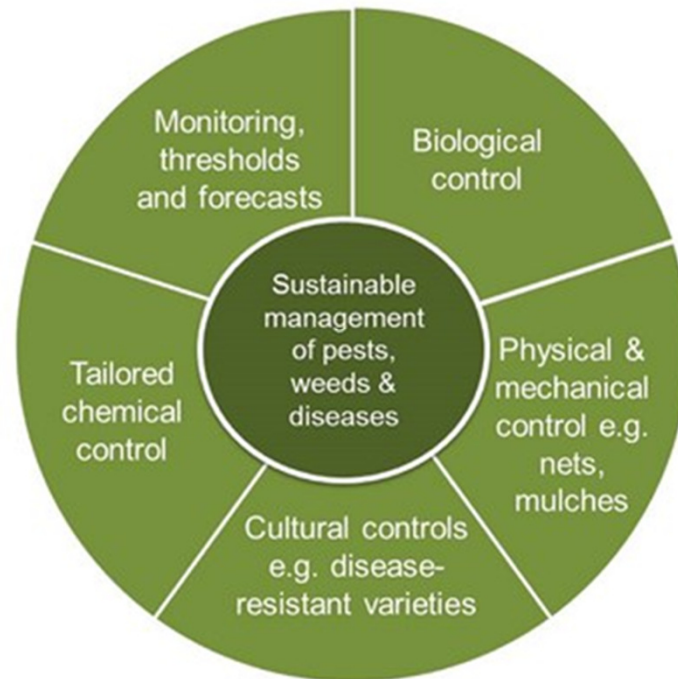


# Integrated Crop Management Tool Box



<https://consult.gov.scot/cap-reform-and-crop-policy/9a1bb2d9/>

# ICM Approach to Take All (*Gaeumannomyces graminis* var. *tritici*)

Jonathan Black PGDip

Agricultural Consultant

BASIS - R/E/7702/IFM

FACTS - FE/5575

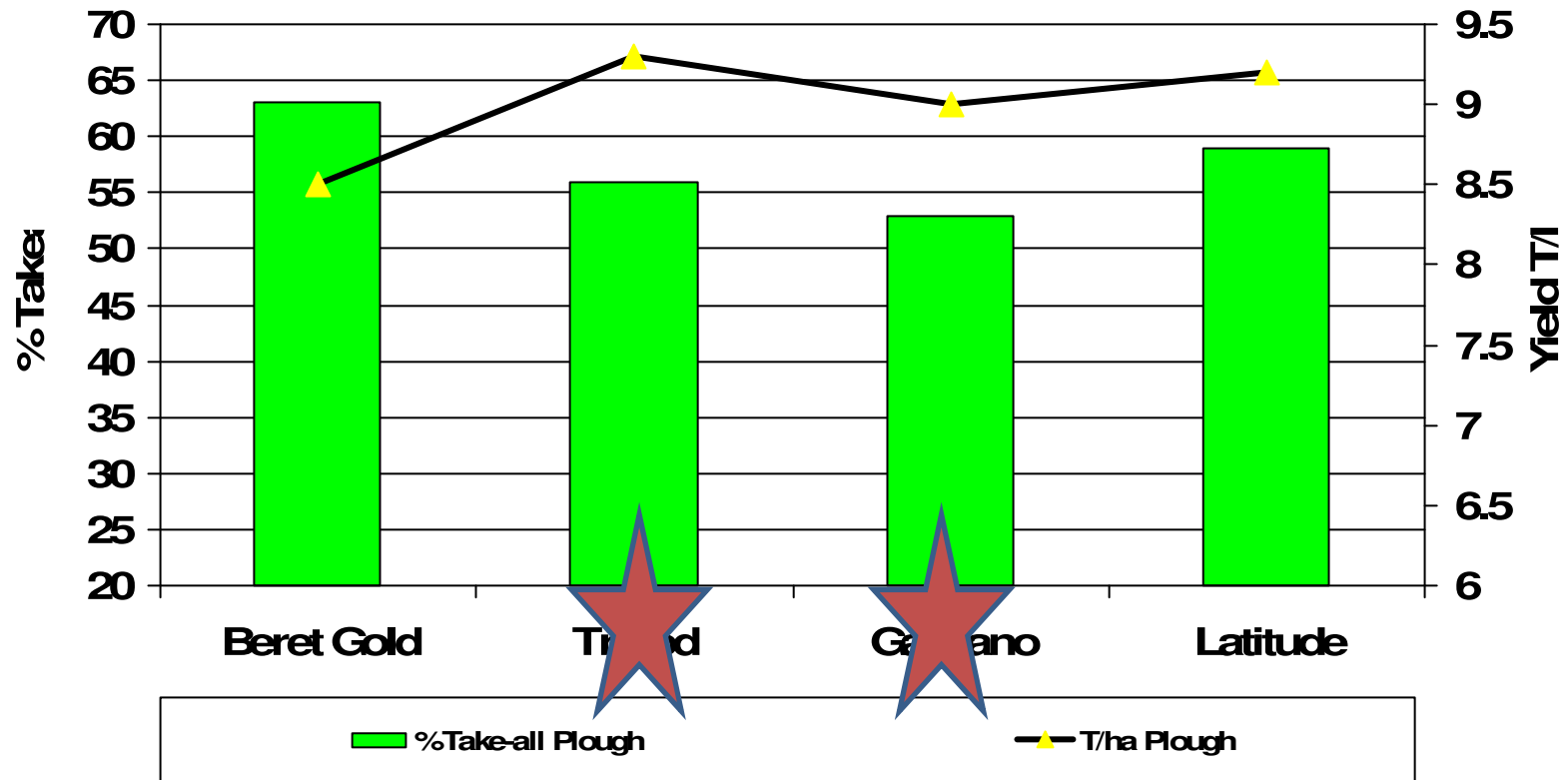
# Take all – Key facts



- AHDB estimate half of of WW crops affected
- Ave yield loss in affected crops 5-20%
- Costing £10's of millions / year
- Cannot be controlled entirely but can be managed
- Loss of key fungicides

# Seed Dressing.....

## Impact of seed treatment on take-all & yield



# Take all characteristics



- Primary infection
  - Inoculum in soil
  - Very little after break
- Secondary infection (root to root ) Patches !
  - Mainly in spring/summer
  - Warm and moist

