

# Cover Crops

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# Topics for discussion





- Bruce Farms cover crop trial
  - Key cover crop considerations
  - Crop species to consider
  - Utilising EFA
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- # Basic Payments Scheme Greening

Agriculture, Food and Rural Communities Directorate





The collage consists of 12 photographs arranged in a 4x3 grid. The images depict various aspects of Scottish agriculture and rural landscapes:

  - Top-left: A wide view of rolling green hills under a cloudy sky.
  - Top-middle: A red tractor plowing a field in a valley with hills in the background.
  - Top-right: A high-altitude landscape with a snow-capped mountain peak and a small pond.
  - Second row, left: A field of red poppies in the foreground with green hills in the background.
  - Second row, middle: A herd of black and white cows grazing in a lush green field.
  - Second row, right: A row of trees in a field.
  - Third row, left: A field of green crops, possibly alfalfa, with a line of trees in the background.
  - Third row, middle: A field of purple and white wildflowers.
  - Third row, right: A sheep grazing in a field of purple heather on a hillside.
  - Bottom-left: A tractor working in a field with the text "February 2015" overlaid.
  - Bottom-middle: A herd of black cows grazing in a green field.
  - Bottom-right: A wide view of rolling green hills under a blue sky.







# Bruce Farms Trial

- Cover crops drilled early September 2016
- Reason – To improve soil structure and retain nutrients from previous crop over winter prior to potatoes
- 3 cover crops were used in the trial;

## **Kings Vitality Mix**

Oil radish  
Oats  
Berseem clover  
Vetch  
Phacelia

Drilled @ 25kg/ha

## **Kings Structure Mix**

Oil radish  
Tillage radish  
Oats  
Forage Rye  
Phacelia

Drilled @ 25kg/ha

## **Winter Oats**

Drilled @ 125kg/ha



# Bruce Farms





# Bruce Farms





# Bruce Farms





# Bruce Farms – Nutrient Uptake



Cover crop	Nitrogen kg/ha	Phosphate kg/ha	Potash kg/ha
Structure mix	40kg/ha	5kg/ha	36kg/ha
Vitality mix	38kg/ha	5kg/ha	33kg/ha
Winter Oats	42kg/ha	6kg/ha	52kg/ha



# Bruce Farms





# Bruce Farms





# Summary – Bruce Farms

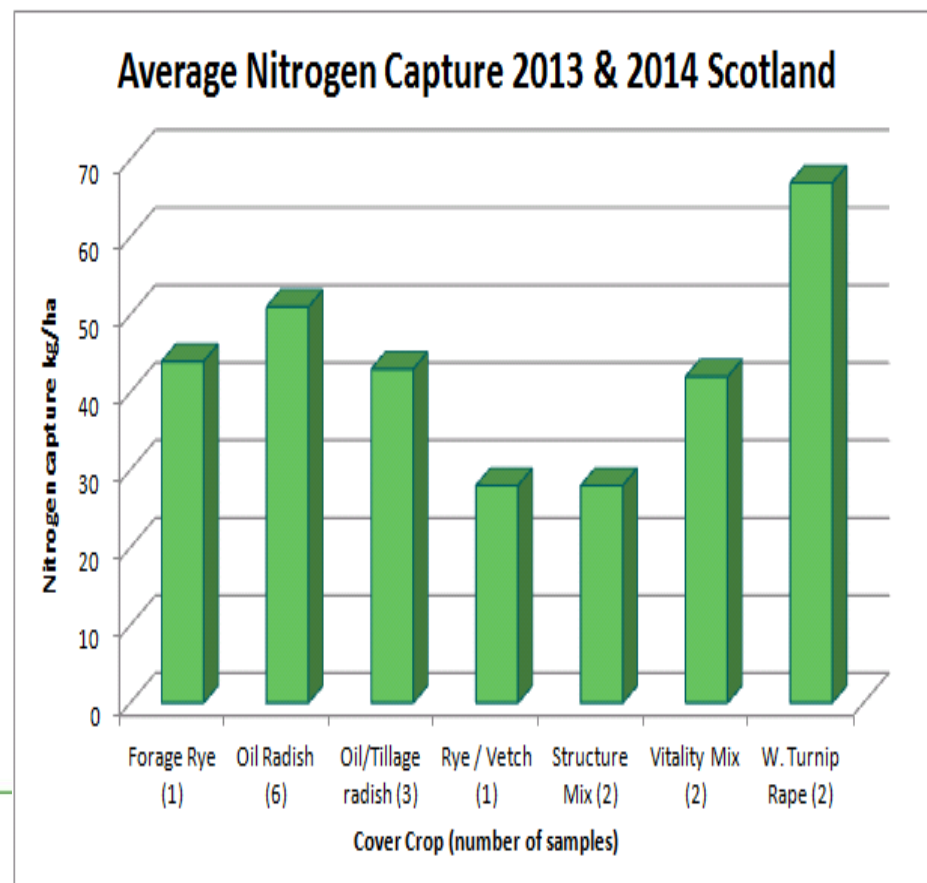
- Cover crops established well
  - Successfully retained nutrients
  - Noticeable difference between stubble and cover cropped ground when ploughing
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# Cover crop considerations



