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# Quantitative and qualitative analysis of live sheep production from the mass breeding system
# Part I. Analysis of procurement rate and prices of live sheep

Ilościowa i jakościowa analiza produkcji owczego żywca rzeźnego
z chowu masowego
Część I. Analiza wielkości skupu i cen żywca owczego

**Summary.** The research objective was quantitative and qualitative assessment of live sheep from the mass breeding system. The first part analyzes the procurement level for lamb and adult slaughter sheep at each period of the year and highlights the price changes of slaughter material taking into account animal body weight and the year period. The analysis included 58228 slaughter lambs and 1125 mature slaughter sheep purchased in the Lublin Province in the years 2005–2008 and intended for export. Besides, there were studied 10325 slaughter lambs and 2379 adult slaughter sheep bought in 2006 in different parts of Poland meant for the domestic market. There was found a decrease in the sheep population during 2005–2009, i.e. a 30% nationwide decline and 47.3% in the Lublin Province. The strongest demand and the highest prices for live lamb are recorded in March, November and December. The export markets show preferences for slaughter lambs of 17–30 kg body weight, whereas the domestic market requires live sheep of over 27 kg live weight. Attention has been brought to the lack of a domestic market for live lamb.

**Key words**: slaughter sheep, price, supply

## INTRODUCTION

The sheep population in Poland increased rapidly until the mid-1980s to peak at 4.9 million head in 1986 [Polski Związek Owczarski 1981–2011]. The major products were subsidized wool and, to a lesser degree, live lamb exported mainly to the western European countries. Since 1987, however, there was observed a continuous shrink in the sheep and lamb flock, with numbers down to 3.2 million head in 1991, 310 thousand in 2004 and 213 thousand in December 2010. Whole flocks were liquidated or their size drastically reduced and consequently the sheep co-product prices imposed shifting of

animal utility from wool-meat into meat production with the main goal in sheep husbandry – a slaughter lamb as a final product [Borys and Zawadzka 2006]. Currently, it is imperative to arrest the downward trend of sheep population and recognize its numerous advantages and benefits in a much broader perspective than agricultural production [Gruszecki *et al*. 2011]. Therefore, carefully developed strategy assumptions are needed to ensure proper functioning and prosperity of this animal production branch [Niżnikowski 2006]. Research literature of the past two decades has not virtually addressed the problems of live lamb produced in Poland and obtained from mass breeding operations. Considering the above mentioned conditions, the present researches have been undertaken with the objective of making quantitative and qualitative study of live sheep from mass breeding system. The first part focuses on the procurement level for lamb and adult slaughter sheep at each part of year. Besides, the changes in slaughter material prices are analyzed, regarding animal type, body weight and a year period.

## MATERIAL AND METHODS

The paper includes the results collected from the breeding documentation of the Regional Sheep and Goat Breeders Association in Lublin (RSGBA) and "Połonina" Slaughterhouse for Calves and Lambs LTD in Lesko (Połonina). The animals purchased by the RSGBA were intended for export to the western European countries as slaughter material and only small part was directed to the domestic market.

The collected results included the following data: place of origin of slaughter material, animal body weight at the purchase, procurement date, price per kilogram live weight, country of export destination.

The documentation of the "Połonina" LTD provided data on slaughter sheep purchased in 2006 in different regions in Poland meant primarily for the domestic market. In this case, the collected data covered 10325 slaughter lambs and 2379 adult sheep. There were analyzed the same traits as in the data provided by the RSGBA.

The analysis of the collected data was performed considering animal body weight. As for lambs, there were seven following weight standards:1 (13–16 kg), 2 (17–22 kg), 3 (23–30 kg), 4 (31–35 kg), 5 (36–40 kg), 6 (41–45 kg), 7 (46–50 kg) whereas adult sheep were assigned into five weight classes, i.e. A (36–40 kg), B (41–45 kg), C (46–50 kg), D (51–70 kg), E (over 70 kg).

The collected results served to calculate arithmetic means and coefficients of variation V (STATISTICA) for the studied traits and followed by the analysis of the collected data using tabular and graphical method of descriptive statistics.

