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RESEARCH

# Collection of Plans for the Woburn Organic Manuring Experiment

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## W/RN/12 - Woburn Organic Manuring 2010 - 2014

### Rothamsted Research

Rothamsted Research (1966-1988) *W/RN/12 - Woburn Organic Manuring 2010 - 2014* ; Collection Of Plans For The Woburn Organic Manuring Experiment, pp 47 - 56

46th year Plan 203

Code: 2010/W/RN/12

Title: Organic Manuring

Field: Stackyard B

**Sponsors:**

A Macdonald K Goulding  
2479 2627

**Treatments:**

Organic Treatments since 2003

- F None
- Dg10 FYM at 10 t/ha annually
- Dg25 FYM at 25 t/ha annually
- St Chopped wheat straw at 7.5 t/ha annually
- CC Cover crop (white mustard) prior to spring sown crop
- Co Compost at 40 t/ha annually
- Lc Permanent grass/clover: Timothy, Fescue & white clover sown @ 30 kg/ha, 4-Oct-2002

**Basal PKS/ha (to be applied early spring)**

Basal P at 97.5 kg TSP (20 kg P) to all treatments except Dg25  
Basal K at 200 kg K<sub>2</sub>SO<sub>4</sub> (83 kg K + 36 kg S) to all treatments except Dg25

**No Nitrogen to W Beans for 2010**

**Nitrogen rotation**

N5>N4>N3>N2>N1>N0>N5

*Residues of previous treatments (see 'Yields' books 1965-2002 for details)*

- (Dg) FYM annually 1965-71, and 1981-85
- (St) Straw annually 1965-71, and 1981-85
- (Gm) Green manure annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)
- (Pt) Peat annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1980-87 (blocks 2 & 4)
- (Fd) PKMg equivalent to (Dg) rate, annually 1965-71, and 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)
- (Fs) KMg equivalent to (St) with P, annually 1965-71, then half (Fd) rate 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)
- (Ln) Grass ley with N 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)
- (Lc) Grass /clover ley 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

