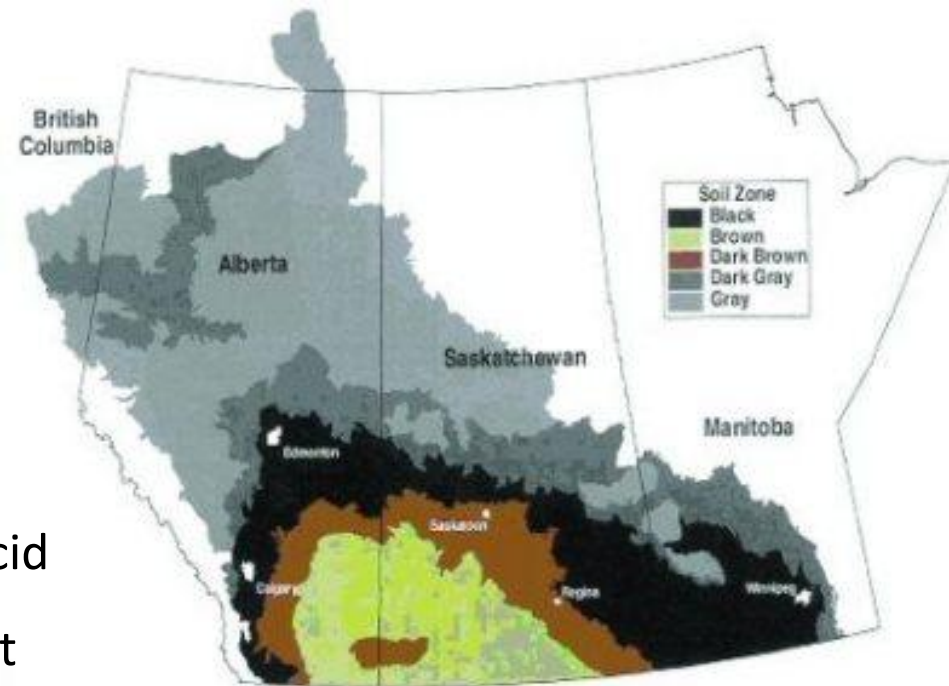
A photograph of a cage containing several brown layer chickens. The cage has a metal wire floor and a metal bar at the top. A large metal tray filled with brown feed is positioned below the chickens. In the foreground, four brown eggs are laid out on the wire floor. The text is overlaid on the image in yellow and white.

**Egg Production of Brown Layers Fed
Solvent-Extracted or Extruded+
Pressed *B. juncea* or *B. napus***

Matt Oryschak
Eduardo Beltranena[©]

B. napus (dark), *B. juncea* (yellow)

- *B. Juncea* is better adapted to grow in the southern Prairies
 - Brown soils “***One crop could add 2M acres of production***” CCC
 - Drought tolerant
 - Thermotolerant
 - Grows more upright
 - Lesser tendency to lodge
 - Pods do not shatter
 - Better for straight combining
 - Slightly more oleic, less linoleic acid
 - No herbicide tolerant varieties yet



B. juncea (yellow), *B. napus* (dark)

- *B. Juncea* canola meal potentially has a higher energy value
 - Yellow, more attractive meal
 - Lower meal fibre content due to thinner seed coat
 - Higher glucosinolates in meal (~10 vs. 3.5 $\mu\text{mol/g}$)
 - Lower antinutritional factors (phytate, sinapine)

	<i>B.</i> <i>Juncea</i> <u>'yellow</u> <u>CM'</u>	<i>B.</i> <i>Napus</i> <u>'dark</u> <u>CM'</u>
Protein, %	39.1	38.9
ADF, %	13.4	18.2
NDF, %	19.8	27.2
Avail. lysine	1.85	1.82