## RESULTS

During the years 2005–2009 both, in Poland and the Lublin Province the estimates indicated a progressing decline in the sheep numbers (Tab. 1). On a national scale, it went down as much as 30% of the total number of sheep and nearly 26% of ewes. In the Lublin Province, the fall was even more drastic as it reached 47% and 44% for total population and ewes, respectively.

Table 1. Total sheep population (number of animals) in Poland and Lublin Province in 2005–2008 [Polski Związek Owczarski 1981–2011]
Tabela 1. Pogłowie owiec (szt.) w Polsce i woj. lubelskim w latach 2005–2008 r. [Polski Związek Owczarski 1981–2011]

| Year – Rok | Total – Razem | | Including ewes – W tym maciorki | |
|---|---|---|---|---|
| | Poland | Lublin Province | Poland | Lublin Province |
| 2005 | 317669 | 22995 | 212681 | 16003 |
| 2006 | 301397 | 25291 | 206861 | 16966 |
| 2007 | 336352 | 23503 | 208004 | 15596 |
| 2008 | 269627 | 15990 | 188038 | 11371 |

Table 2. Number of slaughter lambs (number of animals) purchased at each month of year (RSGBA – 2005–2008 and Połonina – 2006) taking into account weight standards (kg): 1 (13–16), 2 (17–22), 3 (23–30), 4 (31–35), 5 (36–40), 6 (41–45), 7 (46–50), 8 (51–70), 9 (71≤).
Tabela 2. Ilość jagniąt rzeźnych (szt.) zakupionych w poszczególnych miesiącach roku (RZHOiK – Regionalny Związek Hodowców Owiec i Kóz 2005–2008, Połonina 2006 r.) z uwzględnieniem standardów wagowych (kg): 1 (13–16), 2 (17–22), 3 (23–30), 4 (31–35), 5 (36–40), 6 (41–45), 7 (46–50), 8 (51–70), 9 (71≤).

| Weight standard Standard wagowy | | Month – Miesiąc | | | | | | | | | | | | Total Razem (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | |
| 1 | R | 17 | - | 491 | 18 | - | 67 | 31 | 30 | - | 30 | 348 | 431 | 1463 (2,5) |
| | P | 57 | - | 186 | - | - | - | - | - | - | - | - | - | 243 (2.3) |
| 2 | R | 1179 | 1114 | 4595 | 1804 | 1641 | 2223 | 1220 | 1380 | 406 | 967 | 1923 | 1940 | 20400 (35.1) |
| | P | 84 | 8 | 286 | 12 | 26 | 26 | 8 | - | 129 | 3 | - | - | 582 (5.6) |
| 3 | R | 1311 | 2134 | 5014 | 2450 | 4130 | 2690 | 2621 | 2314 | 950 | 1374 | 2557 | 2085 | 29630 (51) |
| | P | 258 | 368 | 508 | 189 | 803 | 759 | 512 | 115 | 87 | 298 | 131 | 52 | 4080 (39.5) |
| 4 | R | 82 | 611 | 617 | 370 | 488 | 306 | 424 | 405 | 267 | 220 | 212 | 71 | 4073 (7.0) |
| | P | 69 | 87 | 216 | 258 | 337 | 205 | 286 | 416 | 310 | 298 | 256 | 113 | 2851 (27.6) |
| 5 | R | 55 | 270 | 236 | 99 | 242 | 22 | 331 | 262 | 245 | 169 | 216 | 85 | 2232 (3.8) |
| | P | 23 | 20 | 68 | 80 | 166 | 75 | 118 | 205 | 114 | 198 | 210 | 165 | 1442 (14.0) |
| 6 | R | 25 | 8 | 1 | 6 | - | - | 11 | - | 6 | - | 14 | - | 71 (0.1) |
| | P | 38 | 1 | 29 | 13 | 39 | 21 | 13 | 41 | 16 | 271 | 56 | 119 | 657 (6.4) |
| 7 | R | 15 | 106 | 7 | 6 | - | - | 98 | - | 10 | - | 13 | - | 255 (0.4) |
| | P | 66 | - | 24 | 6 | 7 | 10 | 5 | 23 | 5 | 124 | 8 | 21 | 299 (2.9) |
| 8 | R | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | P | 7 | 2 | 46 | 13 | 11 | 11 | 7 | 13 | 2 | 24 | 2 | 7 | 145 (1.4) |
| 9 | R | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | P | - | - | - | - | 4 | - | 1 | - | - | 21 | - | - | 26 (0.2) |
| Total Razem (%) | | 3286 (4,8) | 4729 (6,9) | 12324 (18) | 5324 (7,8) | 7894 (11,5) | 6415 (9,4) | 5686 (8,3) | 5204 (7,6) | 2547 (3,7) | 3997 (5,8) | 5946 (8,7) | 5089 (7,4) | |

