Abstract: In this study, nutritive value of rapeseed, rapeseed meal and extracted rapeseed meal were compared. The experiments were performed using the mobile bag technique with three dry cows (Black Pied), fitted with a large ruminal cannula and a T-piece cannula in the proximal duodenum. The procedure involves three steps:
1. Incubation of feed samples for 16 hours in the rumen of cattle to obtain the undegraded residues.
2. Incubation of the residues for 2.5 hours in an artificial stomach (abomasum).

The cows were fed twice a day (at 6 a.m. and 4 p.m.) and their daily rations consisted of 4 kg alfalfa hay, 10 kg maize silage and 1 kg barley meal with a vitamin and mineral supplement. Intestinal digestibility of rumen undegraded protein was 30% for rapeseed, 15% for rapeseed meal and 65% for extracted rapeseed meal. There were statistically significant differences among the feeds (P<0.05). This work was supported by the Ministry of Agriculture of the Czech Republic (MZE 0002701403).

OBJECTIVES
To determine intestinal digestibility of rumen undegraded protein by mobile bag method in rapeseed, rapeseed meal and extracted rapeseed meal.

INTRODUCTION
The precise feed quality evaluation is one of the main assumptions for the increase of milk production in dairy cows and for the efficient utilisation of feeds. Protein supplements are the essential part of diets for high-production dairy cows. Based on current knowledge of ruminant physiology of nutrition, new systems of protein evaluation in feeds for ruminants have been introduced and accepted in most European countries and in the USA. These systems determine how adequately are the requirements of organism for the amino acids...
intake met according to the quantity of protein actually entering the small intestine. All these systems are based on the same principles:
1) Separate evaluation of protein used by a host animal and by micro-organisms in the rumen.
2) The use of protein degradability (the most important criterion) and intestinal digestibility of rumen undegraded protein.

In the Czech Republic, the PDI system is used which has been taken over from French PDI system - Proteines vraies récemment Digestibles dans l’Intestin (Verité et al., 1988). To determine PDI units, it is necessary to know nitrogen content, digestibility of the organic matter, degradability of protein in the rumen and intestinal digestibility of protein undegradable in the rumen.

MATERIAL AND METHODS

Feeds

<table>
<thead>
<tr>
<th>Feed</th>
<th>Dry matter</th>
<th>Crude protein</th>
<th>Ether extract</th>
<th>Crude fibre</th>
<th>Nitrogen free extract</th>
<th>Organic matter</th>
<th>Gross energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapeseed (1418)</td>
<td>927</td>
<td>214</td>
<td>466</td>
<td>203</td>
<td>75</td>
<td>958</td>
<td>29.320</td>
</tr>
<tr>
<td>Rapeseed meal (1419)</td>
<td>902</td>
<td>322</td>
<td>182</td>
<td>113</td>
<td>318</td>
<td>935</td>
<td>23.253</td>
</tr>
<tr>
<td>Extracted rapeseed meal (1420)</td>
<td>879</td>
<td>390</td>
<td>25</td>
<td>114</td>
<td>396</td>
<td>925</td>
<td>20.539</td>
</tr>
</tbody>
</table>

Mobile bag method
The procedure involves three steps:
1. Incubation of feed samples for 16 hours in the rumen of cattle to obtain the undegraded residues.
2. Incubation of the residues for 2.5 hours in an artificial stomach (abomasum).

Animals
The mobile bag method was performed with three dry cows (Black Pied), fitted with a large ruminal cannula and a T-piece cannula in the proximal duodenum. The cows were fed twice a day and their daily rations consisted of 4 kg alfalfa hay, 10 kg maize silage and 1 kg barley meal with a vitamin and mineral supplement.

RESULTS
Intestinal digestibility of rumen undegraded protein was 30 % for rapeseed, 15 % for rapeseed meal and 65 % for extracted rapeseed meal. There were statistically significant difference among the feeds (P<0.05).

REFERENCES
Acknowledgement
This work was supported by the Ministry of Agriculture of the Czech Republic (MZE 0002701403).