Processing of Canola

Solvent Extraction



Cold-Pressed



Expeller-Pressed



Extruded+Expeller Pressed



Materials & Methods

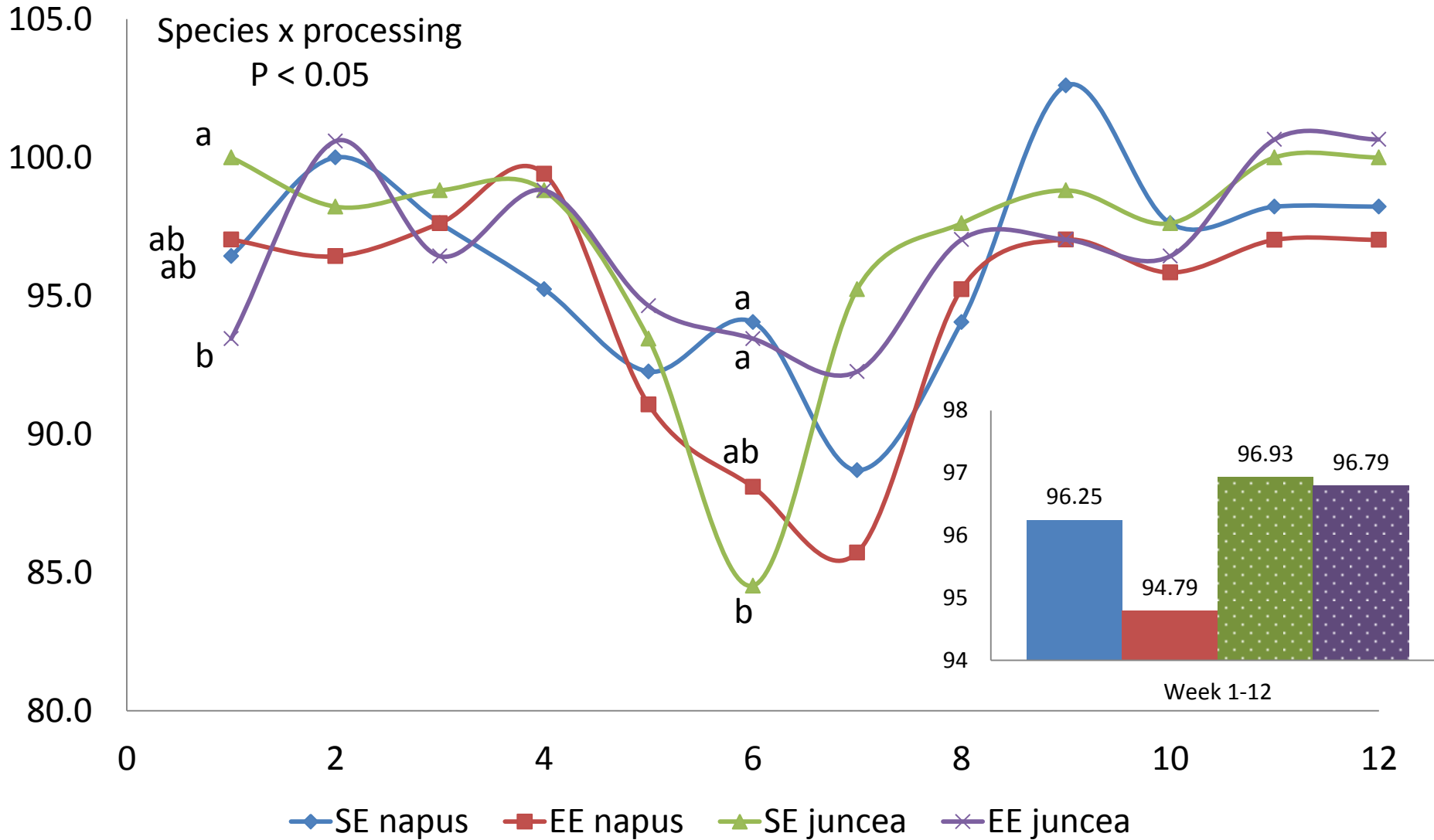
- 2 x 2
 - *B. juncea*, *B. napus*
 - Extruded+pressed, solvent-extracted
- 192 brown Nick layers housed in 48 cages
- 3-tiered battery, blocked by tier
- Layers weighed @4wks
- Feed disappearance
- Egg/cage counted daily
- Egg weight weekly
- Physical & sensory attributes



