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# THE SALES OF ROUND WOOD BY THE 'STATE FORESTS' NATIONAL FOREST HOLDING IN 2017 AND CONSECUTIVE YEARS

**Abstract**. The article presents the most important assumptions and rules of the sales and distribution of round wood by the 'State Forests' National Forest Holding in 2017 and compares them with the solutions applied between 2006 and 2016. The author evaluates these solutions and suggests modifications of the system.

**Key words:** distribution of round wood, 'State Forests' National Forest Holding

## INTRODUCTION

The work on the current system of sales and distribution of round wood by the 'State Forests' National Forest Holding started in July 2006. Konrad Tomaszewski, the chief analyst of the enterprise, suggested selling wood by means of a special Internet application – the Forest and Wood Portal (PLD). The Forest and Wood Committee was appointed to advise the General Director of the 'State Forests' National Forest Holding. The system used for the evaluation of offers of wood purchase and distribution was in operation in 2007. It was slightly modified in 2008 (***Lis 2014***).

Between 2009 and 2016 the sales and distribution of round wood by the Forest and Wood Portal became increasingly complicated. Products were sold to the entrepreneurs that were regular wood purchasers (the clients who had purchased wood from the 'State Forests' National Forest Holding before) and they were auctioned by means of the Internet application *e-drewno* (the offer was addressed to all entrepreneurs). The proportion between the wood offered on the PLD portal and the *e-drewno* application was variable. Usually 70% of wood was sold on the portal, whereas 30% was sold on the *e-drewno* application. Between 2010 and 2012 the proportions were different, i.e. 2010 – 50/50, 2011 – 55/45 on average, 2012 – 65/35 (***Malinowski, Lis, Wieruszewski 2016***).

In 2013 the sales of wood from the investment pool began. It was addressed to the entrepreneurs who performed tasks which significantly increased the round wood processing capacity. The amount of the pool successively increased. In 2013 3% of wood was reserved for entrepreneurs, in 2014 – 5%, in 2015 and 2016 the pool amounted to 2.5 million m$^3$. The wood from the investment pool was sold at the PLD prices. It was usually cheaper, sometimes considerably, than the wood sold via the Internet application *e-drewno*. For this reason the investment pool was very popular among entrepreneurs and there were much more purchase offers than the amount that wood forest inspectorates offered for sale.

In 2016 the rules of sales were significantly modified. New solutions applied to tenders announced in 2017. In general these changes were good for entrepreneurs. The rules are mostly clearer, especially in comparison with the rules applied between 2010 and 2016.

This article presents the most important assumptions and criteria of evaluation of the current system of sales and distribution of wood to entrepreneurs.

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## THE EVALUATION CRITERIA OF WOOD SALES AND DISTRIBUTION OFFERS

The criteria are listed in ***Directive 2016a***. A condensed list of the most important criteria can be found Table 1. The price of wood offered by entrepreneurs in their offers is the most important criterion. Its weight amounts to 65% of the total evaluation. The following other aspects are also evaluated:

1) the purchasing habit, i.e. checking whether the offer is similar to other offers to purchase similar amounts of wood submitted in previous years and whether the purchase transaction is located in the same forest inspectorates;
2) purchasing geography – there is preference for transactions in forest inspectorates located close to the seat of the enterprise.

Table 1. The criteria of evaluation of the offers of sales and distribution of round wood made by the 'State Forests' National Forest Holding in 2017 and consecutive years

| **Evaluation criterion Primary market** | | **Weight** | | **Evaluation criterion Development market 'State Forests' Enterprises** | |
|---|---|---|---|---|---|
| A | Price | 0.65 | | Price | A |
| B | Purchasing habit | 0.25 | 0.35 | Purchasing habit | B |
| C | Purchasing geography | 0.1 | - | | |
| Total score for wood purchase offer | | 1 | | Total score for wood purchase offer | |

*Source: The author's compilation based on Appendix 1 to the Wood Sales Directive introduced by the 'State Forests' National Forest Holding; The Premises, Legal and Substantial Basis and the Implementation of Provisions of the* ***Directive*** *(**2016b**)*

## PRICE OF WOOD

Table 2 shows the range of prices listed in ***Directive 2016a***. According to the Directive, the base price is distinguished as the price of the ideal state. It is offered for tender by the 'State Forests' IT System (SILP), which automatically evaluates purchase offers. The system also distinguishes two accessory extreme prices, i.e. the rejection price – the lowest price at which wood can be sold and the maximum price, which is supposed to eliminate price inflation and some entrepreneurs' attempts to control the market. In 2017 the extreme prices were set at 4%, i.e. the rejection price – -4%, the maximum price - +4%.