- Before deciding what crop to select -  
What do you wish to achieve?
  - Biomass – Spring sown?
  - Soil health
  - Fixing Nitrogen
  - Nematode control
  - EFA
- Drilling date & method
- Destruction
- Rotation – OSR/Peas
- Nitrogen requirements for next crop
- Cost





# Crops to consider

## Oil radish



- Quick growing brassica
- Many different varieties
- Combines an extensive tap root with fibrous lateral roots
  - Very efficient scavenger of available nutrients
- Large amounts of biomass when spring sown
- Club root resistant
- A good forage crop





# Crops to consider

## Oil radish/ Forage Rye



- Good combination of rooting activity
- Deep rooting from the radish and top soil rooting from the Rye
- Can be foraged if required
- EFA green cover option
- Sown at 30kg/ha



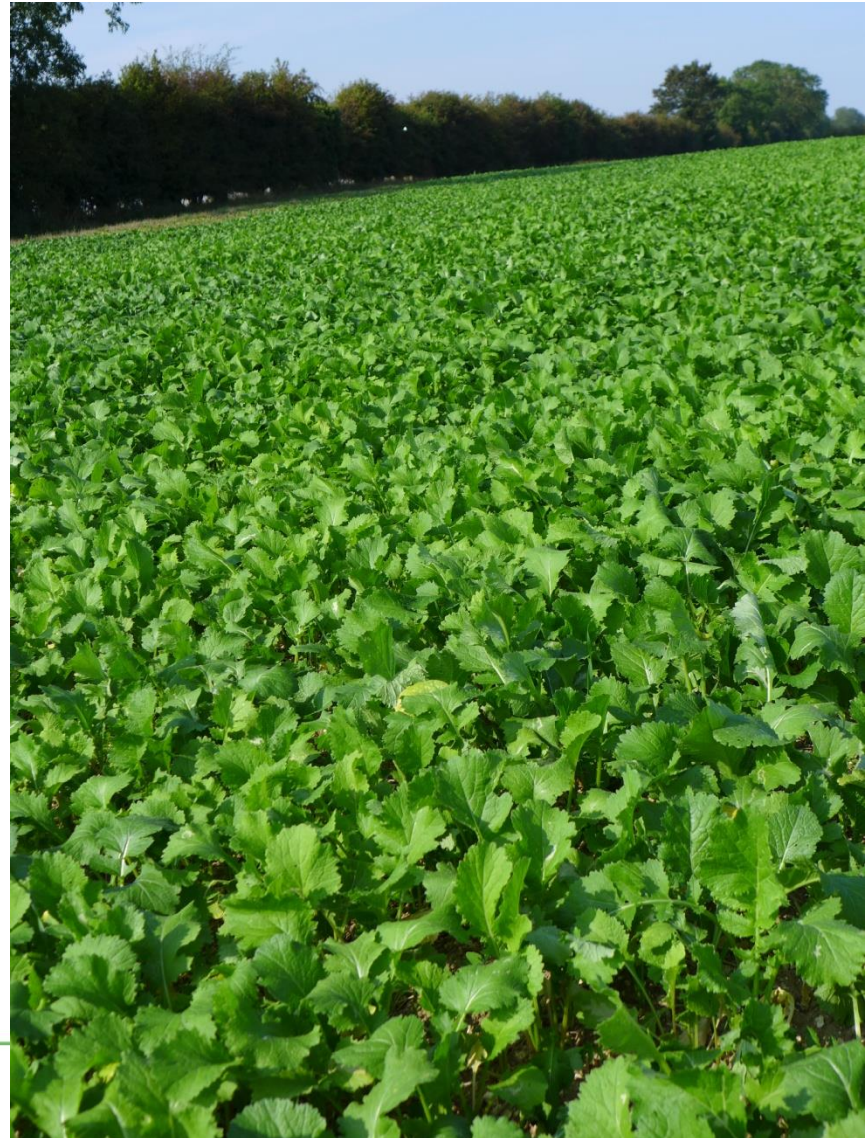


# Crops to consider

## Turnip rape



- Excellent, winter hardy option
- Good for later sown areas
- Very efficient scavenger of nutrient
- Significant grazing crop
- Be wary of club root risk





# Crops to consider

## Mustard and Oats



- Low cost but be wary of club root risk
- Effective combination
- Oats are an efficient nutrient scavenger
- EFA green cover option



EFA

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# EFA – Cover crop



- Weighing factor of 0.3ha  
( Example 10ha of cover crops under EFA will result in 3ha towards your required EFA)
  - Cover crop must be established before 1<sup>st</sup> November and retained until 31<sup>st</sup> December
  - Must consist of two or more of the following species - Alfalfa, Barley, Red/White clover, Mustard, Oats, Phacelia, Radish, Rye, Triticale, Vetch
  - Benefits
    - Keep all cash crops in production
    - Retain nutrients over winter
    - Improve soil structure & soil health
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# EFA – Fallow

- Weighing factor of 1.0ha
  - You must not change the land cover within the fallow period 15 January to 15 July inclusive with the exception of establishing a wild flower or wild bird seed mix
  - You must not top the fallow between the dates of 15 January to 15 July inclusive
  - **Benefits;**
    - Improve soil health and structure (long or short term)
    - Use fallow wbs as game cover crops
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**Thank you**

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