



Department of  
Primary Industries

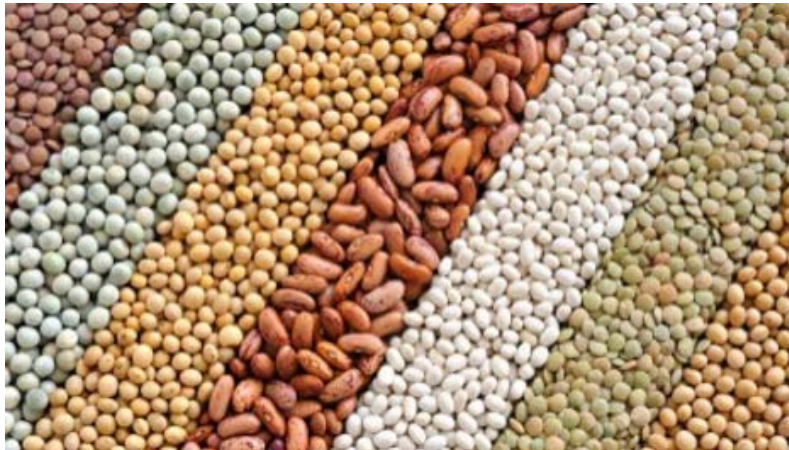


# Raising the Pulse in southern NSW

Mark Richards

# Pulse research at NSW DPI Wagga Wagga

- Co-funded by NSW DPI and GRDC
- Evaluation node for Pulse Breeding Australia (PBA)
- Pulse agronomy & physiology



# Pulse History

- <0.08 m ha 1971 to 1.8 m ha 2015
- Field pea (1893) – Breeding 1980's
- Lupin Breeding – 1970's
- Chickpea Breeding – 1970's
- Faba Bean Breeding – 1970's
- Lentil Breeding – 1990's



# Pulse crop options for southern NSW

- Lupin, Faba Bean, Field Pea, Chickpea, Lentil
- Unique environments in Southern NSW:
  - acidic red-brown soils, cold winters, variable rainfall
- Crossover region between Nthn and Sthn programs

# Benefits of Pulse Crops

- Increase diversity of farming system
- Disease breaks
- Biological N
- Ability to extend the rotation
- Easy to store
- Diversification of markets
- Reduce input costs of following crop



## Pulses

Putting life into the farming system

An insight from growers who are making pulses work



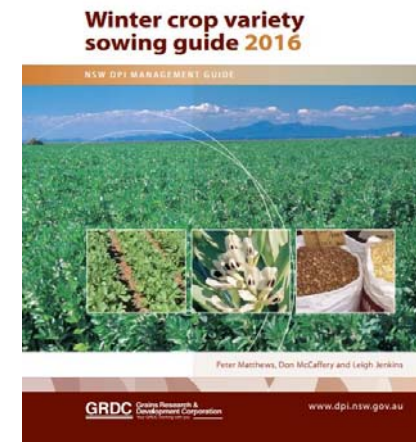
By Dr Eric Armstrong and Di Holding

[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)



# Management is critical

- Pulse handling – belt elevators rather than augers
- Germination testing – sow quality seed
- Paddock selection is critical:
  - Good drainage
  - $\text{pH}_{\text{Ca}} > 5.0$
  - pH stratification (lime incorporation)
  - Residual herbicide carryover (top 5cm)
  - Observe plant-back periods
- Inoculation to ensure effective nodulation
- Stubble
- Sowing times and rates
- Timely weed & insect control
- Preventative fungicide treatments
- Harvest timing & machinery set up





# Narrow-leaf lupin



Yield, HI, pleiochaeta, phomopsis, grey spot, virus res., frost, lodging, herbicide tolerance (B,C,I), aphids, thrips.



# Albus lupin



Yield, biomass management, HI, lodging, anthracnose, pod phomopsis, pleiochaeta, heliothis



# Faba Bean



Yield, canopy management,  
chocolate spot, ascochyta, rust,  
lodging, herbicide tol. (B,I)



# Field Pea



Yield, black spot, bacterial blight, viruses, pea weevil, herbicide tolerance, frost, shattering,



