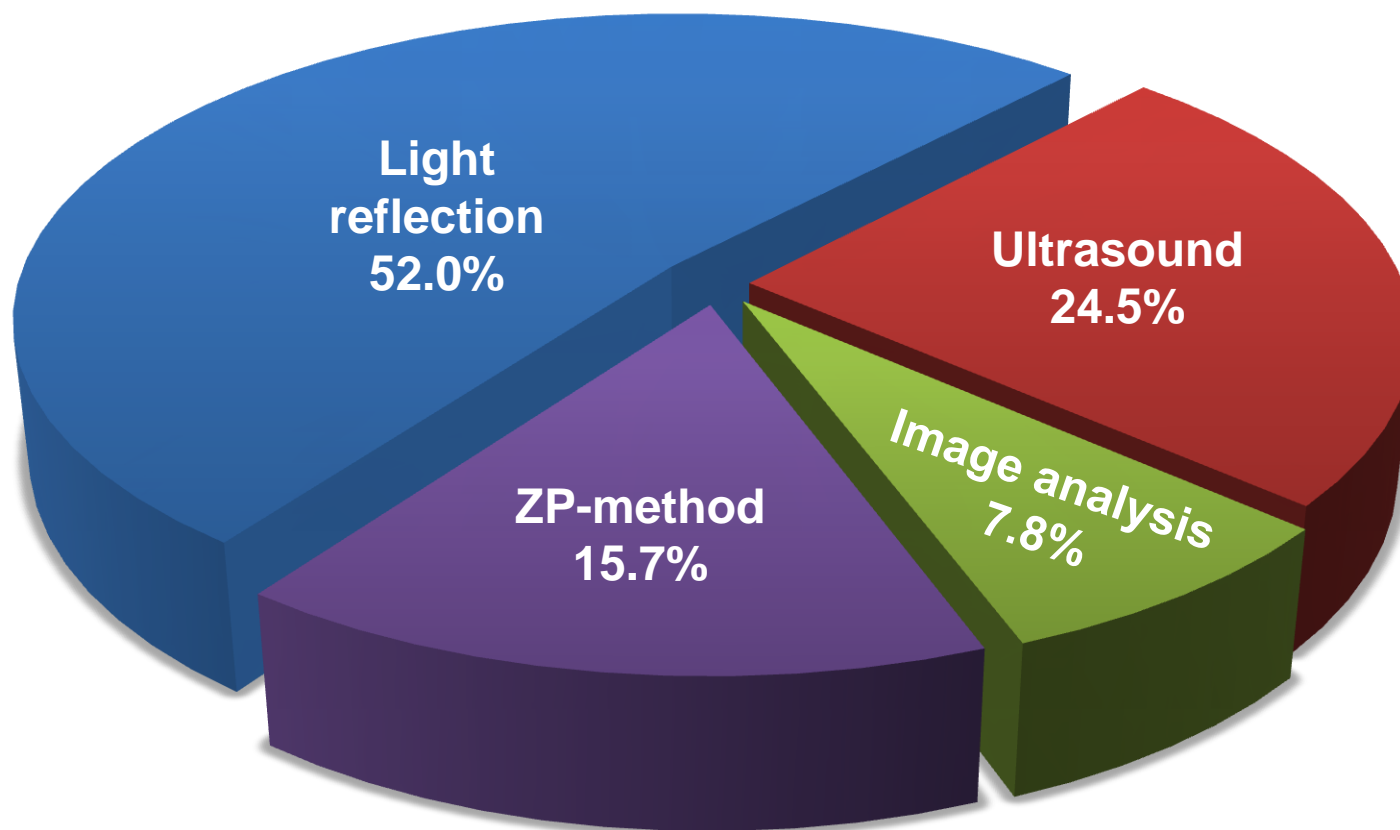
UE REG. 1234/2007

UE REG. 1249/2009 (rules of implementation...)