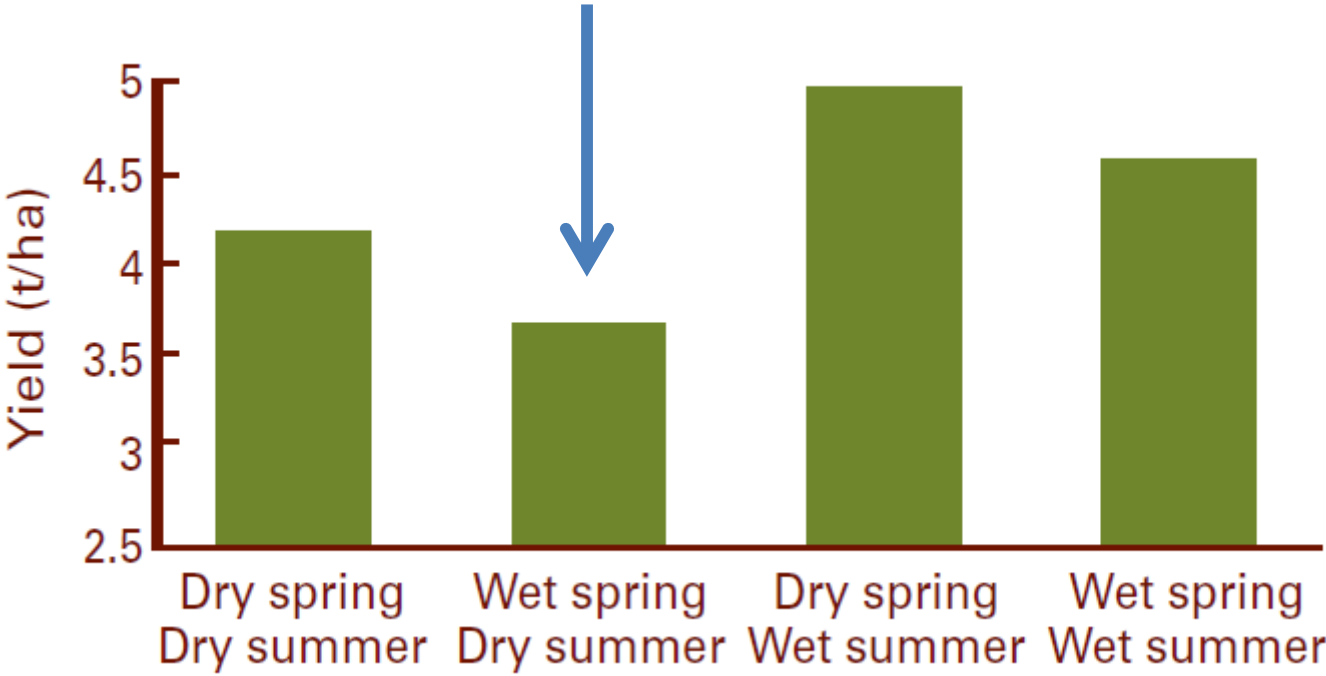
# Survival – Weeds & Volunteer



FARM  
ADVISORY  
SERVICE



# Environmental conditions



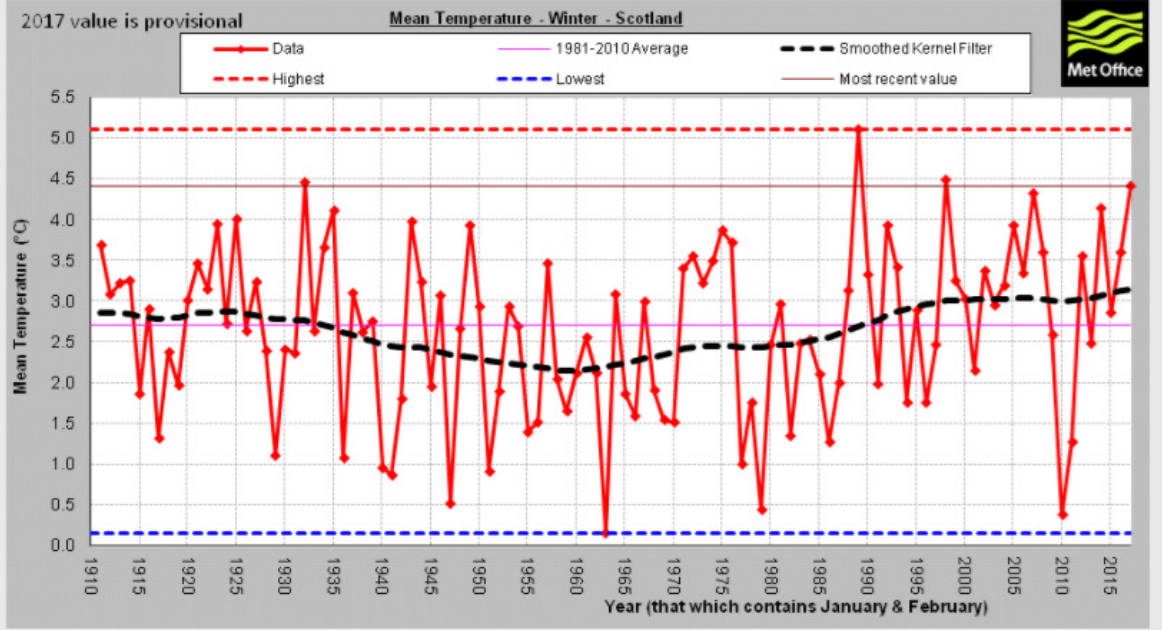


# Environmental Conditions



FARM  
ADVISORY  
SERVICE

## Scotland Mean temperature - Winter



The European Agricultural Fund  
for Rural Development  
Europe investing in rural areas