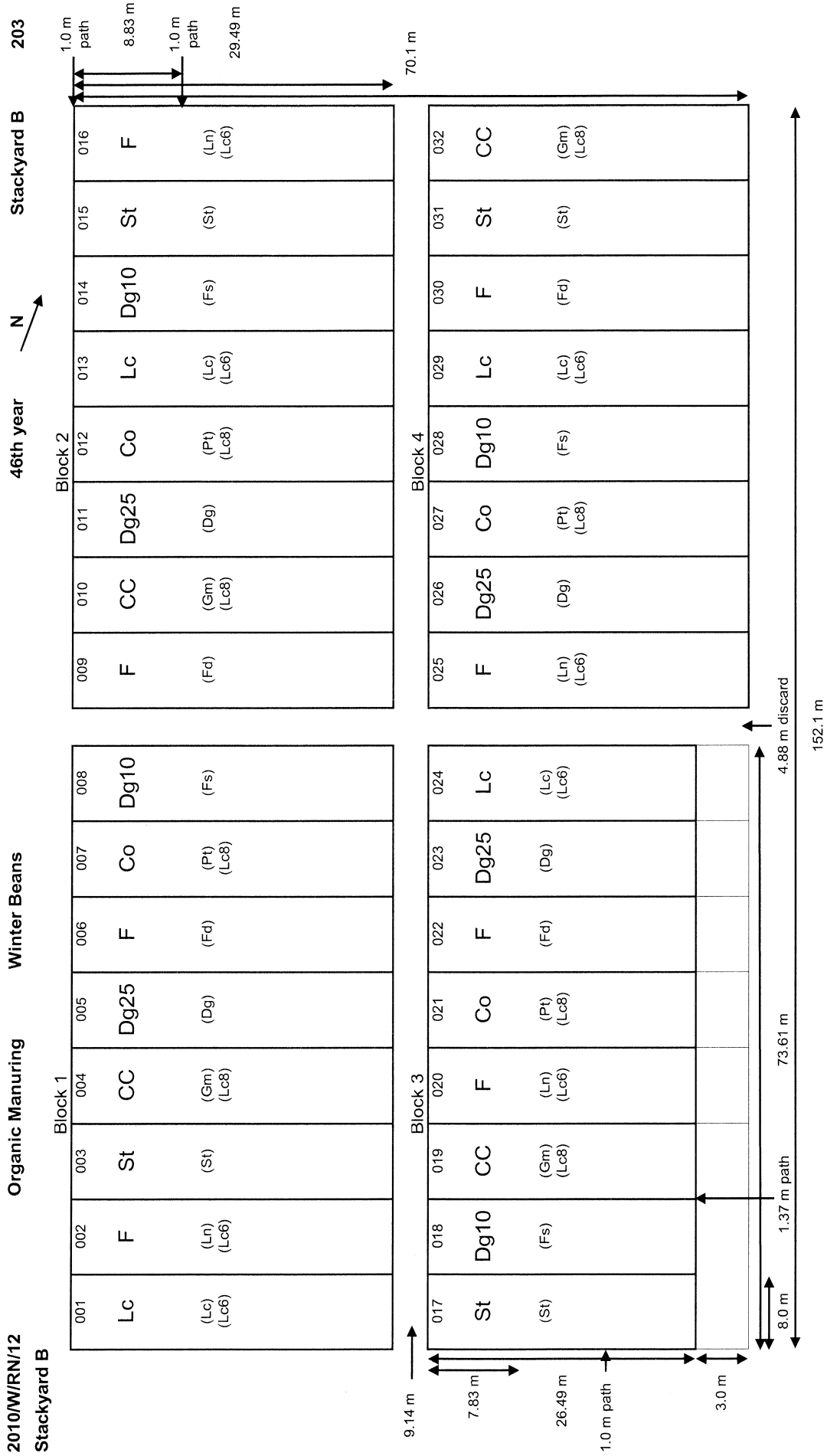
**Crop rotation**

- 2004 S. Barley and Mustard
- 2005 W. Beans
- 2006 W. Wheat
- 2007 F Maize and Mustard
- 2008 W. Rye
- 2009 S. Barley and Mustard
- 2010 W. Beans
- 2011 W. Wheat

**Variety**

W Beans: Wizard

// From 1999 block 3 has a 3.0 m discard at the NE end following severe erosion in winter 1998-99; sub-plots are therefore shorter  
// Paths widened to 1.0 m in 2009, measurements corrected and detailed on layout sheet, including reference posts



47th year  
Plan 203

Code: 2011W/RN/12

Title: Organic Manuring

Field: Stackyard B

**Sponsors:**

A Macdonald  
2479  
K Goulding  
2627

**Treatments:**

Organic Treatments since 2003

F None

Dg10 FYM at 10 t/ha annually

Dg25 FYM at 25 t/ha annually

St Chopped wheat straw at 7.5 t/ha annually

CC Cover crop (white mustard) prior to spring sown crop

Co Compost at 40 t/ha annually

Lc Permanent grass/clover: Timothy, Fescue & white clover sown @ 30 kg/ha, 4-Oct-2002

**Basal PKS/ha (to be applied early spring)**

Basal P at 97.5 kg TSP (20 kg P) to all treatments except Dg25

Basal KS at 200 kg K2SO4 (83 kg K + 36 kg S) to all treatments except Dg25

**Nitrogen to W. Wheat for 2011, kg N/ha, N0-N5.**

0, 50, 100, 150, 200, 250 as Nitrochalk

Split 50 kg N late Feb/early March, remainder mid-April

**Nitrogen rotation**

N5>N4>N3>N2>N1>N0>N5

**Residues of previous treatments (see 'Yields' books 1965-2002 for details)**

(Dg) FYM annually 1965-71, and 1981-85

(St) Straw annually 1965-71, and 1981-85

(Gm) Green manure annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Pt) Peat annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Fd) PKMg equivalent to (Dg) rate, annually 1965-71, and 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Fs) KMg equivalent to (St) with P, annually 1965-71, then half (Fd) rate 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Ln) Grass ley with N 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Lc) Grass /clover ley 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