Table 2. The rules of setting wood prices in the proper markets (in forest inspectorates) and for trade and assortment groups in 2017 and consecutive years

| **PRICE OF WOOD** | | |
|---|---|---|
| REJECTION PRICE | IDEAL STATE PRICE proposed in tender | MAXIMUM PRICE |
| -4% | | +4% |

*Source: The author's compilation based on* ***Directive 2016a***

Table 3 gives examples of price setting. The calculations were based on the prices suggested by the SILP (ideal state prices) set at 100 zlotys/m$^3$, 200 zlotys/m$^3$ and 300 zlotys/m$^3$ of round wood.

Table 3. Examples of setting wood prices in the proper markets (in forest inspectorates) and for trade and assortment groups and their evaluation

| -4% | Price of wood proposed in tender<br>ideal state price | | | | | | | | | | | | | | | | | | | | | | | | | 4% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -12 | -11 | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| Rejection price | | | | | | | | | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | | | | | | | | | Maximum price |
| | | | | | | | | | | 1,25 | 2,50 | 3,75 | 5,00 | **6,25** | 7,50 | 8,75 | 10 | | | | | | | | | |
| | | | | | | | | | | 0,81 | 1,63 | 2,44 | 3,25 | 4,06 | 4,88 | **5,69** | 6,50 | | | | | | | | | |
| | | | | | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | | | | | |
| | | | | | | 0,63 | 1,25 | 1,88 | 2,50 | 3,13 | 3,75 | 4,38 | 5,00 | **5,63** | 6,25 | 6,88 | 7,50 | 8,13 | 8,75 | 9,38 | 10 | | | | | |
| | | | | | | 0,41 | 0,81 | 1,22 | 1,63 | 2,03 | 2,44 | 2,84 | 3,25 | 3,66 | 4,06 | 4,47 | 4,88 | 5,28 | **5,69** | 6,09 | 6,50 | | | | | |
| | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | |
| | | 0,42 | 0,83 | 1,25 | 1,67 | 2,08 | 2,50 | 2,92 | 3,33 | 3,75 | 4,17 | 4,58 | 5,00 | **5,42** | 5,83 | 6,25 | 6,67 | 7,08 | 7,50 | 7,92 | 8,33 | 8,75 | 9,17 | 9,58 | 10 | |
| | | 0,27 | 0,54 | 0,81 | 1,08 | 1,35 | 1,63 | 1,90 | 2,17 | 2,44 | 2,71 | 2,98 | 3,25 | 3,52 | 3,79 | 4,06 | 4,33 | 4,60 | 4,88 | 5,15 | 5,42 | **5,69** | 5,96 | 6,23 | 6,50 | |

*Source: The author's compilation based on **Directive** 2016a and the amount of wood sold by the 'State Forests' National Forest Holding at the end of 2016*

According to Table 3, a change of 1 zloty/m$^3$ in the tender price of 100 zlotys/m$^3$ results in the following values: 12.5% of the evaluation for all the three criteria or 8.1% of the evaluation for the wood price only. A change of 1 zloty/m$^3$ in the price of 200 zlotys/m$^3$ results in 6.3% of the evaluation for all the three criteria or 4.1% of the evaluation for the wood price only. A change of 1 zloty/m$^3$ in the price of 300 zlotys/m$^3$ results in 4.2% of the evaluation for the maximum score for all the three criteria or 2.7% of the evaluation for the maximum wood price.

Table 4 compares the prices of all wood species and quality classes, which may have occurred in all forest inspectorates in Poland at the end of 2016. The prices were grouped at 25 zlotys/ m$^3$ because the rejection price and maximum price change by 1 zloty at each 25 zlotys (according to the rule: 100 zlotys/m$^3$/4 (%)=25 zlotys/m$^3$). Thus, 10 groups with ideal state prices ranging from 88 zlotys/m$^3$ to 338 zlotys/m$^3$ were identified. They encompass an even wider range of real prices which entrepreneurs may have offered in tender: 85-350 zlotys/m$^3$.