R – RSGBA (RZHOiK)
P – Połonina

During the research period the RSGBA bought 58124 slaughter lambs intended for the external markets (Tab. 2) The number of animals purchased over 2005–2008 was systematically reduced. It was found that a hundred per cent of slaughter material was sold into the Italian market.

Analysis of the data summarized in Table 2 indicates that the RSGBA made purchases throughout the entire year, though, the transaction values varied between the months. The highest number of lambs was bought in March and relatively many animals in the summer months and Christmas around.

A matter of primary importance proves to be body weight of the procured lambs (Tab. 2). During the years 2005–2008, the most common weight standards were 2 (17–22 kg) and 3 (23-30 kg). The largest number of lambs in these standards was bought in March (4595 and 5014), while the fewest (406 and 950 ) in September. Among the seven weight standards, the lowest number of lambs was recorded as 6 weight class (41–45 kg). The lightest lambs (1; 13–16 kg) were not represented numerously. Over the four-year period, a total of 1463 such animals were purchased, most of them in March (491) and November, December (779 animals).

Table 2 presents the data indicating the number of lambs procured by the "Połonina" slaughterhouse in Lesko at each month of the year, taking into account weight standards. The largest number of bought lambs were categorized as weight class 3 (23–30 kg) – 4080 animals and the greatest numbers of purchases were made in May and June, i.e. 803 and 759 whereas the fewest in December – 52 animals. The next popular weight standard was 4 (31–35 kg) with 2851 individuals and the purchase of the greatest number of lambs – 416 took place in August, while the fewest – 69 in January. The standard 5(36–40 kg) was also numerous as 1442 lambs were bought, most of them in the second half of the year.

Table 3 presents the procurement distribution of mature sheep over a year period. The data analysis shows that as for the Lublin Province (RSGBA purchases), the market appears to be unstable and the purchases made randomly. Most animals were procured in the second half of the year which is undoubtedly associated with the lamb weaning date. Studying the body weight of adult slaughter sheep it was found that large majority comprises sheep over 51 kg (class D and E), whereas lighter animals (up to 50 kg) account for only 8%. The data summarized in Table 3 can be complemented by the fact that the number of procured sheep tended to decline systematically. In 2005, 532 animals were bought, while it was 354 in 2007 and only 43 sheep in 2008. Alike lambs, most sheep were sold to the overseas markets.

In 2006, the "Połonina" slaughterhouse purchased over 2000 adult sheep for slaughter all over the country (Tab. 3). The procurement monthly report showed the purchase range within 160–270, only in August and December it was 123 and 85 animals, respectively. Among the mature sheep bought by the "Połonina", the animals from the heavier-weight classes D and E (over 51 and 71 kg) prevailed and they made up 80% of the total procurement.

Table 3. Number of adult sheep (number of animals) purchased at each month of year (RSGBA 2005–2008, Połonina – 2006) taking into account weight classes (kg): A (36-40), B (41-45), C (46-50), D (51-70), E (71≤)
Tabela 3. Ilość dorosłych owiec (szt.) zakupionych w poszczególnych miesiącach roku (RZHOiK lata 2005–2008, Połonina 2006 r.) z uwzględnieniem klas wagowych (kg): A (36–40), B (41–45), C (46–50), D (51–70), E (71≤)