**Variety**

W. Wheat: Gallant

**Crop rotation**

2004 S. Barley and Mustard

2005 W. Beans

2006 W. Wheat

2007 F. Maize and Mustard

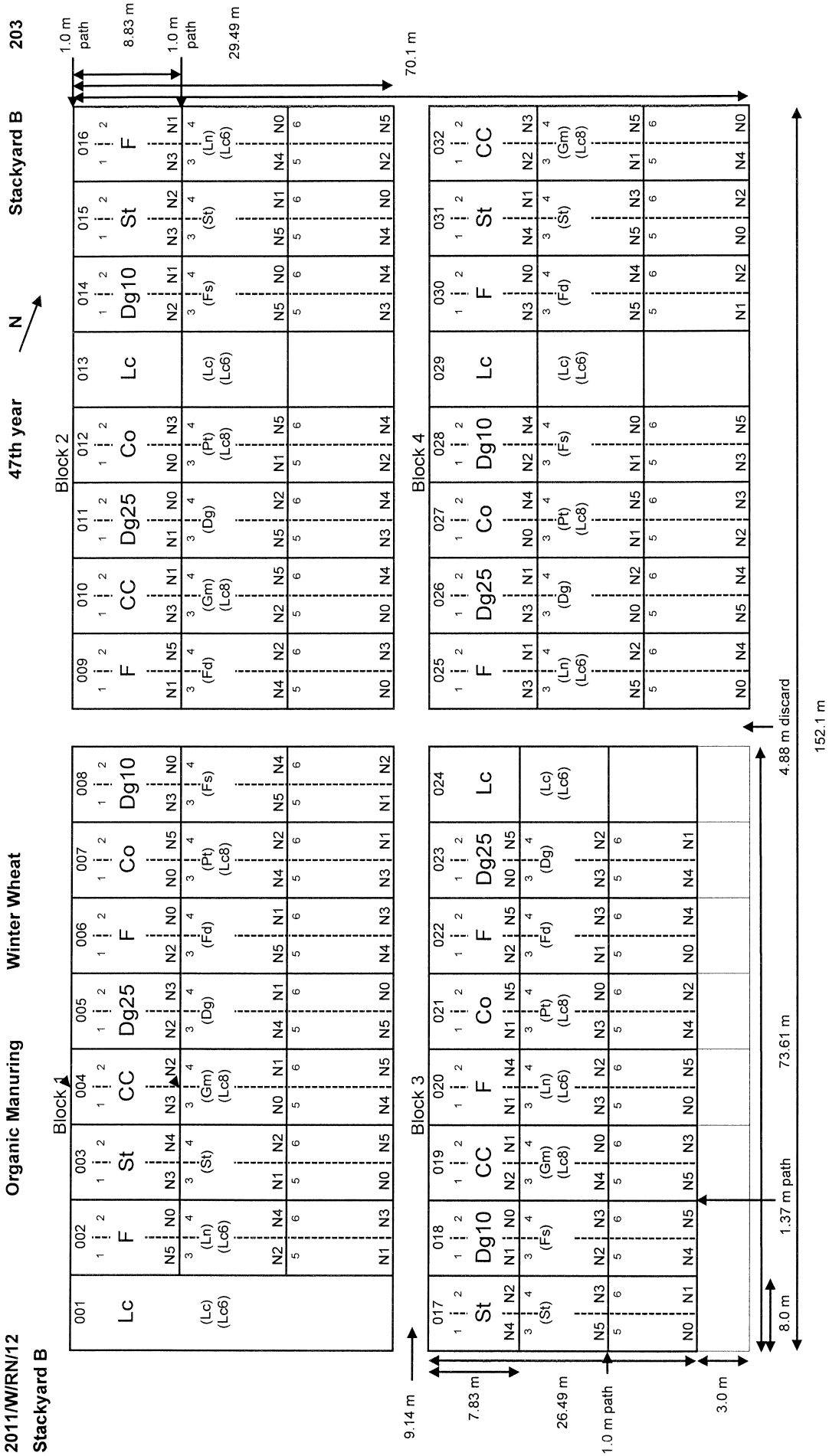
2008 W. Rye

2009 S. Barley and Mustard

2010 W. Beans

2011 W. Wheat

//Straw yields not required. Straw baled and removed  
// From 1999 block 3 has a 3.0 m discard at the NE end following severe erosion in winter 1998-99; sub-plots are therefore shorter  
// Paths widened to 1.0 m in 2009, measurements corrected and detailed on layout sheet, including reference posts



Code: 2012/W/RN/12  
 Title: Organic Manuring  
 Field: Stackyard B

48th year

Plan 203

**Sponsors:**

A Macdonald  
 2479  
 K Goulding  
 2627

**Treatments:**

Organic Treatments since 2003

F None  
 Dg10 FYM at 10 t/ha annually  
 Dg25 FYM at 25 t/ha annually  
 St Chopped wheat straw at 7.5 t/ha annually  
 CC Cover crop (white mustard) prior to spring sown crop  
 Co Compost at 40 t/ha annually  
 Lc Permanent grass/clover: Timothy, Fescue & white clover sown @ 30 kg/ha, 4-Oct-2002

**Basal PKS/ha (to be applied early spring)**

Basal P at 97.5 kg TSP (20 kg P) to all treatments except Dg25  
 Basal KS at 200 kg K2SO4 (83 kg K + 36 kg S) to all treatments except Dg25

**Nitrogen to F Maize for 2012, kg N/ha, N0-N5.**

0, 50, 100, 150, 200, 250 as Nitrochalk  
 Split 50 kg N to seedbed (except N0); remainder post emergent.

**Nitrogen rotation**

N5>N4>N3>N2>N1>N0>N5

*Residues of previous treatments (see 'Yields' books 1965-2002 for details)*

(Dg) FYM annually 1965-71, and 1981-85  
 (St) Straw annually 1965-71, and 1981-85  
 (Gm) Green manure annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
 (Pt) Peat annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1980-87 (blocks 2 & 4)  
 (Fd) PKMg equivalent to (Dg) rate, annually 1965-71, and 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
 (Fs) KMg equivalent to (St) with P, annually 1965-71, then half (Fd) rate 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
 (Ln) Grass ley with N 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
 (Lc) Grass /clover ley 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