MAIN PRINCIPLES

- Criteria: evaluation of lean meat content in the carcass
- Based objective measurements
- Representative sample of the population
- Required constraints of error
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TECHNOLOGIES APPROVED FOR PIG CARCASS GRADING USED IN EU (2013)



Number of countries with approved ZP method

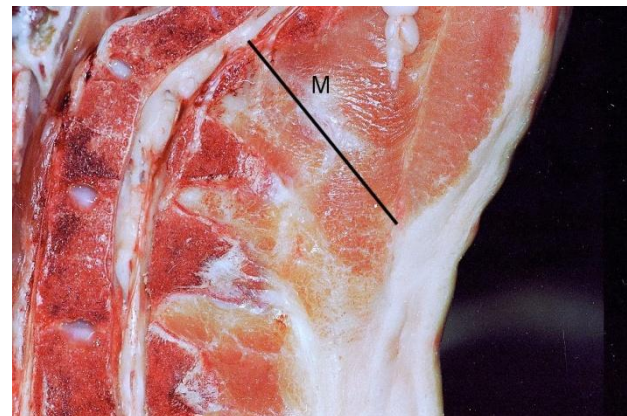
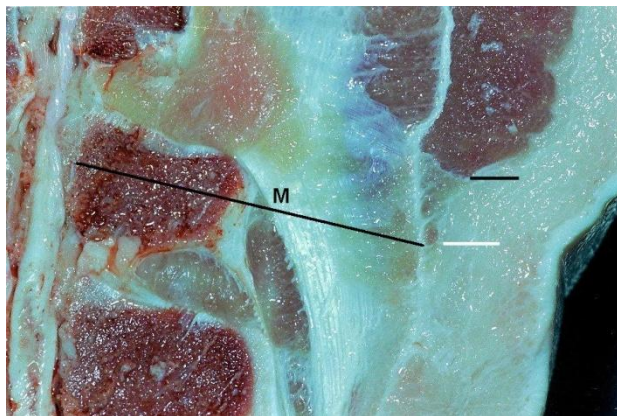
Ruler	11
Optiscan-TP	4
MD02	1

METHOD ZP (small abattoirs)

F-ZP: Shortest measurement of fat+skin thicknesses over *gluteus medius* m.

M-ZP: Mínimum distance from vertebral channel to the craneal end of the *gluteus medius*