The scoring awarded to offers can be found on the right side of the table – for the price, purchasing habit and purchasing geography. In the first price group (84-108 zlotys/m$^3$) a change by 1 zloty resulted in a change in the evaluation by 1.25 points in total or by 0.81 points for the price only. It corresponds to the change in the price of 100 zlotys/m$^3$, because it matches the first price group, which encompasses the ideal state prices ranging from 88 to 112 zlotys/m$^3$. In the last price group (300-324 zlotys/m$^3$) a change in the price of round wood by 1 zloty/m$^3$ resulted in a change in the evaluation by 0.38 points in total or by 0.25 points for the price only.

The rightmost column of Table 4 shows the bonus in zlotys which entrepreneurs can receive with the price offered if they have the maximum score in the total evaluation for the purchasing habit and purchasing geography. It is 2 zlotys/m$^3$ in the first group and 7 zlotys/m$^3$ in groups 8, 9 and 10.

The bonuses are relatively low. In forest inspectorates which are not far away from each other differences in the ideal state prices proposed by the SILP for the same round wood species and quality class often amount to more than 10 zlotys/m$^3$ or in some cases they even exceed 20 zlotys/m$^3$. It is much more important for entrepreneurs to submit their purchase offer in cheaper forest inspectorates rather than receive a bonus for the purchasing habit and purchasing geography if a much more expensive inspectorate offers a bonus.

Table 4. Suggested wood prices and their evaluation in the proper markets (in forest inspectorates) and for trade and assortment groups in 2017 and consecutive years