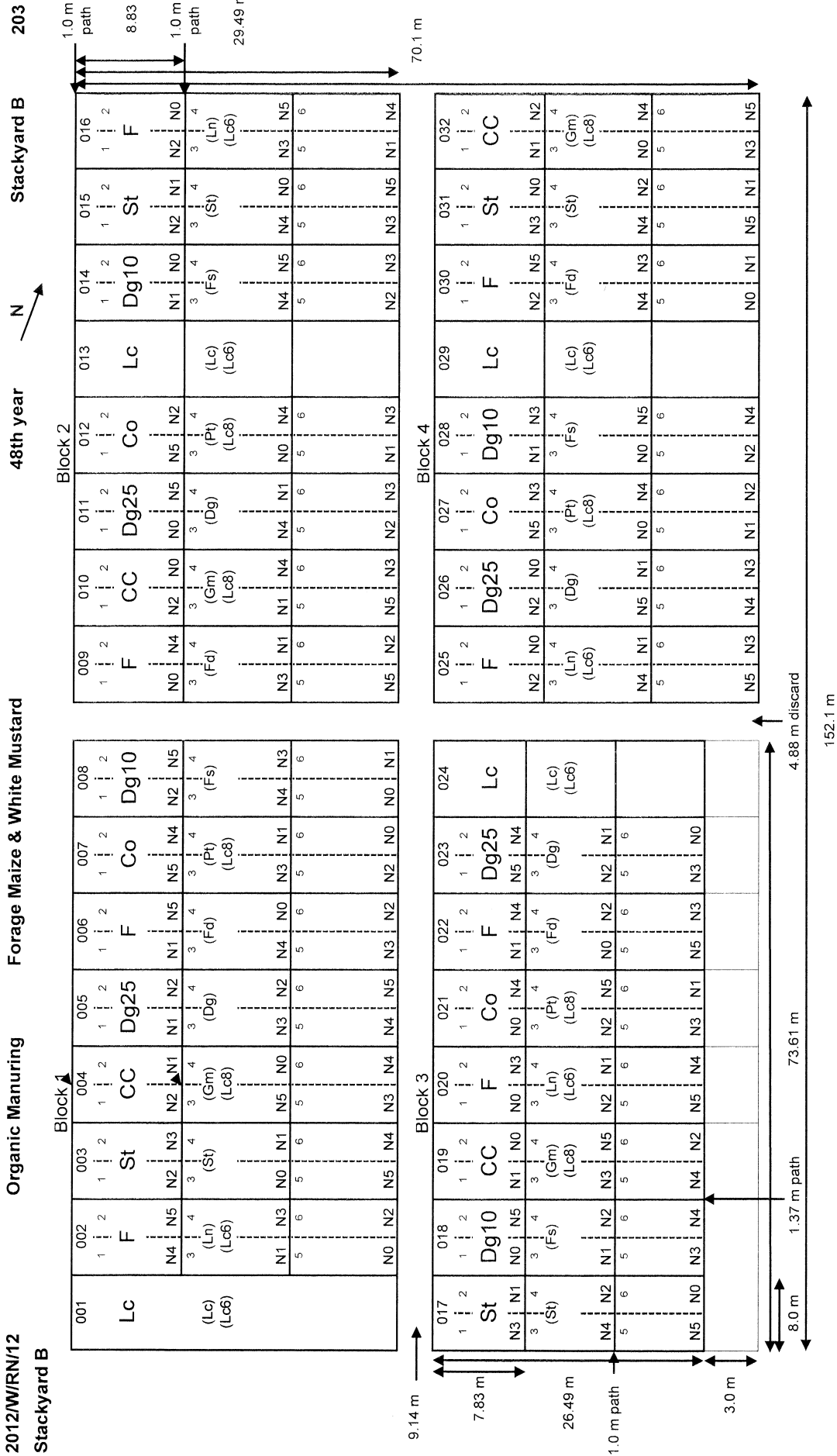
**Crop rotation**

2005 W. Beans  
 2006 W. Wheat  
 2007 F Maize and Mustard  
 2008 W. Rye  
 2009 S. Barley and Mustard  
 2010 W. Beans  
 2011 W. Wheat  
 2012 F Maize and Mustard

**Variety**

W. Mustard - var Rivona (farm to confirm)  
 F Maize - var Hudson (farm to confirm)

//Straw yields not required. Straw baled and removed  
 // From 1999 block 3 has a 3.0 m discard at the NE end following severe erosion in winter 1998-99; sub-plots are therefore shorter  
 // Paths widened to 1.0 m in 2009, measurements corrected and detailed on layout sheet, including reference posts



Code: 2013/W/RN/12

Title: Organic Manuring

Field: Stackyard B

49th year

Plan 203

**Sponsors:**

A Macdonald  
2479  
K Goulding  
2627

**Treatments:**

Organic Treatments since 2003

F None

Dg10 FYM at 10 t/ha annually

Dg25 FYM at 25 t/ha annually

St Chopped wheat straw at 7.5 t/ha annually

CC Cover crop (white mustard) prior to spring sown crop

Co Compost at 40 t/ha annually

Lc Permanent grass/clover: Timothy, Fescue & white clover sown @ 30 kg/ha, 4-Oct-2002

**Basal PKS/ha (to be applied early spring)**

Basal P at 97.5 kg TSP (20 kg P) to all treatments except Dg25

Basal KS at 200 kg K<sub>2</sub>SO<sub>4</sub> (83 kg K + 36 kg S) to all treatments except Dg25

