The development of Solospun

Mr Martin Prins

CSIRO
Sirospun

- Sirospun, in essence, is the combination of spinning and two-folding in a single step on the spinning machine.
- Sirospun is suited to the production of lightweight, trans-seasonal Cool Wool fabrics.
Sirospun

**Two major advantages:**

- cost of two-folding is eliminated
- productivity per spindle on the spinning frame is effectively doubled.
THE SIROSPUN™ PROCESS

ROVING GUIDE

REAR ROLLER

PREDRAFTING ZONE CONDENSER

MIDDLE ROLLER

APRON

MAIN DRAFTING ZONE CONDENSER

FRONT ROLLER

YARN BREAK DETECTOR

WORSTED RING SPINNING MACHINE
Sirospun
Solospun

- A spinning technology that produces a weavable singles yarn in a single step from a single roving.
- A simple, inexpensive, clip-on attachment to standard long-staple spinning frames.
Solospun
Solospun

- Achieves fibre security through the actions of localised twist in sub-strands and fibre migration.
Solospun
Solospun

**Economic benefits:**
- higher spinning productivity and efficiency
- elimination of twisting and associated processes
- higher winding productivity and efficiency.
Solospun

Product benefits:

- Finer yarns at lower cost
- Softer yarns at lighter weight.
## Solospun - benefits

<table>
<thead>
<tr>
<th>Process</th>
<th>2/64 Nm Twofold 19.5 µm (US$/kg)</th>
<th>1/32Nm Solospun™ 19.5 µm (US$/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top*</td>
<td>9.81</td>
<td>9.81</td>
</tr>
<tr>
<td>Drawing</td>
<td>0.16</td>
<td>0.14</td>
</tr>
<tr>
<td>Roving</td>
<td>0.12</td>
<td>0.06</td>
</tr>
<tr>
<td>Spinning</td>
<td>3.95</td>
<td>1.97</td>
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<tr>
<td>Steaming</td>
<td>0.04</td>
<td>0.04</td>
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<tr>
<td>Winding</td>
<td>0.46</td>
<td>0.23</td>
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<tr>
<td>Twisting</td>
<td>1.10</td>
<td>0</td>
</tr>
<tr>
<td>Steaming</td>
<td>0.04</td>
<td>0</td>
</tr>
<tr>
<td>Overheads</td>
<td>0.51</td>
<td>0.26</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>16.19</td>
<td>12.51</td>
</tr>
<tr>
<td><strong>Saving %</strong></td>
<td>-</td>
<td>3.59</td>
</tr>
<tr>
<td><strong>Saving $</strong></td>
<td>-</td>
<td>22%</td>
</tr>
</tbody>
</table>

*Wool top prices @ March 1998