Scottish Government  
Riaghaltas na h-Alba  
gov.scot

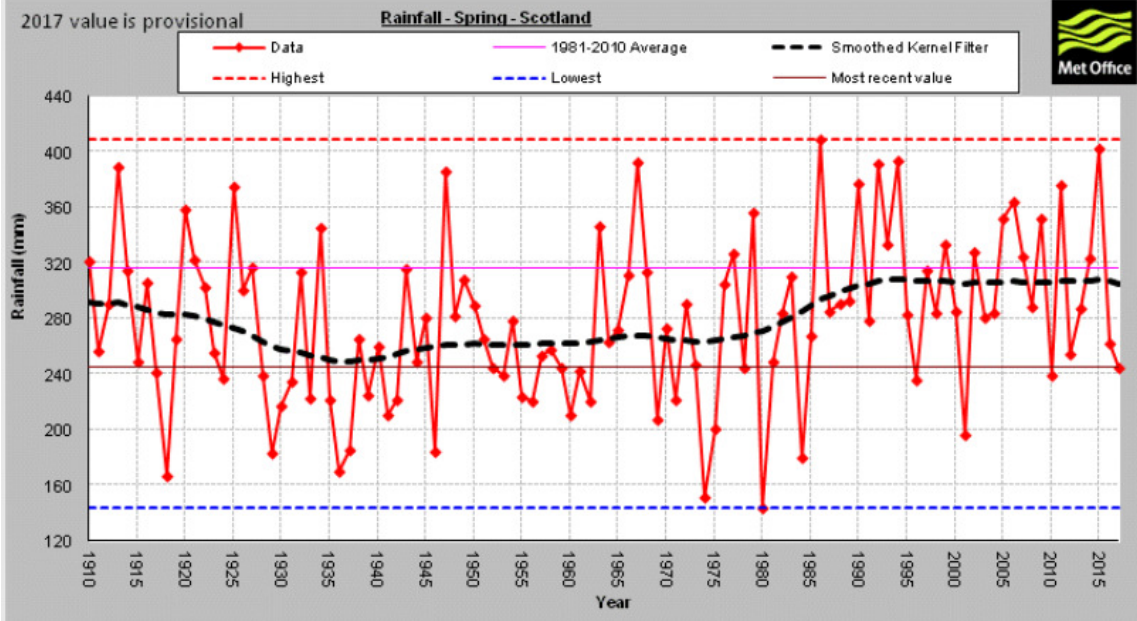


# Environmental Conditions



FARM  
ADVISORY  
SERVICE