| Round wood price group | Rejection price -4% | Price of wood proposed in tender | | | | | | | | | | | | | | | | | | | | | | | | | | | Maximum price 4% | Evaluation of the offers in the points | | Purchasing habit and geography |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ideal state price | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | -13 | -12 | -11 | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | together | for price | |
| 1 | 84 | | | | | | | | | | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | | | | | | | | | | 92 | | | 2 |
| | | | | | | | | | | | | 1,25 | 2,5 | 3,75 | 5 | **6,25** | 7,5 | 8,75 | 10 | | | | | | | | | | | 1,25 | | |
| | | | | | | | | | | | | 0,81 | 1,63 | 2,44 | 3,25 | 4,06 | 4,88 | **5,69** | 6,50 | | | | | | | | | | | | 0,81 | |
| | 108 | | | | | | | | | | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | | | | | | | | | | 116 | | | |
| 2 | 108 | | | | | | | | | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | | | | | | | | | 118 | | | 3 |
| | | | | | | | | | | | 1 | 2 | 3 | 4 | 5 | **6** | 7 | 8 | 9 | 10 | | | | | | | | | | 1 | | |
| | | | | | | | | | | | 0,65 | 1,30 | 1,95 | 2,60 | 3,25 | 3,90 | 4,55 | 5,20 | **5,85** | 6,50 | | | | | | | | | | | 0,65 | |
| | 132 | | | | | | | | | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | | | | | | | | | 142 | | | |
| 3 | 132 | | | | | | | | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | | | | | | | | 144 | | | 3 |
| | | | | | | | | | | 0,83 | 1,67 | 2,50 | 3,33 | 4,17 | 5,00 | **5,83** | 6,67 | 7,50 | 8,33 | 9,17 | 10 | | | | | | | | | 0,83 | | |
| | | | | | | | | | | 0,54 | 1,08 | 1,63 | 2,17 | 2,71 | 3,25 | 3,79 | 4,33 | 4,88 | **5,42** | 5,96 | 6,50 | | | | | | | | | | 0,54 | |
| | 156 | | | | | | | | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | | | | | | | | 168 | | | |
| 4 | 156 | | | | | | | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | | | | | | | 170 | | | 4 |
| | | | | | | | | | 0,71 | 1,43 | 2,14 | 2,86 | 3,57 | 4,29 | 5,00 | **5,71** | 6,43 | 7,14 | 7,86 | 8,57 | 9,29 | 10 | | | | | | | | 0,71 | | |
| | | | | | | | | | 0,46 | 0,93 | 1,39 | 1,86 | 2,32 | 2,79 | 3,25 | 3,71 | 4,18 | 4,64 | 5,11 | **5,57** | 6,04 | 6,50 | | | | | | | | | 0,46 | |
| | 180 | | | | | | | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | | | | | | | 194 | | | |
| 5 | 180 | | | | | | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | | | | | | 196 | | | 5 |
| | | | | | | | | 0,63 | 1,25 | 1,88 | 2,50 | 3,13 | 3,75 | 4,38 | 5,00 | **5,63** | 6,25 | 6,88 | 7,50 | 8,13 | 8,75 | 9,38 | 10 | | | | | | | 0,63 | | |
| | | | | | | | | 0,41 | 0,81 | 1,22 | 1,63 | 2,03 | 2,44 | 2,84 | 3,25 | 3,66 | 4,06 | 4,47 | 4,88 | 5,28 | **5,69** | 6,09 | 6,50 | | | | | | | | 0,41 | |
| | 204 | | | | | | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | | | | | | 220 | | | |
| 6 | 204 | | | | | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | | | | | 222 | | | 5 |
| | | | | | | | 0,56 | 1,11 | 1,67 | 2,22 | 2,78 | 3,33 | 3,89 | 4,44 | 5,00 | **5,56** | 6,11 | 6,67 | 7,22 | 7,78 | 8,33 | 8,89 | 9,44 | 10 | | | | | | 0,56 | | |
| | | | | | | | 0,36 | 0,72 | 1,08 | 1,44 | 1,81 | 2,17 | 2,53 | 2,89 | 3,25 | 3,61 | 3,97 | 4,33 | 4,69 | 5,06 | **5,42** | 5,78 | 6,14 | 6,50 | | | | | | | 0,36 | |
| | 228 | | | | | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | | | | | 246 | | | |
| 7 | 228 | | | | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | | | | 248 | | | 6 |
| | | | | | | 0,5 | 1 | 1,5 | 2 | 2,5 | 3 | 3,5 | 4 | 4,5 | 5 | **5,5** | 6 | 6,5 | 7 | 7,5 | 8 | 8,5 | 9 | 9,5 | 10 | | | | | 0,5 | | |
| | | | | | | 0,33 | 0,65 | 0,98 | 1,30 | 1,63 | 1,95 | 2,28 | 2,60 | 2,93 | 3,25 | 3,58 | 3,90 | 4,23 | 4,55 | 4,88 | 5,20 | **5,53** | 5,85 | 6,18 | 6,50 | | | | | | 0,33 | |
| | 252 | | | | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | | | | 272 | | | |
| 8 | 252 | | | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | | | 274 | | | 7 |
| | | | | | 0,45 | 0,91 | 1,36 | 1,82 | 2,27 | 2,73 | 3,18 | 3,64 | 4,09 | 4,55 | 5,00 | **5,45** | 5,91 | 6,36 | 6,82 | 7,27 | 7,73 | 8,18 | 8,64 | 9,09 | 9,55 | 10 | | | | 0,45 | | |
| | | | | | 0,30 | 0,59 | 0,89 | 1,18 | 1,48 | 1,77 | 2,07 | 2,36 | 2,66 | 2,95 | 3,25 | 3,55 | 3,84 | 4,14 | 4,43 | 4,73 | 5,02 | 5,32 | **5,61** | 5,91 | 6,20 | 6,50 | | | | | 0,30 | |
| | 276 | | | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | | | 298 | | | |
| 9 | 276 | | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | | 300 | | | 7 |
| | | | | 0,42 | 0,83 | 1,25 | 1,67 | 2,08 | 2,50 | 2,92 | 3,33 | 3,75 | 4,17 | 4,58 | 5,00 | **5,42** | 5,83 | 6,25 | 6,67 | 7,08 | 7,50 | 7,92 | 8,33 | 8,75 | 9,17 | 9,58 | 10 | | | 0,42 | | |
| | | | | 0,27 | 0,54 | 0,81 | 1,08 | 1,35 | 1,63 | 1,90 | 2,17 | 2,44 | 2,71 | 2,98 | 3,25 | 3,52 | 3,79 | 4,06 | 4,33 | 4,60 | 4,88 | 5,15 | **5,42** | 5,69 | 5,96 | 6,23 | 6,50 | | | | 0,27 | |
| | 300 | | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | | 324 | | | |
| 10 | 300 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 326 | | | 7 |
| | | | 0,38 | 0,77 | 1,15 | 1,54 | 1,92 | 2,31 | 2,69 | 3,08 | 3,46 | 3,85 | 4,23 | 4,62 | 5,00 | 5,38 | **5,77** | 6,15 | 6,54 | 6,92 | 7,31 | 7,69 | 8,08 | 8,46 | 8,85 | 9,23 | 9,62 | 10 | | 0,38 | | |
| | | | 0,25 | 0,50 | 0,75 | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 | 2,75 | 3,00 | 3,25 | 3,50 | 3,75 | 4,00 | 4,25 | 4,50 | 4,75 | 5,00 | 5,25 | **5,50** | 5,75 | 6,00 | 6,25 | 6,50 | | | 0,25 | |
| | 324 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 350 | | | |