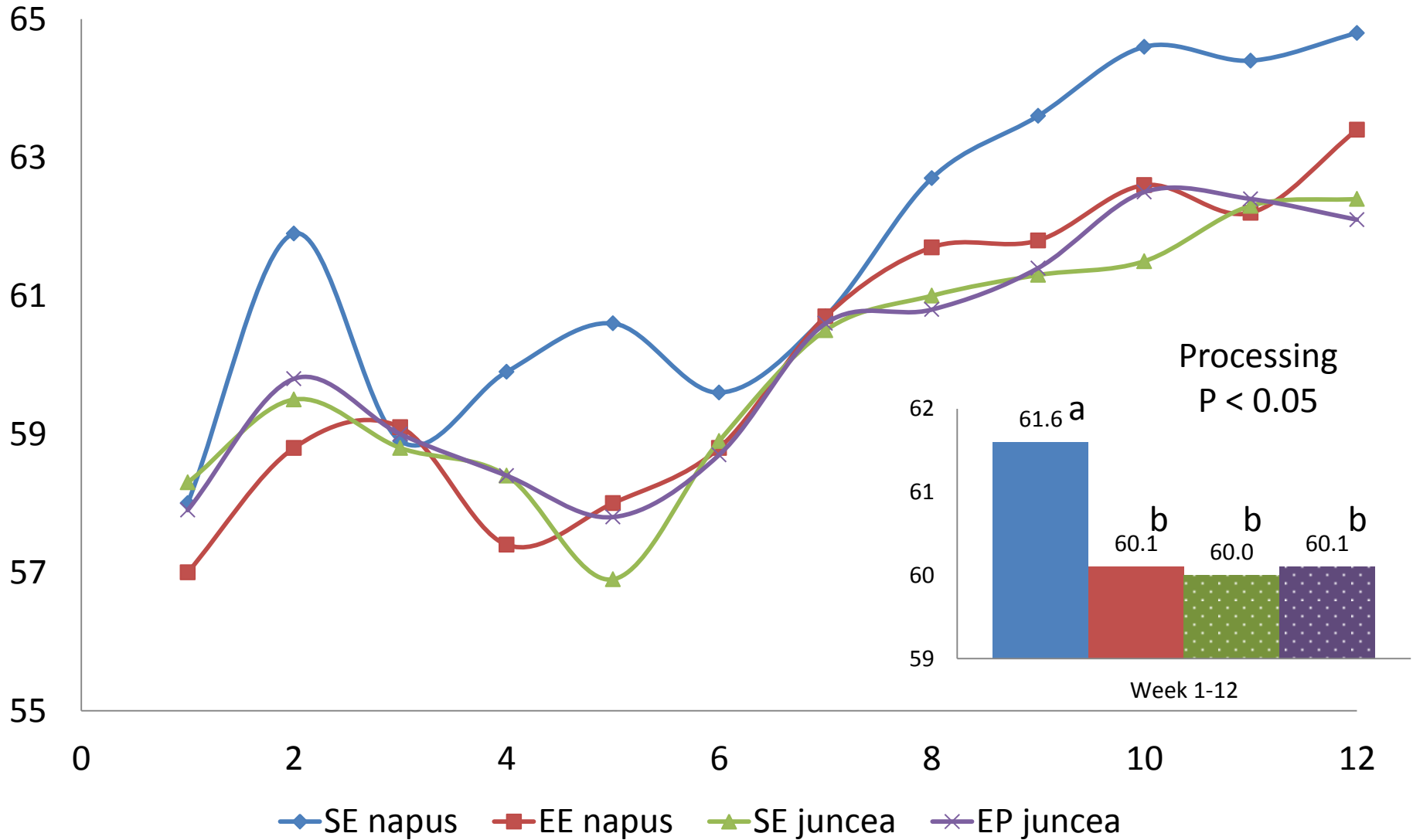
Phase 1 diets

Ingredient, %	SE	EP	SE	EP	Nutrient, %	SE	EP	SE	EP
	napus	napus	juncea	juncea		napus	napus	juncea	juncea
Barley grain	43.47	28.54	43.47	28.54	AME, Mcal/kg	2.8	2.8	2.8	2.8
Wheat grain	12.71	27.34	12.71	27.34	Crude protein	17.5	17.5	17.5	17.5
SE napus meal	20.00				Ether extract	7.813	8.03	7.813	8.03
EP napus meal		20.00			Linoleic acid	1.9	1.95	1.9	1.95
SE juncea meal			20.00		Calcium	3.702	3.702	3.702	3.702
EP juncea meal				20.00	Avail. phosp	0.427	0.427	0.427	0.427
Limestone (coarse)	6.05	6.10	6.05	6.10	Sodium	0.17	0.17	0.17	0.17
Limestone (fine)	3.02	3.05	3.02	3.05	Chloride	0.17	0.17	0.17	0.17
Canola oil	6.50	4.20	6.50	4.20	Magnesium	0.197	0.214	0.197	0.214
Soybean meal	5.10	4.68	5.10	4.68	Dig Lys	0.678	0.678	0.678	0.678
Wheat DDGS	1.05	4.07	1.05	4.07	Dig Met	0.352	0.373	0.352	0.373
Vitamin premix	0.50	0.50	0.50	0.50	Dig Met+Cys	0.618	0.618	0.618	0.618
Choline premix	0.50	0.50	0.50	0.50	Dig Thr	0.478	0.478	0.478	0.478
Mono-dical phosphate	0.45	0.40	0.45	0.40	Dig Try	0.22	0.197	0.22	0.197
Sodium bicarb	0.29	0.25	0.29	0.25	Dig Arg	0.819	0.794	0.819	0.794
Salt	0.11	0.13	0.11	0.13					
D,L - Methionine	0.13	0.10	0.13	0.10					
Lysine - HCl	0.06	0.07	0.06	0.07					
Enzyme	0.05	0.05	0.05	0.05					
Threonine	0.01	0.02	0.01	0.02					