## Scotland Rainfall - Spring

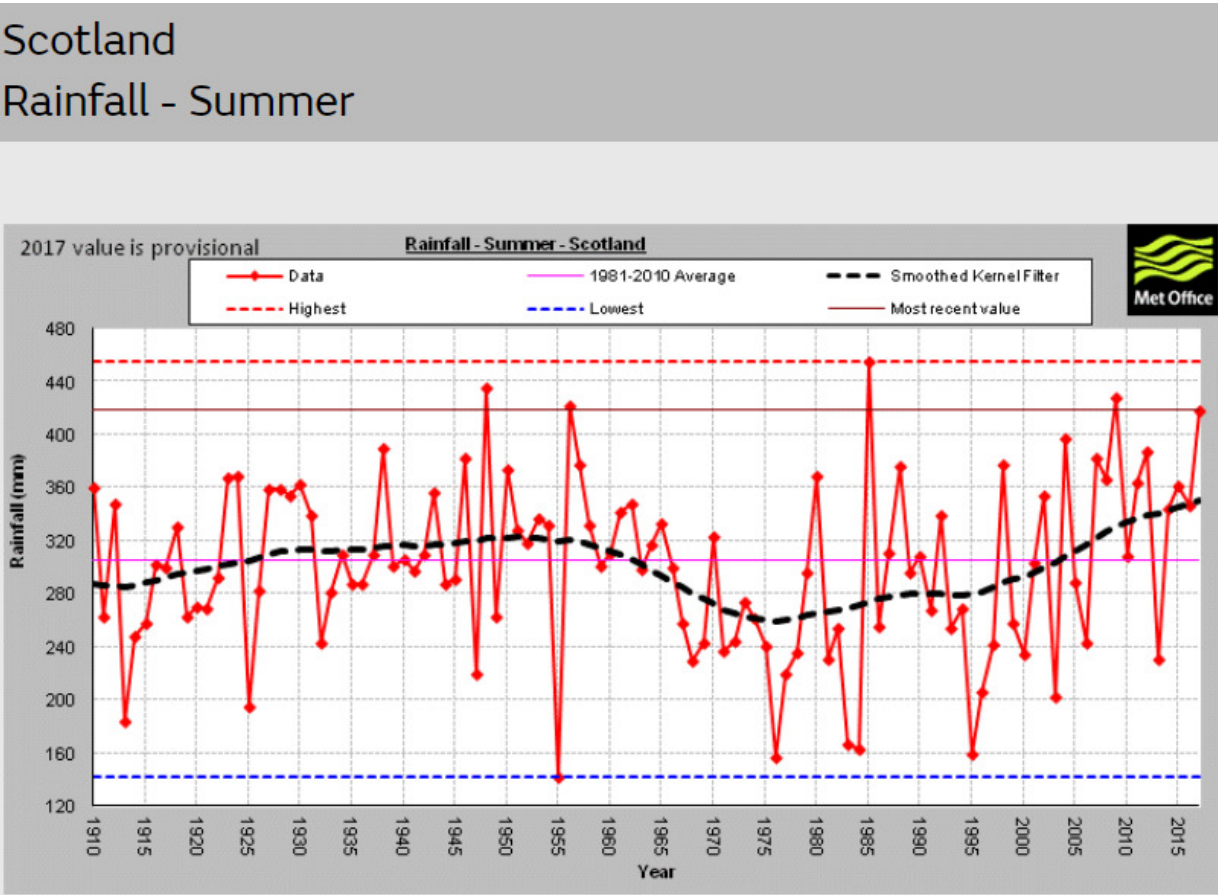


Scottish Government  
Riaghaltas na h-Alba  
gov.scot

# Environmental Conditions

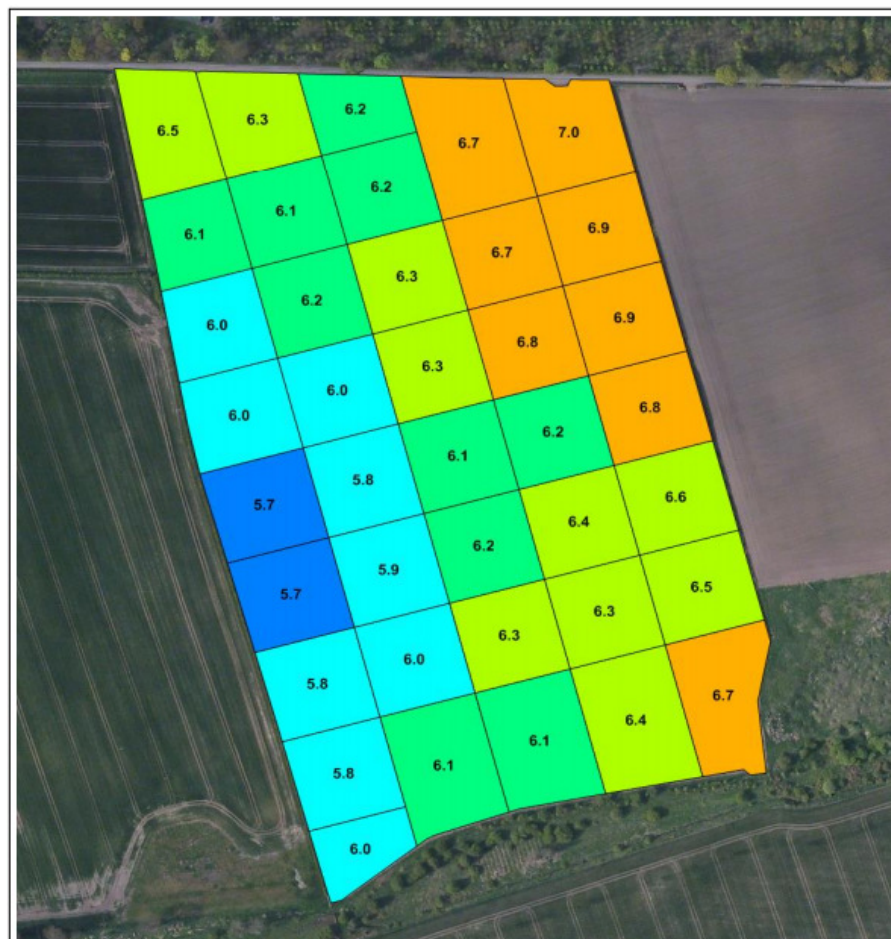