*Source: The author's compilation based on the amount of wood sold by the 'State Forests' National Forest Holding at the end of 2016*

## THE NUMBER OF PROCEDURES IN THE EVALUATION OF OFFERS

There were 3 offer evaluation procedures implemented in the sales and distribution of wood in 2017: the main quota – the main stage (5 December 2016) and two supplementary quotas (12 December 2016 and 22 December 2016). The first column of Table 5 shows how high entrepreneurs' scores should be at the main stage and consecutive supplementary stages to satisfy their demand for round wood at the level given in the central part of the table.

As results from Table 5, entrepreneurs should score at least 54% in the main and supplementary stages for their offers if they want to acquire more than 90% of wood for annual production. 90.27% of the entrepreneurs' demand will be satisfied. Acquiring more than 90% of the necessary material is thought be satisfactory.

According to the current rules of wood distribution, a score of 32.5%, which is guaranteed by the SILP for the price of wood that is equal to the ideal state price, requires 5 supplementary quotas to satisfy more than 90% of the demand (90.54% of the necessary wood will be allocated). If there should be 5 rather than 2 supplementary quotas, the wood distribution procedure needs to begin about one month earlier than in 2016, i.e. in late October.

If an offer scores 45%, the entrepreneur can exceed the necessary limit of 90% in 4 stages, i.e. the main quota and 3 supplementary ones. The clients who had the top score for the purchasing habit and purchasing geography, i.e. who scored 50%, belong to this group. In this situation it is necessary to carry out 4 procedures – the main stage and 3 supplementary ones and the procedure of wood sales and distribution should not begin later than mid-November.

## CONCLUSIONS

The system of wood distribution applied tothe sales of wood in 2017 is definitely better than the system which was used between 2010 and 2016. However, it needs to be improved systematically and final decisions need to be taken more quickly.

Table 5. The evaluation of round wood purchase offers in the main and supplementary stages

