

# Beans – Future & growing a quality crop

31<sup>st</sup> January 2018  
Dairygold Symposium,  
Fermoy



- Future outlook
- Spring Bean Agronomy



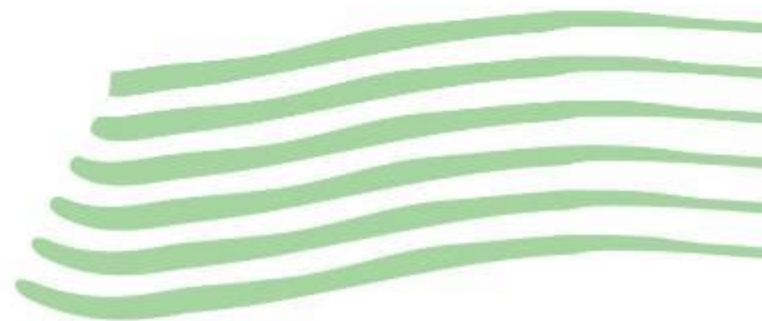
# Quality Beans

- Profitable
- Marketable
- Good for soil
- Reliable
- Potential for investment
- Future development

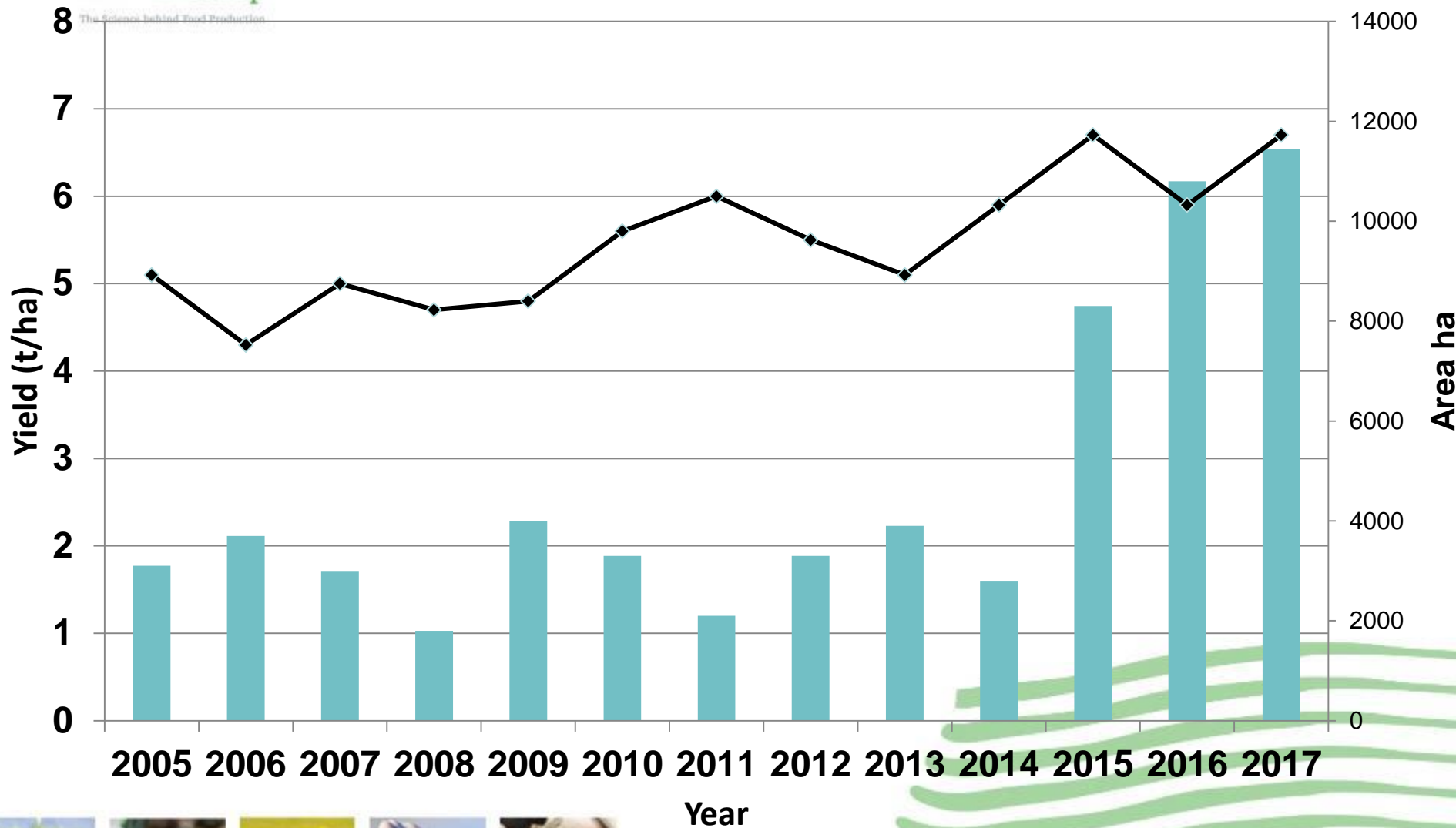


# Profitable

	Beans	S. Barley
Yield (t/ac)	2.8	3.2
Price (€/ton)	175	150
Straw (€/ac)	0	60
<u>Subsidy</u>	<u>100</u>	<u>0</u>
Income	590	540
<u>Costs</u>	<u>350</u>	<u>380</u>
Margin	240	160



## Spring Beans – yield & area



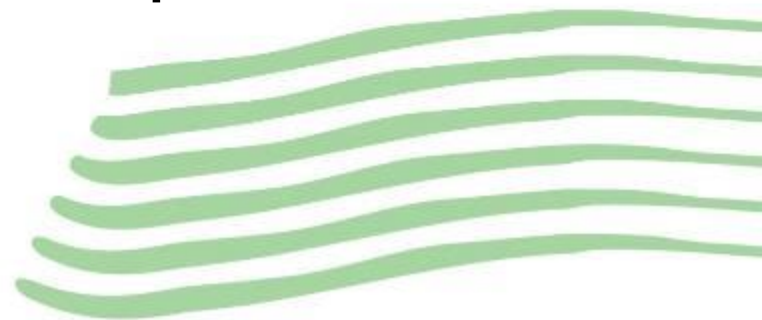
# Marketable & demand

- Proteins are extremely topical – why?
  - Demand is growing globally as emerging economies consume more meat - alternative protein production
  - GM free – debate on Kerrygold Butter