| Weight classes Klasa wagowa | | Month – Miesiąc | | | | | | | | | | | | Total Razem (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | |
| A | R* | 1 | - | - | 1 | 1 | - | - | 7 | - | - | - | - | 10 (0.9) |
| | P** | - | 3 | 8 | 4 | 6 | 6 | 2 | 4 | 7 | 6 | 8 | 3 | 57 (2.4) |
| B | R | 1 | - | - | 1 | - | - | 1 | 16 | 2 | - | - | - | 21 (1.9) |
| | P | - | 8 | 20 | 8 | 23 | 20 | 15 | 9 | 12 | 19 | 24 | 7 | 165 (7.0) |
| C | R | 6 | - | - | 7 | - | - | - | 39 | 2 | - | 7 | - | 61 (5.4) |
| | P | - | 27 | 28 | 14 | 26 | 27 | 19 | 23 | 26 | 31 | 38 | 11 | 270 (11.4) |
| D | R | 25 | - | 25 | 26 | - | - | 43 | 109 | 71 | 8 | - | - | 307 (27.3) |
| | P | 176 | 127 | 146 | 99 | 140 | 94 | 109 | 55 | 99 | 131 | 131 | 21 | 1328 (56.0) |
| E | R | 26 | 86 | 10 | 34 | - | - | 450 | 83 | 9 | 3 | 25 | - | 726 (64.5) |
| | P | 93 | 38 | 67 | 59 | 69 | 49 | 19 | 32 | 16 | 48 | 18 | 43 | 551 (23.2) |
| Total Razem | | 328 (9.4) | 289 (8.3) | 304 (8.7) | 253 (7.2) | 265 (7.6) | 196 (5.6) | 658 (18.8) | 377 (10.7) | 244 (7.0) | 246 (7.0) | 251 (7.1) | 85 (2.4) | |

R – RSGBA (RZHOiK)
P – Połonina

Tabela 4. Średnie ceny żywca jagnięcego oferowane przez RZHOiK w poszczególnych miesiącach roku w latach 2005–2008 (PLN $kg^{-1}$)
Table 4. Average price for live lamb offered by RSGBA at each month of year during 2005–2008 (PLN $kg^{-1}$)

| Month Miesiąc | Year – Rok | | | | Average Średnia 2005–2008 |
|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2008 | |
| | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ |
| I | 7.92 | 7.96 | 4.70 | 7.04 | 6.90 |
| II | 7.48 | 7.13 | 5.55 | 5.90 | 6.52 |
| III | 7.37 | 6.93 | 7.44 | 6.59 | 7.08 |
| IV | 7.25 | 7.03 | 6.83 | 6.07 | 6.79 |
| V | 6.30 | 6.18 | 5.57 | 4.94 | 5.75 |
| VI | 6.48 | - | - | 4.97 | 5.72 |
| VII | 6.07 | 6.05 | - | - | 6.06 |
| VIII | 6.39 | 5.91 | 6.15 | 5.10 | 5.89 |
| IX | - | 5.92 | 5.21 | 5.00 | 5.38 |
| X | 6.55 | 5.98 | - | 5.17 | 5.90 |
| XI | 6.92 | 5.97 | 5.38 | 6.10 | 6.09 |
| XII | 6.96 | 7.17 | 7.29 | 7.45 | 7.22 |
| Average in year Średnia w roku | 6.88 | 6.57 | 6.01 | 5.85 | 6.33 |

Table 5. Average price for live lamb offered by RSGBA during 2005–2008 taking into account weight standards (PLN kg$^{-1}$): 1 (13–16), 2 (17–22), 3 (23–30), 4 (31–35), 5 (36–40), 6 (41–45), 7 (46–50), 8 (51–70), 9 (71≤)

Tabela 5. Średnie ceny żywca jagnięcego oferowane przez RZHOiK w latach 2005–2008 z uwzględnieniem standardów wagowych (PLN kg$^{-1}$): 1 (13–16), 2 (17–22), 3 (23–30), 4 (31–35), 5 (36–40), 6 (41–45), 7 (46–50), 8 (51–70), 9 (71≤)

| Weight Standard Standard wagowy | Year – Rok | | | |
|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2008 |
| | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ |
| 1 | 8.38 | 8.30 | 8.47 | 7.87 |
| 2 | 7.38 | 7.58 | 6.90 | 6.63 |
| 3 | 6.39 | 6.51 | 6.35 | 5.56 |
| 4 | 5.44 | 5.62 | 5.23 | 4.91 |
| 5 | 4.96 | 5.09 | 4.83 | 4.41 |
| 6 | 4.20 | 4.29 | 4.35 | - |
| 7 | 4.27 | 4.15 | 3.85 | - |
| 8 | 3.20 | 2.14 | 3.20 | - |
| 9 | - | 1.89 | 2.73 | - |