| Evaluation of offers in the main stage | Number of suplementary stages on the same qualification as on the main stage | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | **2** | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 5 | 9,75 | **14,26** | 18,55 | 22,62 | 26,49 | 30,17 | 33,66 | 36,98 | 40,13 | 43,12 |
| 10 | 19,00 | **27,10** | 34,39 | 40,95 | 46,86 | 52,17 | 56,95 | 61,26 | 65,13 | 68,62 |
| 15 | 27,75 | **38,59** | 47,80 | 55,63 | 62,29 | 67,94 | 72,75 | 76,84 | 80,31 | 83,27 |
| 20 | 36,00 | **48,80** | 59,04 | 67,23 | 73,79 | 79,03 | 83,22 | 86,58 | 89,26 | 91,41 |
| 22,5 | 39,94 | **53,45** | 63,92 | 72,04 | 78,33 | 83,21 | 86,99 | 89,91 | 92,18 | 93,94 |
| 25 | 43,75 | **57,81** | 68,36 | 76,27 | 82,20 | 86,65 | 89,99 | 92,49 | 94,37 | 95,78 |
| 27,5 | 47,44 | **61,89** | 72,37 | 79,97 | 85,48 | 89,47 | 92,37 | 94,47 | 95,99 | 97,09 |
| 30 | 51,00 | **65,70** | 75,99 | 83,19 | 88,24 | 91,76 | 94,24 | 95,96 | 97,18 | 98,02 |
| **32,5** | **54,44** | **69,25** | **79,24** | **85,99** | **90,54** | **93,62** | **95,69** | **97,09** | **98,04** | **98,67** |
| 35 | 57,75 | **72,54** | 82,15 | 88,40 | 92,46 | 95,10 | 96,81 | 97,93 | 98,65 | 99,12 |
| 36 | 59,04 | **73,79** | 83,22 | 89,26 | 93,13 | 95,60 | 97,19 | 98,20 | 98,85 | 99,26 |
| 37 | 60,31 | **75,00** | 84,25 | 90,08 | 93,75 | 96,06 | 97,52 | 98,44 | 99,02 | 99,38 |
| 37,5 | 60,94 | **75,59** | 84,74 | 90,46 | 94,04 | 96,27 | 97,67 | 98,54 | 99,09 | 99,43 |
| 38 | 61,56 | **76,17** | 85,22 | 90,84 | 94,32 | 96,48 | 97,82 | 98,65 | 99,16 | 99,48 |
| 39 | 62,79 | **77,30** | 86,15 | 91,55 | 94,85 | 96,86 | 98,08 | 98,83 | 99,29 | 99,56 |
| 40 | 64,00 | **78,40** | 87,04 | 92,22 | 95,33 | 97,20 | 98,32 | 98,99 | 99,40 | 99,64 |
| 42,5 | 66,94 | **80,99** | 89,07 | 93,71 | 96,39 | 97,92 | 98,81 | 99,31 | 99,60 | 99,77 |
| **45** | 69,75 | **83,36** | 90,85 | 94,97 | 97,23 | 98,48 | 99,16 | 99,54 | 99,75 | 99,86 |
| 46 | 70,84 | **84,25** | 91,50 | 95,41 | 97,52 | 98,66 | 99,28 | 99,61 | 99,79 | 99,89 |
| 47 | 71,91 | **85,11** | 92,11 | 95,82 | 97,78 | 98,83 | 99,38 | 99,67 | 99,83 | 99,91 |
| 48 | 72,96 | **85,94** | 92,69 | 96,20 | 98,02 | 98,97 | 99,47 | 99,72 | 99,86 | 99,92 |
| 49 | 73,99 | **86,73** | 93,23 | 96,55 | 98,24 | 99,10 | 99,54 | 99,77 | 99,88 | 99,94 |
| 50 | 75,00 | **87,50** | 93,75 | 96,88 | 98,44 | 99,22 | 99,61 | 99,80 | 99,90 | 99,95 |
| 51 | 75,99 | **88,24** | 94,24 | 97,18 | 98,62 | 99,32 | 99,67 | 99,84 | 99,92 | 99,96 |
| 52 | 76,96 | **88,94** | 94,69 | 97,45 | 98,78 | 99,41 | 99,72 | 99,86 | 99,94 | 99,97 |
| 53 | 77,91 | **89,62** | 95,12 | 97,71 | 98,92 | 99,49 | 99,76 | 99,89 | 99,95 | 99,98 |
| 54 | 78,84 | **90,27** | 95,52 | 97,94 | 99,05 | 99,56 | 99,80 | 99,91 | 99,96 | 99,98 |
| 55 | 79,75 | **90,89** | 95,90 | 98,15 | 99,17 | 99,63 | 99,83 | 99,92 | 99,97 | 99,98 |
| 56 | 80,64 | **91,48** | 96,25 | 98,35 | 99,27 | 99,68 | 99,86 | 99,94 | 99,97 | 99,99 |
| 57 | 81,51 | **92,05** | 96,58 | 98,53 | 99,37 | 99,73 | 99,88 | 99,95 | 99,98 | 99,99 |
| 58 | 82,36 | **92,59** | 96,89 | 98,69 | 99,45 | 99,77 | 99,90 | 99,96 | 99,98 | 99,99 |
| 59 | 83,19 | **93,11** | 97,17 | 98,84 | 99,52 | 99,81 | 99,92 | 99,97 | 99,99 | 99,99 |
| 60 | 84,00 | **93,60** | 97,44 | 98,98 | 99,59 | 99,84 | 99,93 | 99,97 | 99,99 | 100,00 |
| 65 | 87,75 | 95,71 | 98,50 | 99,47 | 99,82 | 99,94 | 99,98 | 99,99 | 100,00 | |
| 67,5 | 89,44 | ***96,57*** | *98,88* | *99,64* | *99,88* | *99,96* | *99,99* | 100,00 | | |
| 70 | 91,00 | **97,30** | 99,19 | 99,76 | 99,93 | 99,98 | 99,99 | 100,00 | | |
| 75 | 93,75 | **98,44** | 99,61 | 99,90 | 99,98 | 99,99 | 100,00 | | | |
| 80 | 96,00 | **99,20** | 99,84 | 99,97 | 99,99 | 100,00 | | | | |
| 85 | 97,75 | **99,66** | 99,95 | 99,99 | 100,00 | | | | | |
| 90 | 99,00 | **99,90** | 99,99 | 100,00 | | | | | | |