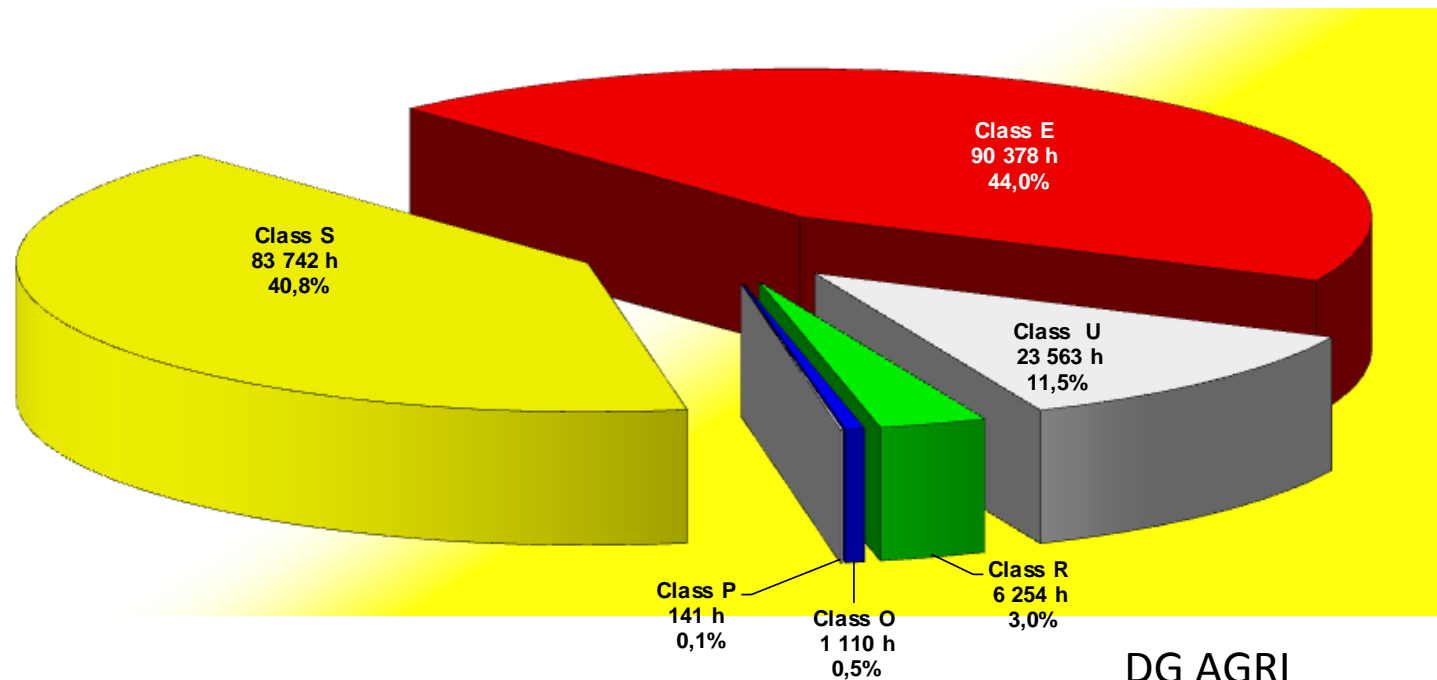




CLASSES UE Carcass LMP

S	≥60% (opt)
E	60% - 55%
U	55% - 50%
R	50% - 45%
O	45% - 40%
P	< 40%

Dispersion of Pig Carcasses on grades EU 27 in 2011 (in 1000 heads)



OFFICIAL FORMULAS TO ESTIMATE %LEAN MEAT WITH ZP METHOD BY COUNTRY

Country	EU Decision	Intercept	Equation Coefficients			CW (kg)
			F-ZP	M-ZP	Hot CW	
BE	2012/146/UE	58.81491	-0.6415	0.16873	-	60-130
CZ	2013/187/UE	59.08991	-0.43868	0.09792	-	60-120
DE	2011/258/EU	58.101220	-0.56495	0.13199	-	50-120
SK	2009/622/EC	59.79	-0.581	0.107	-	60-120
ES	2012/384/EU	59.89	-0.821	0.157	-	60-120
FR	2006/784/EC	55.99	-0.514	0.157	-	45-125
LV	2007/571/EC	61.689	-0.658	0.109	-	50-100
LT	2008/364/CE	54.578	-0.47534	0.27035	-0.09201	50-110
HU	2011/507/UE	58.31147	-0.62677	0.14664	-	50-120
AT	2007/165/EC	48.7719	-0.4833	0.23127	-	70-120
PL	2011/506/UE	52.61	-0.6148	0.1842	-	60-120
SI	2008/167/EC	60.81879	-0.72992	0.12157	-	50-120

NATIONAL SAMPLES USED FROM NATIONAL TRIALS AND MEASUREMENT TOOL

Spain (n=132)	Ruler
Slovenia (n=121)	DM02
France (n=250)	Calliper
Germany (n=308)	Ruler
Belgium (n=140)	Optiscan-TP
Pooled (n=951)	