FARM  
ADVISORY  
SERVICE

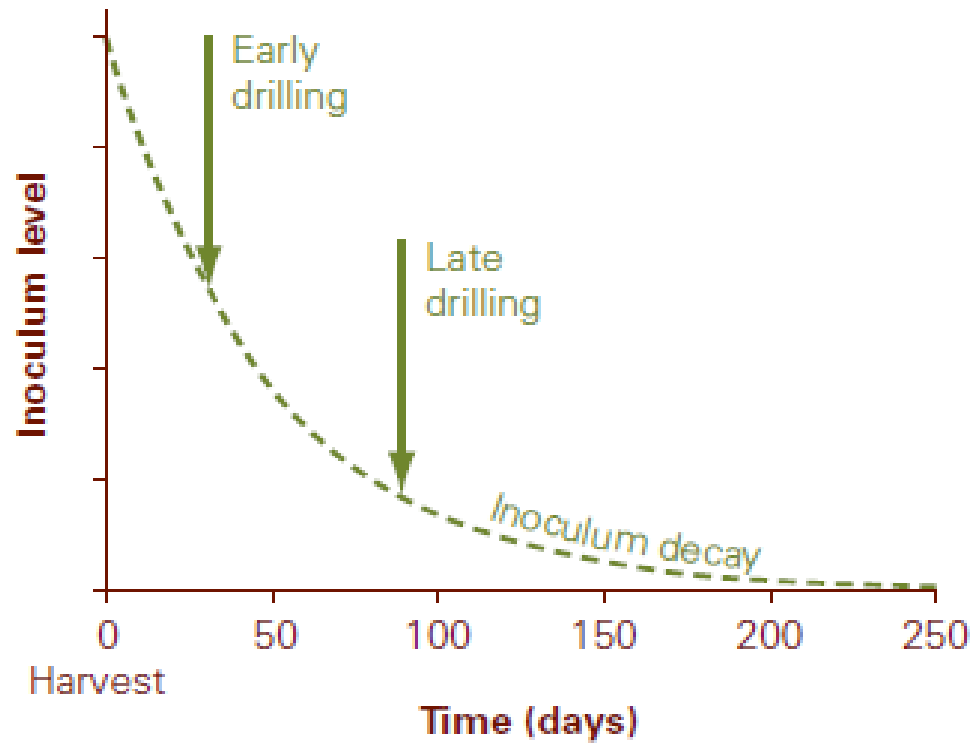


Scottish Government  
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gov.scot

