CROPPING CONCEPTS
FEEDING FARMER INNOVATIONS
JAN 20 - 22 2015
PNW OILSEED & DIRECT SEED CONFERENCE
THREE RIVERS CONVENTION CENTER
Kennewick, WA

cs: css.wsu.edu/biofuels/  www.directseed.org/events;

WASHINGTON STATE UNIVERSITY
EXTENSION
Pacific Northwest Direct Seed Association
Winter Canola Water Use, Winter Survival

Bill Pan, Megan Reese, Lauren Young, Dennis Roe, Frank Young, Bill Schillinger
Dept Crop and Soil Sciences
Seedling Development

**Oilseeds**

Epigeal emergence: cotyledons are pushed out of the ground.

**Cereals**

Shoot meristems

One tap root

Several seminal roots
Ralston, 2013-14, All winter canola died
Winter canola kill in lower landscape at Dusty, WA
Are water stressed plants less cold tolerant?

Ritzville, 2013
Are taller plants with higher shoot meristems less cold tolerant?

**Planting Date**

**Winter Survival %**

<table>
<thead>
<tr>
<th>Planting Date</th>
<th>Stalk Height (in)</th>
<th>% survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Jun</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>26-Jun</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>5-Aug</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>12-Aug</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>
Good survival in 2011-2012 across the region
KCl: soluble salts lowers freezing point in plant cells, but have not been able to demonstrate improved winter survival with KCl applications in field experiments
Thanks to growers for plot ground:

- Hennings, Ralston
- Stubbs, Dusty
- Nollmeyers, Davenport
- Johnsons, Davenport