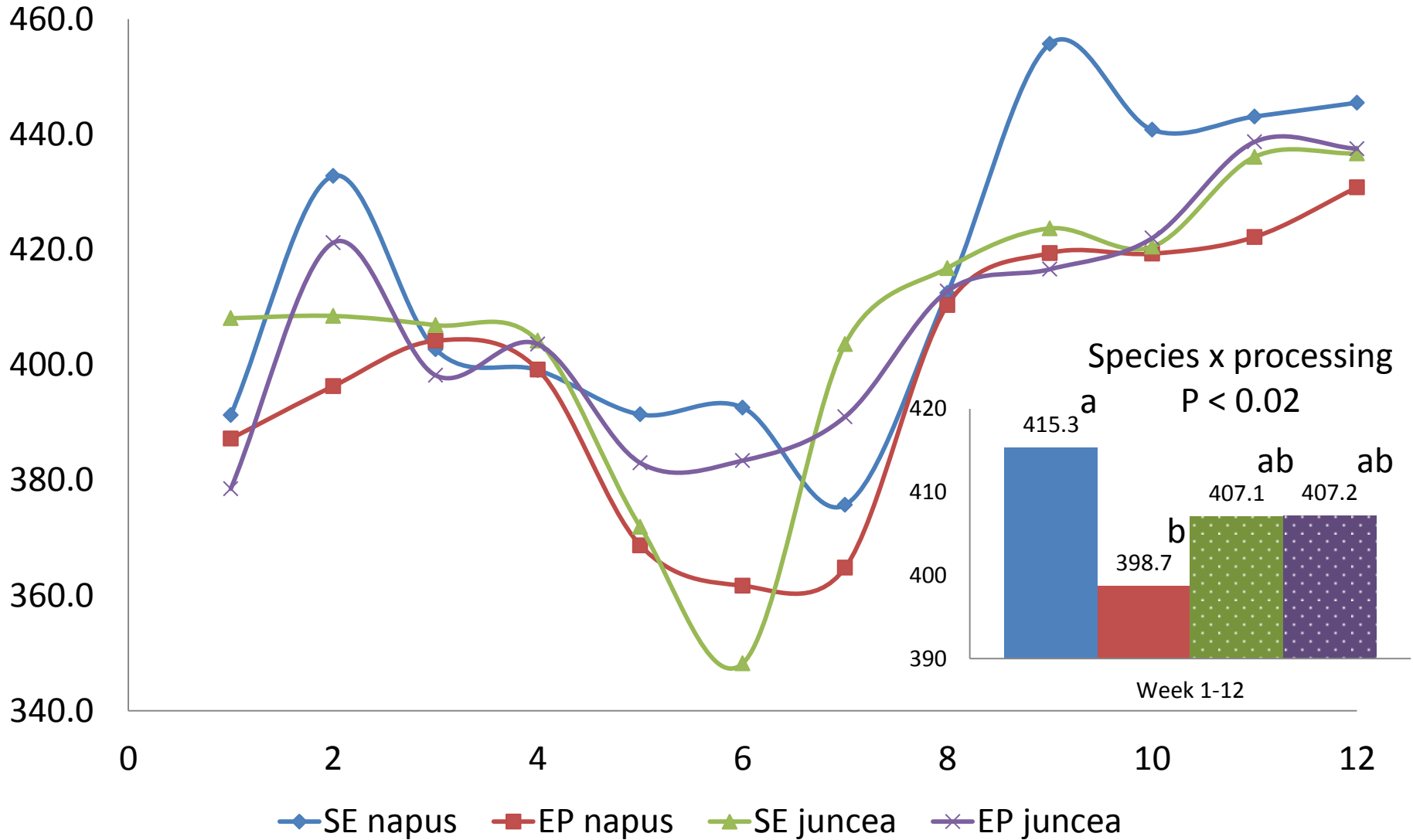
Laying %



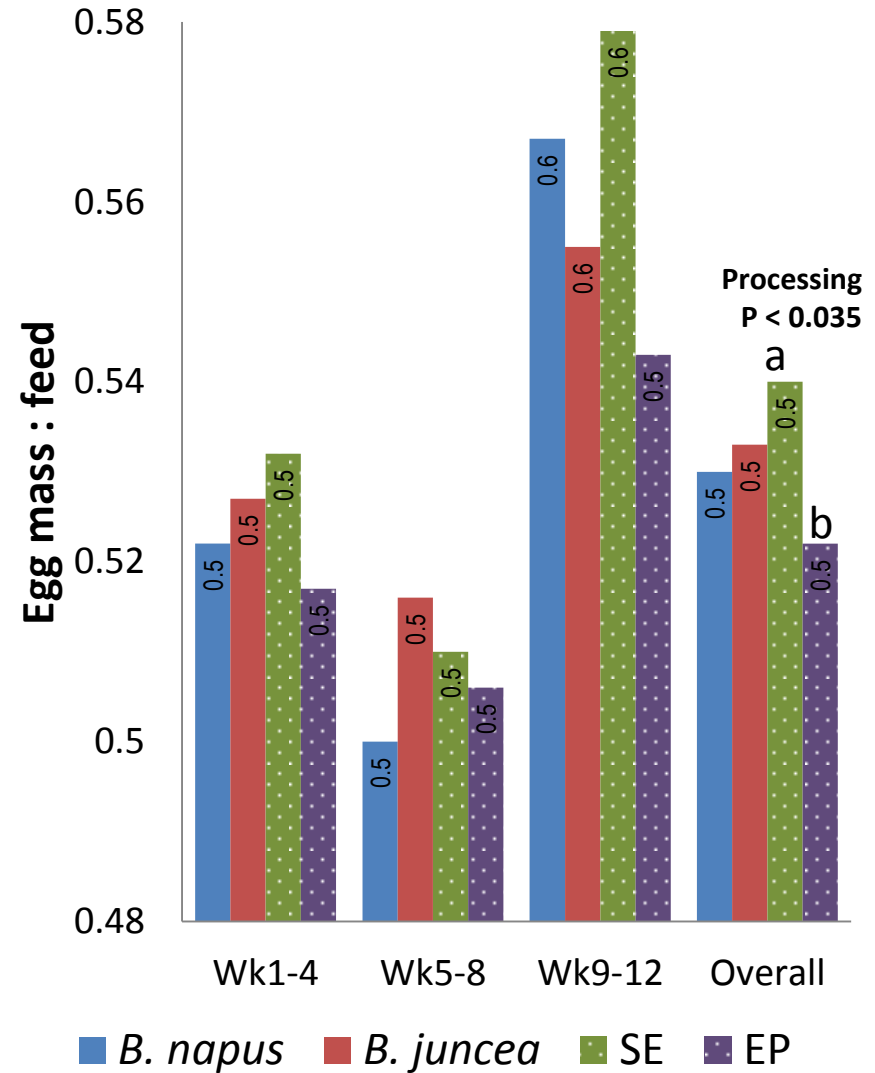