**Nitrogen to Rye for 2013, kg N/ha, N0-N5.**

0, 30, 60, 90, 120, 150 as Nitrochalk

**Nitrogen rotation**

N5>N4>N3>N2>N1>N0>N5

**Residues of previous treatments (see 'Yields' books 1965-2002 for details)**

(Dg)

FYM annually 1965-71, and 1981-85

(St)

Straw annually 1965-71, and 1981-85

(Gm)

Green manure annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Pt)

Peat annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Fd)

PKMg equivalent to (Dg) rate, annually 1965-71, and 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Fs)

KMg equivalent to (St) with P, annually 1965-71, then half (Fd) rate 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Ln)

Grass ley with N 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

(Lc)

Grass/clover ley 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

**Variety**

Rye - What Variety? Is it Matador?

//Straw yields not required. Straw baled and removed

// From 1999 block 3 has a 3.0 m discard at the NE end following severe erosion in winter 1998-99; sub-plots are therefore shorter

// Paths widened to 1.0 m in 2009, measurements corrected and detailed on layout sheet, including reference posts

**Crop rotation**

2006 W. Wheat

2007 F Maize and Mustard

2008 W. Rye

2009 S. Barley and Mustard

2010 W. Beans

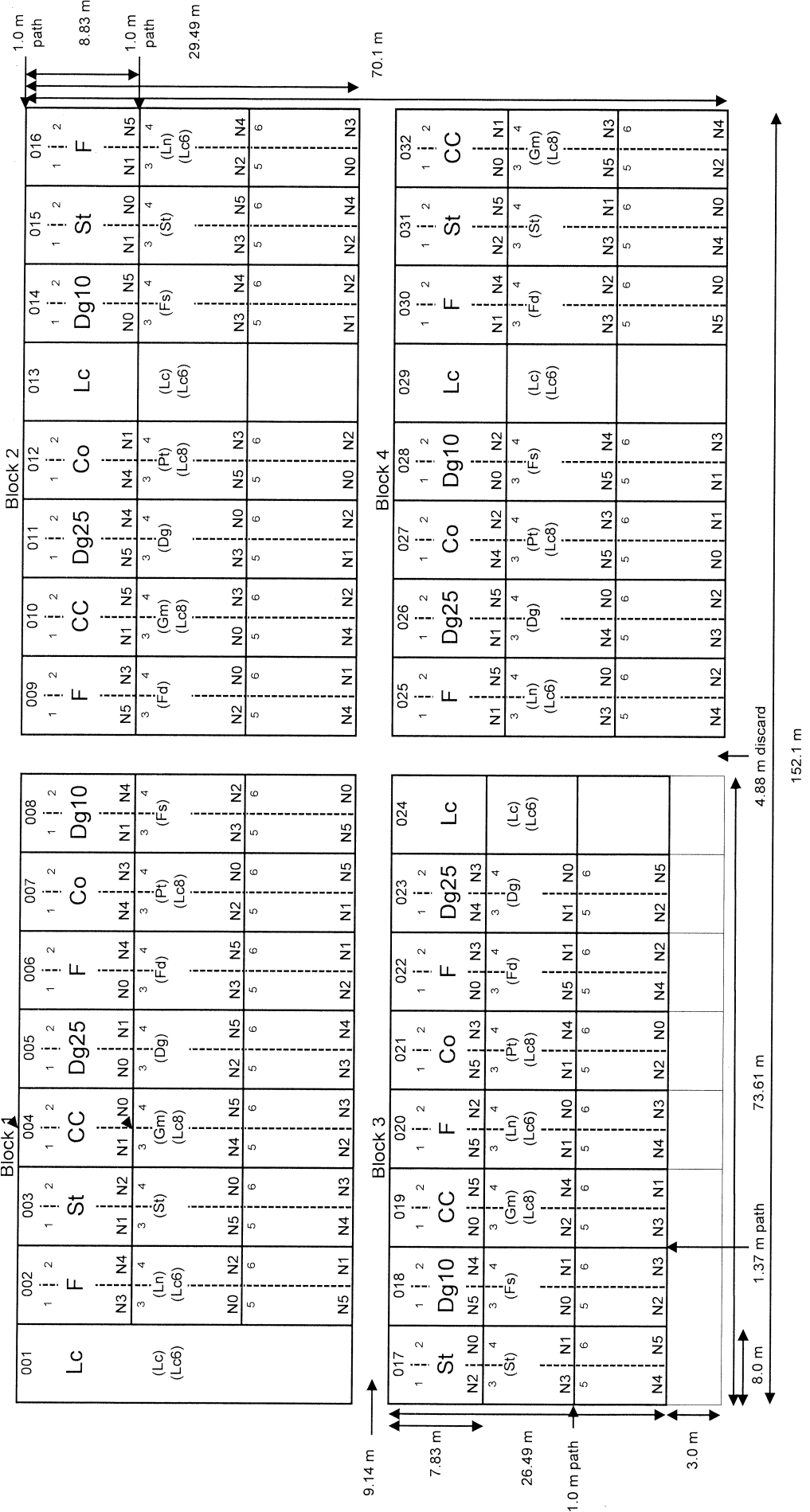
2011 W. Wheat

2012 F Maize and Mustard

2013 W. Rye



2013/W/RN/12 Stackyard B  
 Organic Manuring Winter Rye 49th year Stackyard B 203



Code: 2014/W/RN/12

Title: Organic Manuring

Field: Stackyard B

50th year

Plan 203

**Sponsors:**

A Macdonald  
2479

K Goulding  
2627

**Treatments:**

Organic Treatments since 2003

F None  
Dg10 FYM at 10 t/ha annually  
Dg25 FYM at 25 t/ha annually  
St Chopped wheat straw at 7.5 t/ha annually  
CC Cover crop (white mustard) prior to spring sown crop  