  - Environmental pressure to reduce inputs & CO<sub>2</sub> emissions – no N fertiliser required
  - Rotational benefits and nitrogen fixing capacity will assist with the sustainable farming agenda



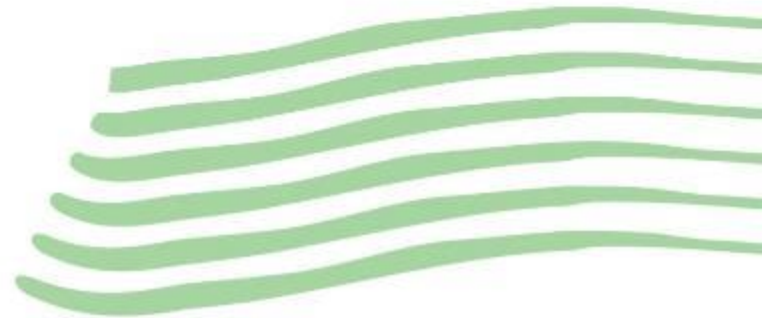
# What we want?

- 2.5 to 3.0 t/ac reliably
- Moistures ~ 20%
- Pods ~ 4" off the ground
- Clean stubble
- Minimal compaction
- Well established following crop of cereals



# Rotation

- Bean yields
- Nematodes
- Downy Mildew
- Weevils
  
- Take-all





# Soil & Fertility

- Medium to heavy soils are most suitable – moisture in stem extension is VIP
- A pH of 6.5 to 7 is ideal. Beans will not yield in acid conditions.
- P & , no yield benefit from N
- P index linked to yield (PGRO/Teagasc)
- Aim for P index 3 – not practical so place P and lime.