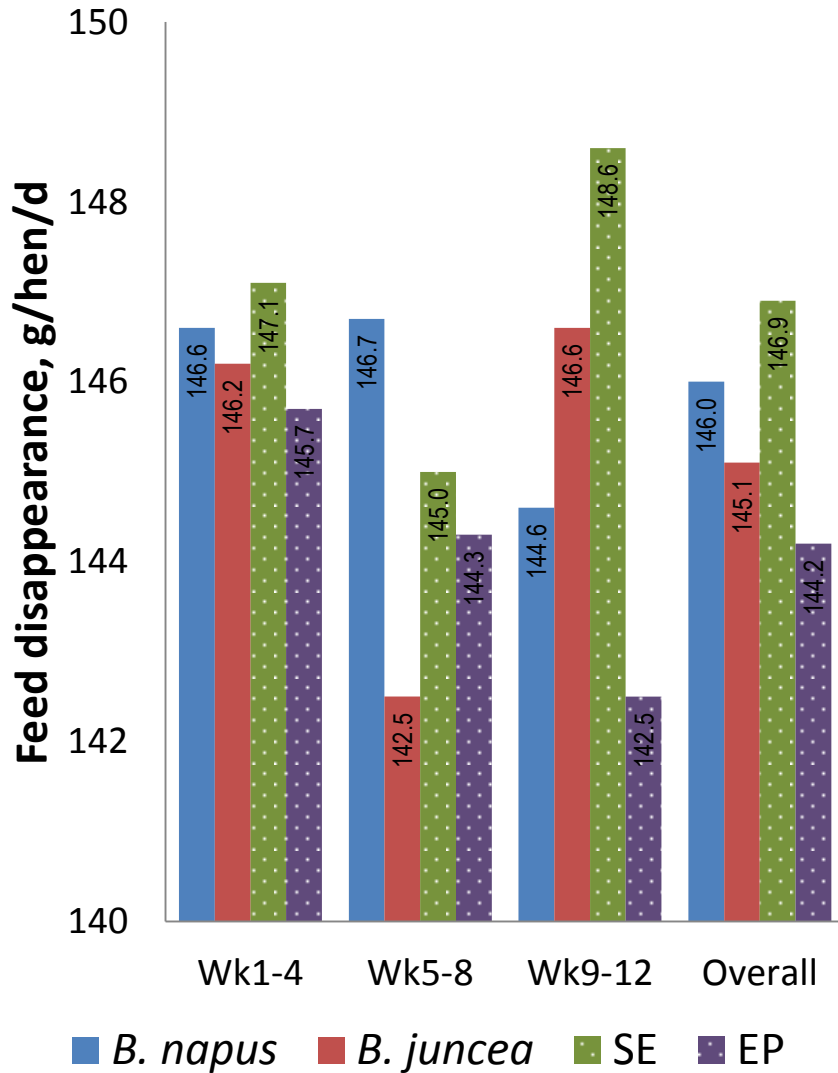
Egg mass, g/egg