*Source: The author's compilation based on the amount of wood sold by the 'State Forests' National Forest Holding at the end of 2016*

1. The evaluation of wood for the purchasing habit should be abandoned, or at least its form should be modified. In particular, it is unacceptable to compare the purchasing history in the last 3 years with the amount of wood purchased in the last year especially when there is high variability between forest inspectorates in their offers of wood assortments and quality classes. Undoubtedly, this process is independent of entrepreneurs. There was considerable confusion brought by offers of log wood as many forest inspectorates did not have them in previous years. There was not any direct purchasing habit referring to these offers, nor were there any equivalents given.
2. The purchasing geography is generally a good assumption. However, the place of purchase does not always depend on the entrepreneur's decision, because, as was mentioned before, there is high variability between forest inspectorates in their offers. Apart from that, as there are considerable differences between forest inspectorates in the ideal state prices for the same wood type and quality class, the positive effect of this factor is significantly reduced. It is difficult to assume that the entrepreneur will make a voluntary and conscious decision to pay more for transport over a longer distance. The purchasing geography can be replaced by the assumption of entrepreneurs' intuitive and conscious decisions taken to their own advantage.
3. Using the price of wood as the only evaluation criterion is justified when a large group of clients offers the maximum price at each stage of the purchasing procedure. This situation could be observed in 2017. Will there be any changes?
4. It is necessary to set the maximum price to prevent excessive price inflation caused by a narrow group of clients who are interested in taking over the market in a longer perspective or in blocking it.
5. It is not necessary to reduce the offers with minimal interest. At present the orders where the interest is close to zero are reduced proportionally to their evaluation. In 2017 this unnecessary reduction amounted to 1.2%, whereas the price changed by 10 zlotys/$m^3$. It was too much and not necessary.

**REFERENCES**


1. Lis W. (2014): Strategia sektora leśno-drzewnego w okresie koniunktury i dekoniunktury na rynku drzewnym. W: Lasy i gospodarka leśna jako instrumenty ekonomicznego i społecznego rozwoju kraju. Praca naukowa pod redakcją Adama Kaliszewskiego i Kazimierza Rykowskiego. Instytut Badawczy Leśnictwa. Sękocin Stary, s. 67 – 101
2. Malinowski Z., Lis W., Wieruszewski M. (2016): Submisje jako kierunek dystrybucji cennego surowca drzewnego. SYLWAN R.160 (7):531-538
3. Zarządzenie (2016a) nr 46 dyrektora generalnego Lasów Państwowych z 24 października 2016 w sprawie sprzedaży drewna prowadzonej przez Państwowe Gospodarstwo Leśne Lasy Państwowe. ZM.800.2.2016 (http://drewno.zilp.lasy.gov.pl/drewno/Zarzadzenie%20nr%2046_2016_Sprzedaz_drewna_na_2017)
4. Zarządzenie (2016b) w sprawie sprzedaży drewna prowadzonej przez Państwowe Gospodarstwo Leśne Lasy Państwowe; Przesłanki, uzasadnienie prawne i merytoryczne oraz konkretyzacja postanowień zarządzenia (maszynopis). Dokumentacja Komisji Leśno – Drzewnej. Warszawa 2016.