Tabela 6. Średnie ceny dorosłych owiec rzeźnych oferowane przez RZHOiK w latach 2005–2008 z uwzględnieniem klas wagowych (PLN kg$^{-1}$): A (36–40), B (41–45), C (46–50), D (51–70), E (71≤)

Table 6. Average price of mature slaughter sheep offered by RSGBA during 2005–2008 taking into account weight classes (PLN kg$^{-1}$): A (36–40), B (41–45), C (46–50), D (51–70), E (71≤)

| Year – Rok | | Weight class – Klasa wagowa | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| 2005 | X | - | - | - | - | 1.80 |
| 2006 | X | 4.20 | 4.75 | 4.32 | 3.12 | 1.83 |
| 2007 | X | 4.38 | 4.21 | 4.25 | 3.20 | 2.37 |
| 2008 | X | - | - | - | - | 1.80 |

Table 4 presents data illustrating price of 1 kg live lamb in the years 2005–2008 considering each month of the year. The highest unit price 7.96 PLN kg$^{-1}$ was recorded in January 2006, while the lowest in January 2007. Over these years, the price for live sheep showed a systematic downtrend as in 2005 it averaged 6.88 PLN kg$^{-1}$ and in 2008 down to 5.85 PLN. Average price for the three-year period was 6.33 PLN kg$^{-1}$.

Table 5 presents the live sheep price at each studied year taking into account the weight standards. Regardless of a study year, the highest prices were offered for the lightest lambs (7.87–8.47 PLN) and an increase in animal body weight decreased prices down to 1.89–2.73 PLN kg$^{-1}$ at 9 weight class (46–50 kg).

Price for mature slaughter sheep ranged from 1.8 PLN up to 4.75 PLN for kg of live sheep (Tab. 6). In the A, B and C weight classes, i.e. up to 50 kg body weight, the prices were relatively equal (4.2–4.57 PLN), while those of animals of over 51 kg body weight

were lower (1.8–3.2 PLN). The presented prices served as the basis for calculation of the value of mature sheep that oscillated between 114–215 PLN depending on the procurement date and weight class.

## DISCUSSION

The recorded and presented in Table 1 declining trend noted in the sheep population in Poland and the Lublin Province should be considered as very unfavorable effect for both, sheep husbandry itself and agriculture. Analysis of this effect from the viewpoint of nature should arouse serious concerns as it threatens and virtually declines biodiversity not only of farm animals but the entire ecosystem [Krupiński 2009]. The multiple hazards can induce adverse changes in natural environment and affect it in varying and unpredictable ways [James 2001]. As biodiversity is an intrinsically valuable as well as significant global issue, the internationally recognized program was developed to conserve and restore the genetic resources of farm animals [FAO 1998].

A consequence of the shrinking sheep population is an observable downward trend of live sheep purchase which is disadvantageous in every respect. Importantly, it is absolutely inappropriate, according to the present authors, to place entire produce on the single market, that is Italian. This operation may pose a substantial hazard in case of any economic crisis or recession at this market. The situation is similar in Hungary, where over 90% of sheep meat is exported to Italy and the rest to Greece [Fenyves 2009]. Another really very distressing problem is the practical lack of a domestic market in Poland. However, it is quite astonishing that different restaurant chains in the Lublin Province and the country serve a variety of lamb dishes year-round. Yet the owners admit that the meat does not come from domestic production.

The analysis of the data presenting purchase distribution at each month of the year (Tab. 2) has indicated a pattern of three ample supply periods of lambs, i.e. March, June-August, November and December. This regularity is evidently a consequence of the fluctuations in consumer demand for lamb that holds a significant meaning in the observances of religious celebrations and makes a dietary staple of the Italian cultural tradition associated with serving small roast lambs [Baruk *et al*. 2011]. What plays a major role is seasonal nature of sheep biology but the current reproduction management practices facilitate out-of-season or year-round breeding that ensure continuous slaughter lamb supply.

Assessment of number of lambs bought depending on their body weight (Tab. 2) leads the conclusion that the limitation of the lightest lamb sale is a positive trend. Young and light lamb is just the "raw material" to produce full value live sheep. Obviously, the matter of importance is the price per kg live weight which is a determinant of production profitability. The analysis of Table 2 results implies that the domestic market prefers heavier lambs over 23 kg and that is a hint for producers and processors involved in domestic turnover.