# Lentil - Yenda

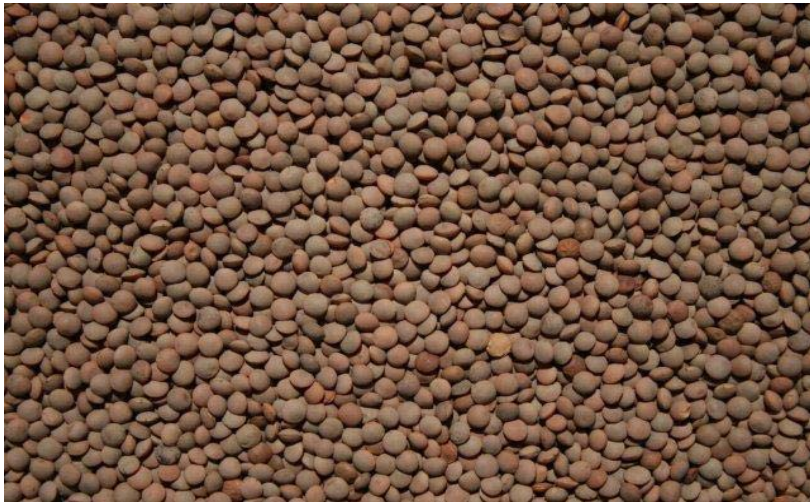


Yield, botyrtis,  
ascochyta, lodging,  
herbicide tol, boron,  
salt





# Lentil - Culcairn





# Chickpea



# Novel Ideas

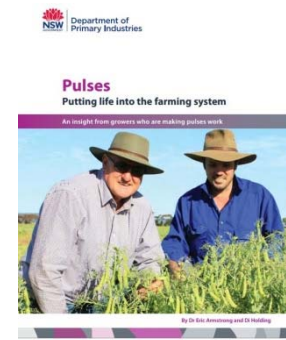
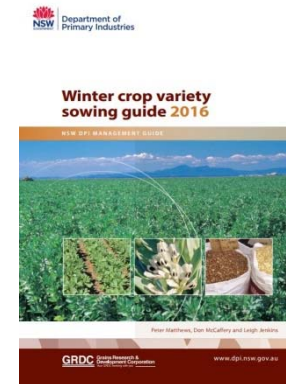


- Protein extract from germinating albus seed
- Fracture fungicide is labelled for control of powdery mildew and botrytis in tomatoes, strawberries and grapes, and brown rot blossom blight in almonds.



# Further information

- NSW DPI - Winter crop variety sowing guide. ([www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au))
- NSW DPI – Weed control in winter crops ([www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au))
- NSW DPI – Southern cropping region trial results. ([www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au))
- Pulse Australia ([www.pulseaus.com.au](http://www.pulseaus.com.au))

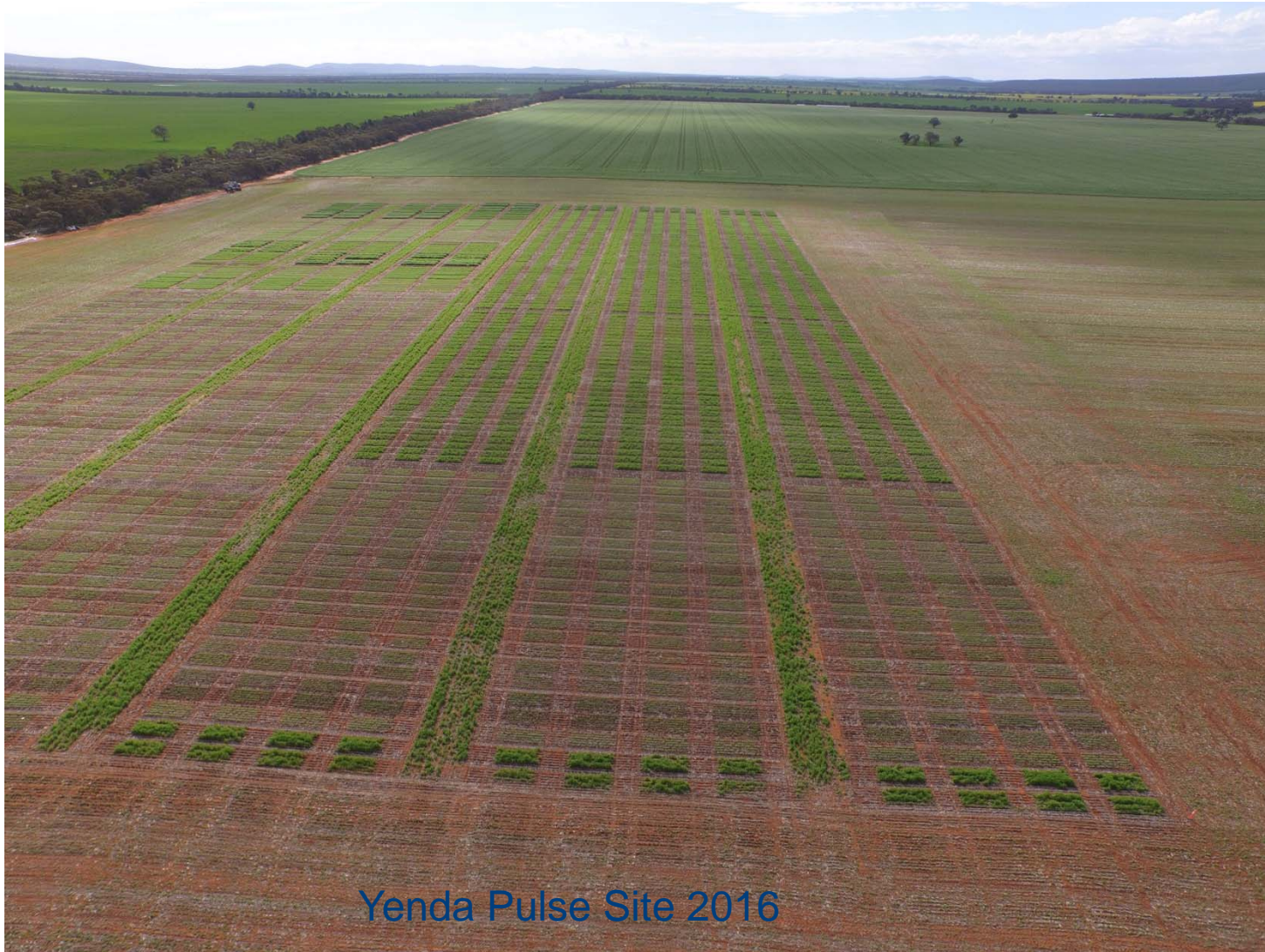


# The future is bright!





# Thankyou



Yenda Pulse Site 2016