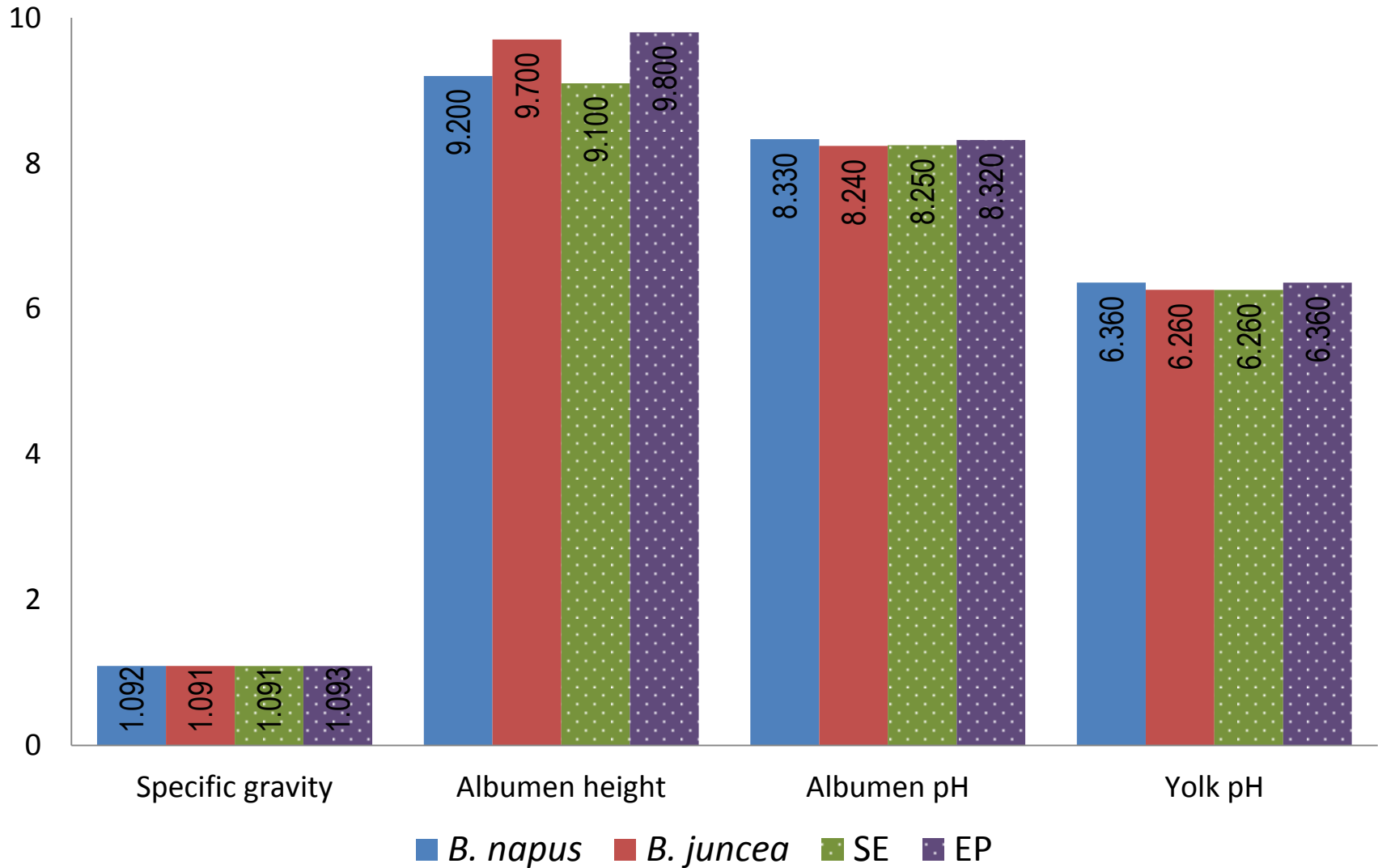
Egg mass, g/hen/week



ADFI, Egg mass:feed



Egg physical characteristics



Conclusions

- Excellent egg production (96% over 12 wks)
- Egg mass greater for SE meals and *B. napus*
- No differences in ADFI or egg mass:feed
- No differences in egg physical characteristics



Agriculture and
Rural Development