# Acidic Soils

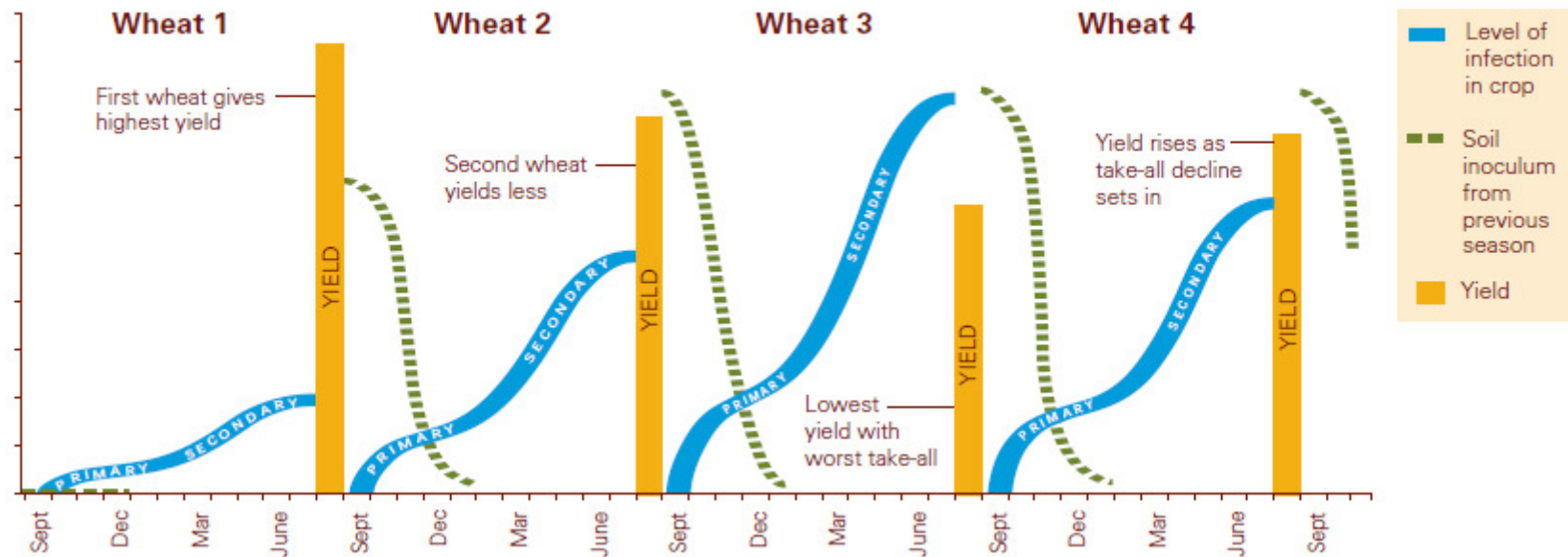


# Take all decline



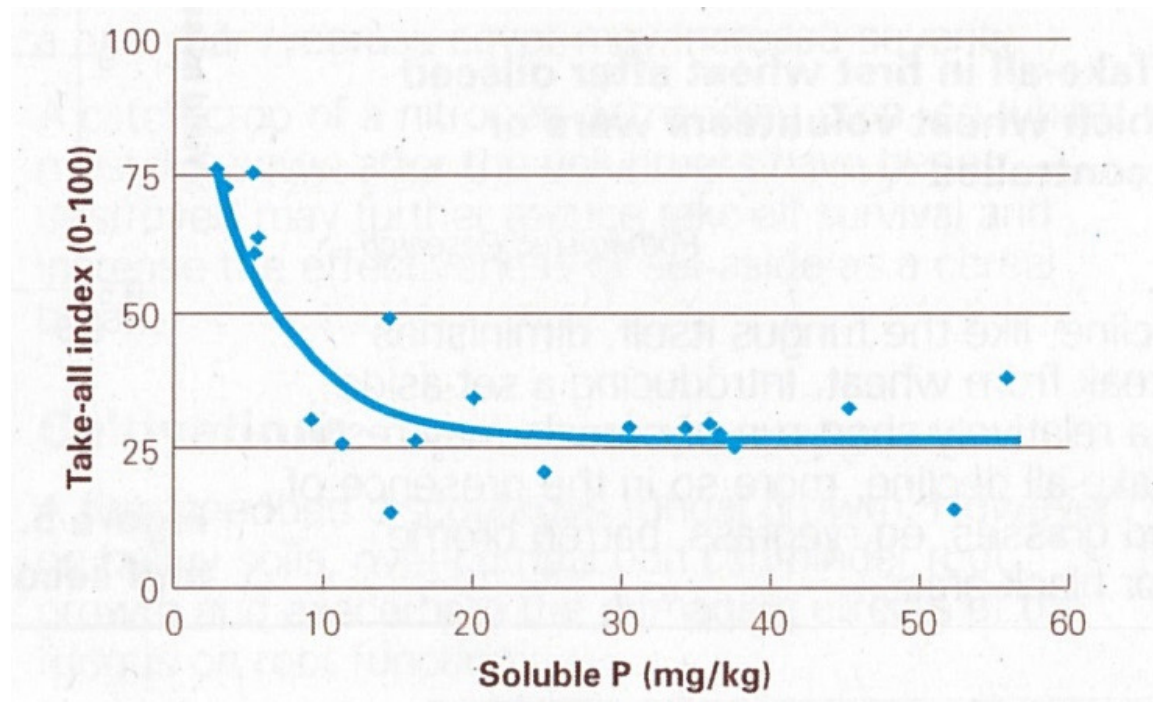
(HGCA 2006)

# Take all decline





# Nutrients – Phosphate



# Cultivations



- **Firm seedbed required!**
- Ploughing reduces primary infection source
- Minimum Tillage – 2<sup>nd</sup> wheat exposed to greater primary infection
- After take-all decline reached little difference between plough or min-till but quality of seedbed a factor in both



# Rotational control

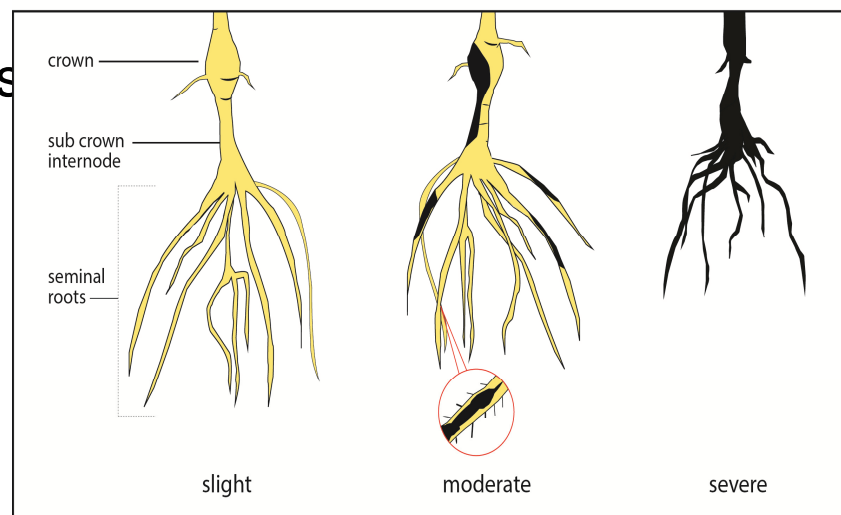


Rotation 1	Rotation 2	Rotation 3
WOSR	WOSR	WOSR
WW	WW	WW
WW	WW	WO
SB	WB	WW
WW	WOSR	LG
WB	WW	WW
<b><u>£787/ha</u></b>	<b><u>£857/ha</u></b>	<b><u>£876/ha</u></b>

# Take-all ICM

1. Rotation for take-all decline
2. Weed control
3. Soil type, pH and structure problems
4. Cultivations
5. Attention to drilling date...
6. Nutrient – Nitrogen & Phosphate
7. Seed Dressing

TAKE-ALL (HAYDIE) - root + stembase symptoms



*(Picture courtesy of Dept Food Agriculture, Western Australia)*

# Thank You

