Liquid Coating Techniques of Animal Feeds

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Feed temperature in typical expanding process

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**Graph:**

- **Y-axis:** °C
- **X-axis:**
  - Pre-bin
  - Conditioner
  - FP
  - Die
  - Conveyor
  - Cooler

- **Lines:**
  - Dashed line: Without Expander
  - Solid line: With Expander
Effect of processing temperature on phytase activity in a barley/wheat-based pig feed ration

**Fig. 1**

<table>
<thead>
<tr>
<th>Process Stage</th>
<th>Temperature</th>
<th>&quot;Relative&quot; Phytase Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before conditioner</td>
<td>27.9°C</td>
<td>100</td>
</tr>
<tr>
<td>After expander</td>
<td>80.5°C</td>
<td>76</td>
</tr>
<tr>
<td>After pellet press</td>
<td>70°C</td>
<td>47</td>
</tr>
<tr>
<td>After expander</td>
<td>102°C</td>
<td>18</td>
</tr>
<tr>
<td>After expander+press</td>
<td>79°C</td>
<td>12</td>
</tr>
</tbody>
</table>
Figure 2. Effect of processing temperature, 160 and 195 deg F (70 and 90 deg C), on vitamins

Pickford 1992
Roche data
LC50S system configuration

Diagram showing various components of the system:
- High level indicator
- Middle level indicator
- Low level indicator
- Bin
- Control panel
- Manual 3-way valve
- Automatic valve
- Flow meter
- Globe valve
- Test pipe
- Liquid tank
- Relief valve
- Pressure gauge
- Liquid pump
- Strainer
- Drain pipe
- Finished product
LC50S system configuration
LC50 liquid coater

coating chamber

mass disk

liquid disk

paddle

mixing chamber
LC50 Liquid Coater
LC50 Liquid Coater
On-line coating system
Off-line coating system