Problem
Feeding poultry with regional and fully organic components, in line with animal needs, is still very difficult to achieve in many parts of Europe. The supply of sulphur-containing amino acids (e.g., methionine) is especially challenging.

Solution
Nettles have traditionally been used as a poultry feed, and have a high protein content. The use of nettles for laying hens was tested in two feeding trials. Dried nettles were used in proportions of 10% (trial 1) and 5% (trial 2) in the respective rations of the farms, replacing 5% of existing protein source. In trial 1, the milled grass was additionally reduced by 5% (ration of trial 1, see table 1). The fodder was prepared on the farms with mobile grinding and mixing equipment. The feed (see figure 1) was fed ad libitum to almost 300 laying hens by automatic feeders. The bird genetics used were Sandy (trial 1) and Lohmann Brown (trial 2). The feeding duration was 10 days in trial 1 and 26 days in trial 2. Trial 1 took place in the mobile house (see figure 2), trial 2 in the permanent house.

Benefits
The aim was to reduce the amount of purchased protein concentrates. Concentrates usually contain oilcakes from all over the world (e.g. soya, sunflower, rapeseed and sesame). The use of nettles also promises a health-promoting effect.

Practical recommendation
- Subjective evaluation of the feed by farmers and consultants was very positive. The hens also accepted the changed rations very well. The feed intake did not change (120-130 g per hen and day).
- The faeces were very solid and tended to be positively influenced.
- The laying performance of the animals was constant (at almost 80% of flock in trial 1 and 88% in trial 2).
- The quality characteristics (egg shell, yolk colour, protein quality) did not change in the tests.
- The nettles were purchased for the trials. The stalk content was very high, so the feed values were worse than expected. In our own cultivation trials, significantly higher methionine levels were found with pure leaf mass. Further trials with higher percentages in the ration would be interesting here.
- The purchase of nettles as medicinal and spice plant (organic) is very costly (approx. 5 €/ kg). Other sources are not available. Nettles are not included in the list of authorised feedstuffs. Therefore, feeding on a larger scale is legally not possible in the long term. The experiment was only a first estimation of the potential.
### Table 1: Ration trial 1

<table>
<thead>
<tr>
<th>Components</th>
<th>Share</th>
<th>Ingredients</th>
<th>Blend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>ME  MJ</td>
<td>Protein %</td>
</tr>
<tr>
<td>Corn</td>
<td>15.00</td>
<td>2.16</td>
<td>1.29</td>
</tr>
<tr>
<td>Wheat</td>
<td>16.25</td>
<td>1.51</td>
<td>1.76</td>
</tr>
<tr>
<td>Triticale</td>
<td>9.00</td>
<td>0.93</td>
<td>0.95</td>
</tr>
<tr>
<td>Oat</td>
<td>5.00</td>
<td>0.40</td>
<td>0.53</td>
</tr>
<tr>
<td>Milled alfalfa</td>
<td>2.50</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td>Peas</td>
<td>6.00</td>
<td>0.76</td>
<td>1.26</td>
</tr>
<tr>
<td>Beans</td>
<td>2.50</td>
<td>0.27</td>
<td>0.66</td>
</tr>
<tr>
<td>Bread liquid</td>
<td>2.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Oyster shells</td>
<td>1.75</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Protein concentrate</td>
<td>30.00</td>
<td>2.40</td>
<td>7.95</td>
</tr>
<tr>
<td>Nettles</td>
<td>10.00</td>
<td>0.56</td>
<td>1.85</td>
</tr>
<tr>
<td>Content in compound feed</td>
<td>100.00</td>
<td>9.13</td>
<td>16.73</td>
</tr>
</tbody>
</table>

**Target values**

|       | 10.50 | 17.00 | 4.00 | 5-7 | 0.78 | 0.32 | 0.16 | 3.70 | 0.53 | 0.18 |

**Protein from cereals:** 18%

Abbreviations: ME = Metabolizable Energy; MJ = Megajoule; Lys = Lysine; Met = Methionine; Trp = Tryptophan; Ca = Calcium; P = Phosphorus; Na = Natrium (Sodium)

Protein, Fat, Fibre = indicated in crude

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**Figure 1:** Feed. Photo: Thomas Neumaier

**Figure 2:** Feeding in mobile stables. Photo: Christopher Lindner

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PRACTICE ABSTRACT

Further information

Video
- Check the Video about experiments on the cultivation and feeding of nettles (German with English subtitles).

Weblinks
- A Practice Abstract on the cultivation of nettles can be found here (German and English).
- Check the Organic Farm Knowledge platform for more practical recommendations.

About this practice abstract and OK-Net EcoFeed

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