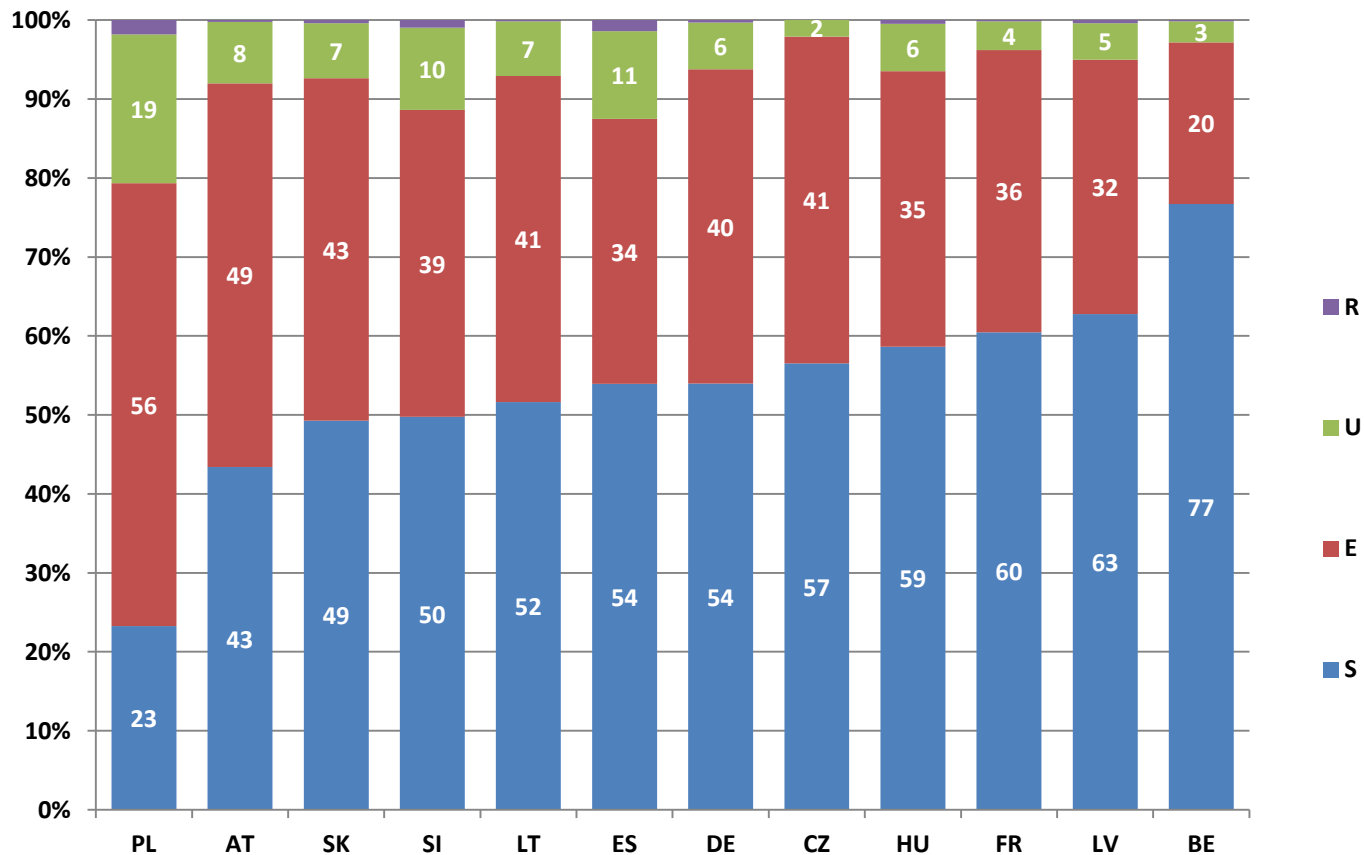


MD02



Optiscan-TP

% OF CARCASSES FROM THE DATA SET WITHIN EACH SEUIROP CLASSES AFTER APPLYING THE OFFICIAL ZP FORMULA IN EACH COUNTRY



CONCLUSIONS

Differences in the results can be ascribed to:

- The diversity of pig national populations across countries (sexes and genotypes)
- Methodological differences (different tools used to measure ZP, differences in the measurements due to the operator)
- Observed differences between approved ZP equations can be considered too high to be acceptable in view of EU harmonization.



***Thank you for your
attention***