The purchase results of adult slaughter sheep show that this live animal supply is quite tight which is probably associated with low prices (Tab. 6). At present, the live mature sheep component is practically of no importance in overall slaughter sheep turnover. Therefore, most of adult sheep culled from a breeding stock by producers are then used according to the sheep flock management plan.

Over the years 2005–2009, the price for slaughter lambs clearly tended to decline (Tab. 4). The situation was primarily caused by high value of the Polish zloty against the euro at that time which translates into low prices in home currency while selling to foreign markets.

The study on changes of lamb prices during the year (Tab. 4) indicates that regardless of a weight standard, the highest values were noted before Christmas and Easter holiday triggered by unit prices for kg live animal weight. The confirmed regularity should be taken into account when planning ahead the tupping seasons each year. There is a tight correlation between the major periods for seasonal demands in the export markets in Poland and in Hungary. Most of Polish and Hungarian [Fenyves 2009] sheep meat go to Italy. In harmony with the Polish breeding traditions and the species characteristics of sheep, the supply of lambs is the largest in the Easter period. Increase of prices starts usually a few weeks before Easter simultaneously with the increase in the number of exported animals. In the second half of the year excluded Christmas time the supply is lower.

Another problem is to determine the optimal body weight of lambs intended for slaughter. As currently the grain prices are really high [www.arimr.gov.pl, www.arr.gov.pl], there is not the least likelihood that the lightest lamb production may be profitable. Lambs fattened to higher body weight can be fed cheaper on-farm produced feeds and thus, better financial results may be attained.

The authors of the present work share the opinion of Seremak-Bulge [1992] who states that development of a universal standard procedure to follow is not possible and at each farm the production costs ought to be carefully considered before the individual decision is made regarding the weight standard that lambs should be fattened to.

The seasonal fluctuation of the average price could be useful information for the producers. The deviation can help in production organization and adaptation to the markets.

## CONCLUSIONS

1. The sheep population estimates indicate that in the years 2005–2009 in both, Poland and the Lublin Province a systematic decline in sheep numbers occurred. It was the 30% decrease in Poland with regard to total sheep and nearly 26% in the case ewes. In the Lublin Province, the drop was even more drastic, i.e. 47% and 44% for total sheep population and mother sheep, respectively.

2. Approximately 90% slaughter lambs produced in the Lublin Province are exported to Italy. The lack of a domestic market and the dependence on a single foreign market should be considered as unfavorable factors.

3. The strongest demand and the highest prices for live lamb are noted in March, November and December.

4. Export markets prefer slaughter lambs of 17–30 kg body weight, while the domestic market shows preference for lamb live weight over 27 kg.

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**Streszczenie.** Celem pracy była ocena ilościowa i jakościowa żywca owczego pochodzącego z chowu masowego. W części I analizowano wielkość skupu jagniąt i dorosłych owiec rzeźnych w poszczególnych okresach roku oraz zmiany cen materiału rzeźnego z uwzględnieniem masy ciała zwierząt i okresu roku. Analizą objęto 58 228 jagniąt rzeźnych oraz 1125 dorosłych owiec rzeźnych zakupionych na terenie województwa lubelskiego w latach 2005–2008 z przeznaczeniem na sprzedaż poza granice kraju. Ponadto analizowano 10 325 jagniąt rzeźnych oraz 2379 dorosłych owiec rzeźnych zakupionych w 2006 roku w różnych regionach Polski z przeznaczeniem na rynek krajowy. Stwierdzono, że w latach 2005–2008 nastąpił spadek pogłowia owiec, 15% w skali kraju oraz 30% w województwie lubelskim. Największy popyt na żywiec jagnięcy i jego najwyższe ceny są w marcu, w listopadzie i w grudniu. Przy sprzedaży poza granice kraju preferowane są jagnięta rzeźne o masie ciała 17–30 kg, natomiast na rynku krajowym poszukiwany jest żywiec o masie ciała powyżej 27 kg. Wskazano na niekorzystne zjawisko braku krajowego rynku żywca jagnięcego.

**Słowa kluczowe:** owce rzeźne, ceny, podaż