# Variety choice

	Fanfare	Boxer		Lynx
<b>Yield</b> (100 = 8.0 t/ha)	<b>103</b>	<b>101</b>		<b>(107 &amp; 109)</b>
<b>Plant Height (cm)</b>	146	140		(144)
<b>% Crude Protein</b> (100= 25.4%)	100	100		(100)
<b>Chocolate Spot</b>	6	5		(7)
<b>Downy Mildew</b>	9	6		(7)
<b>Rust</b>	7	4		(4)



# Seeding Rate

- Bean seeding rate trials are very variable however...
  - The optimum plant density for beans is 25 to 35 plants/m<sup>2</sup>.
  - **Aim for 30 to 35 plants/m<sup>2</sup> (wind shear)**

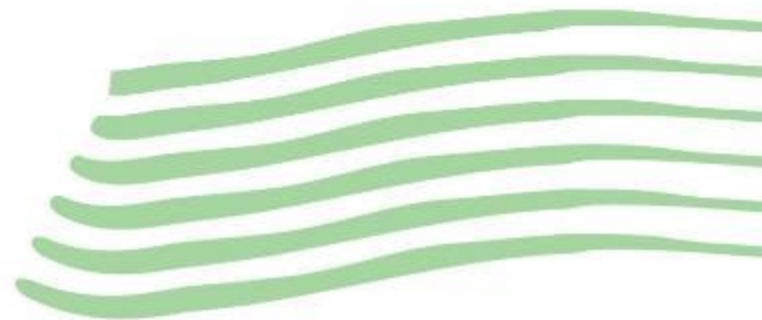
$$\frac{\text{Target Plant Population} \quad \times \quad \text{TGW}}{\text{Estimated plant establishment \%}}$$

seed rate in kg/ha



# Planting beans



- Bird attack is a big threat
- Plant to a depth of 100-125 cm (4-5")
- Less coulters or direct drills (Claydon)
- Direct drills – watch lime and P and stubble on top of ground can reduce herbicides

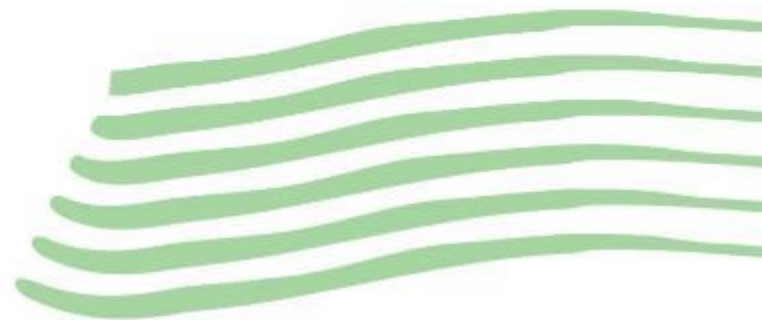


# Crows



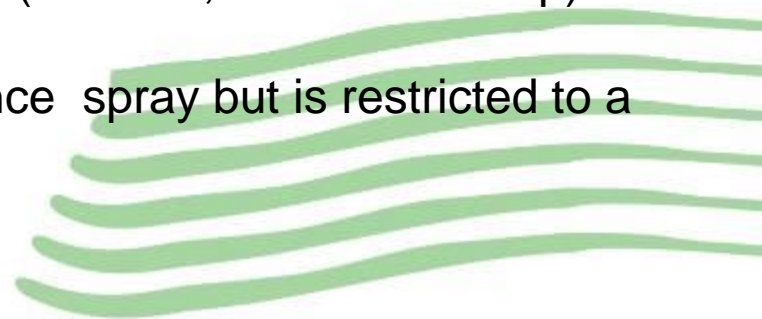
# What we want?

