ABSTRACTS
The objective was to test the efficiency of different species for interseeding in relation to forage and crude protein production. Availability of forage and crude protein were evaluated every spring, after 60 days rest. The design was a split-split plot: in an Argiudol soil legumes were the whole plot, grasses subplot and fertilizer sub-subplot. Dry matter accumulation did not show any difference in relation to treatments in three of four springs. Crude protein showed differences in three of four springs, being interseeding better than control. Interseeding of old pastures resulted in a good practice to keep the balance legume-grass, as a way to lengthen the period of utilization.

RESULTS
Dry matter production in each spring showed no differences due to different legumes or grasses or interaction of both. These results are different from those of Avendaño and Ovalles (1989) who stated that differences can be expected according to species. Only differences were observed in relation with fertilization treatments as they are showed in Table 1. These data agree with those of Avendaño and Ovalles (1989) according to phosphorus fertilization and forage yield. Crude protein yields did not show differences in relation to legumes and legume-grass interaction. Only in the first spring did hardingrass show more protein (P<0,04) than fescue and orchardgrass. For simplicity, only the means for fertilization in relation to the non fertilized ones are shown (Table 2). If we accept, as Mallarino and Wedin (1990) and McBratney (1981) did, that legume proportion and forage production decrease in old pastures, interseeding with legumes and grasses can help maintain high productions with higher quality in our area.

REFERENCES


MATERIALS AND METHODS
The trial was located in an Argiudol soil in Pergamino, Argentina, 33,56 S 60,33 W). The pasture to be interseeded was alfalfa (Medicago sativa L.), fescue (Festuca arundinacea Schreb., brome (Bromus unioloides HBK.) and white clover (Trifolium repens L.), hardingrass (Serpoles hirsuta L.), orchardgrass (Dactylis glomerata L.) and red clover (Trifolium pratens L.) (Bromus unioloides HBK.) and white clover (Trifolium repens L.), fescue (Festuca arundinacea Schreb., brome (Bromus unioloides HBK.) and hardingrass (Serpoles hirsuta L.). The pasture to be interseeded was alfalfa (Medicago sativa L.), fescue (Festuca arundinacea Schreb., brome (Bromus unioloides HBK.) and white clover (Trifolium repens L.), hardingrass (Serpoles hirsuta L.), orchardgrass (Dactylis glomerata L.) and red clover (Trifolium pratens L.)

INTRODUCTION
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KEYWORDS
Interseeding, legumes, grasses, forage production, protein production

FORAGE AND PROTEIN PRODUCTION PER HECTARE USING DIFFERENT SPECIES FOR INTERSEEDING
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### Table 1
Dry matter accumulation in each spring, with and without fertilization (four years data) (DM/kg/ha).

<table>
<thead>
<tr>
<th>Springs</th>
<th>1st.</th>
<th>2nd.</th>
<th>3rd.</th>
<th>4th.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interseeded</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertilized</td>
<td>2444 a</td>
<td>2582 a</td>
<td>2651 a</td>
<td>4016 a</td>
</tr>
<tr>
<td>Interseeded not Fertilized</td>
<td>2364 a</td>
<td>2680 a</td>
<td>2512 b</td>
<td>4022 a</td>
</tr>
</tbody>
</table>

NS NS 0,05 NS

CV: 14,53% CV: 15,0% CV: 9,55% CV: 5,47%

SEM: 67,2% SEM: 93,02 SEM: 58,12 SEM: 51,8

Means followed by the same letter are not different.

### Table 2
Crude protein yield (kg/ha) Four year data

<table>
<thead>
<tr>
<th>Springs</th>
<th>1st.</th>
<th>2nd.</th>
<th>3rd.</th>
<th>4th.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interseeded</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertilized</td>
<td>260 a</td>
<td>268 a</td>
<td>276 a</td>
<td>413</td>
</tr>
<tr>
<td>Interseeded not Fertilized</td>
<td>222 b</td>
<td>257 a</td>
<td>244 b</td>
<td>382</td>
</tr>
</tbody>
</table>

P-0,0004 NS P-0,0006 P-0,0025

CV: 13,58% CV: 16,15% CV: 11,21% CV: 7,89%

SEM: 7,71 SEM: 10,0 SEM: 6,88 SEM: 7,43

Means followed by the same letter are not different.