Co Compost at 40 t/ha annually  
Lc Permanent grass/clover: Timothy, Fescue & white clover sown @ 30 kg/ha, 4-Oct-2002

**Basal PKS/ha (to be applied early spring)**

Basal P at 97.5 kg TSP (20 kg P) to all treatments except Dg25

Basal KS at 200 kg K<sub>2</sub>SO<sub>4</sub> (83 kg K + 36 kg S) to all treatments except Dg25

**Nitrogen to Spring Barley for 2014, kg N/ha, N0-N5.**

0, 35, 70, 105, 140, 175 as Nitrochalk @ 27%N

**Nitrogen rotation**

N5>N4>N3>N2>N1>N0>N5

**Residues of previous treatments (see 'Yields' books 1965-2002 for details)**

(Dg) FYM annually 1965-71, and 1981-85  
(St) Straw annually 1965-71, and 1981-85  
(Gm) Green manure annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
(Pt) Peat annually 1965-71, then (Lc8) grass/clover ley 1979-86 (blocks 1 & 3), 1980-87 (blocks 2 & 4)  
(Fd) PKMg equivalent to (Dg) rate, annually 1965-71, and 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
(Fs) KMg equivalent to (St) with P, annually 1965-71, then half (Fd) rate 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
(Ln) Grass ley with N 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)  
(Lc) Grass /clover ley 1965-71, then (Lc6) grass/clover ley 1981-86 (blocks 1 & 3), 1981-87 (blocks 2 & 4)

**Crop rotation**

2008 W. Rye  
2009 S. Barley and Mustard  
2010 W. Beans  
2011 W. Wheat  
2012 F. Maize and Mustard  
2013 W. Rye  
2014 S. Barley and Mustard  
2015 W. Beans

**Variety**

Mustard - Zlata (or similar) to be sown as early as possible; preferably by mid-August.  
Sp. Barley - Tipple

//Straw yields not required. Straw baled and removed  
// From 1999 block 3 has a 3.0 m discard at the NE end following severe erosion in winter 1998-99; sub-plots are therefore shorter  
// Paths widened to 1.0 m in 2009, measurements corrected and detailed on layout sheet, including reference posts