- 2.5 to 3.0 t/ac reliably 
- Moistures ~ 20%
- Pods ~ 4" off the ground 
- Clean stubble
- Minimal compaction
- Well established following crop of cereals



# Weeds

- Use glyphosate before sowing for perennial weeds and to lower the overall weed burden.
- Residual products work best on fine seedbeds with some moisture after spraying.
- 4 l/ha Nirvana
- 3.5 l/ha Nirvana + 1.7 l/ha Lingo or 0.2 l/ha Centium
- 4.0l/ha Defy + 2.5l/ha
- Nirvana 3.0 l/ha Stallion (Centium + pendimethalin)
- Graminicides like Falcon, Stratos Fusilade etc (Take-all, vol in seed crop)
- Basagran is the only option as a postemergence spray but is restricted to a narrow timing window

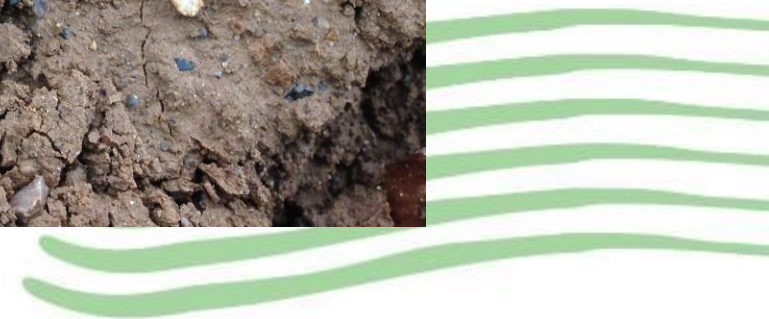


# Establishment & Weeds





# Seedbed VIP Weeds





Untreated

23

# Stem Nematode

- Seed-borne (desiccated) or carried by infested soil
- Soil-borne for up to 10 years
- Species studied in UK, not in Irl so oats ?
- All Seedtech seed is DAFM certified as Stem Nematode free



# Stem Nematode

- Seed
- Avoid close rotations
- Avoid infested fields for 10 years



# Bean Weevil

- U-shaped notch
- Always near ditch
- Treat if damage is
  - Across all field
  - Repeat 3 weeks later
- ‘Normal aphid spray’
  - Check labels + rate
  - Pyrethroid
  - ‘Bee safety’



# Weevil Damage





# Ascochyta

- Always seen in volunteers so remove!
- Seed borne so use certified seed
- All Seedtech beans are DAFM certified free from Ascochyta
- Chemical control is variable

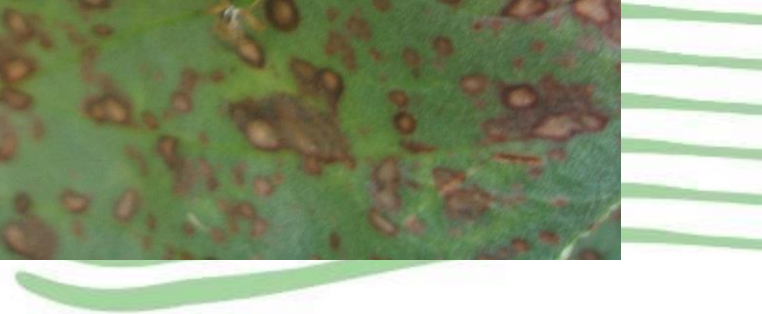
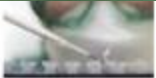


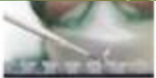


# Disease Control

- Control Chocolate Spot at the first signs of infection (usually at start of flowering).
- Trials in the UK would suggest a 2-spray program starting at flowering gives the best control.
- chlorothalonil 2 l/ha +/- 0.5 l/ha Amistar or chlorothalonil 2 l/ha +/- 0.75 l/ha Folicur or Signum 0.5 kg/ha
- Check Labels of Chlorothalonil







# Thank You!



[www.seedtech.ie](http://www.seedtech.ie)