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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 K₂SO₄ (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)

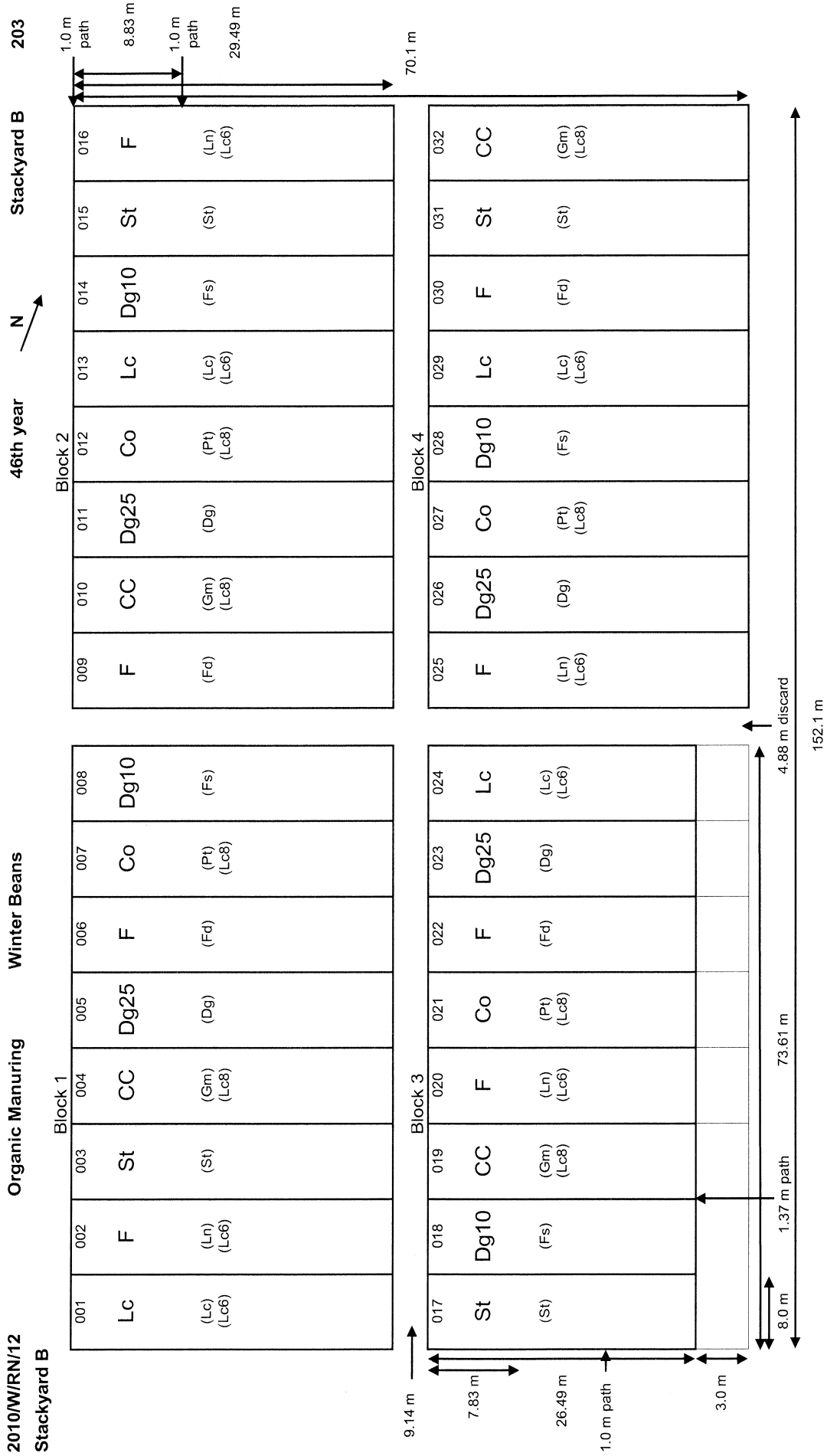
Crop rotation

- 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

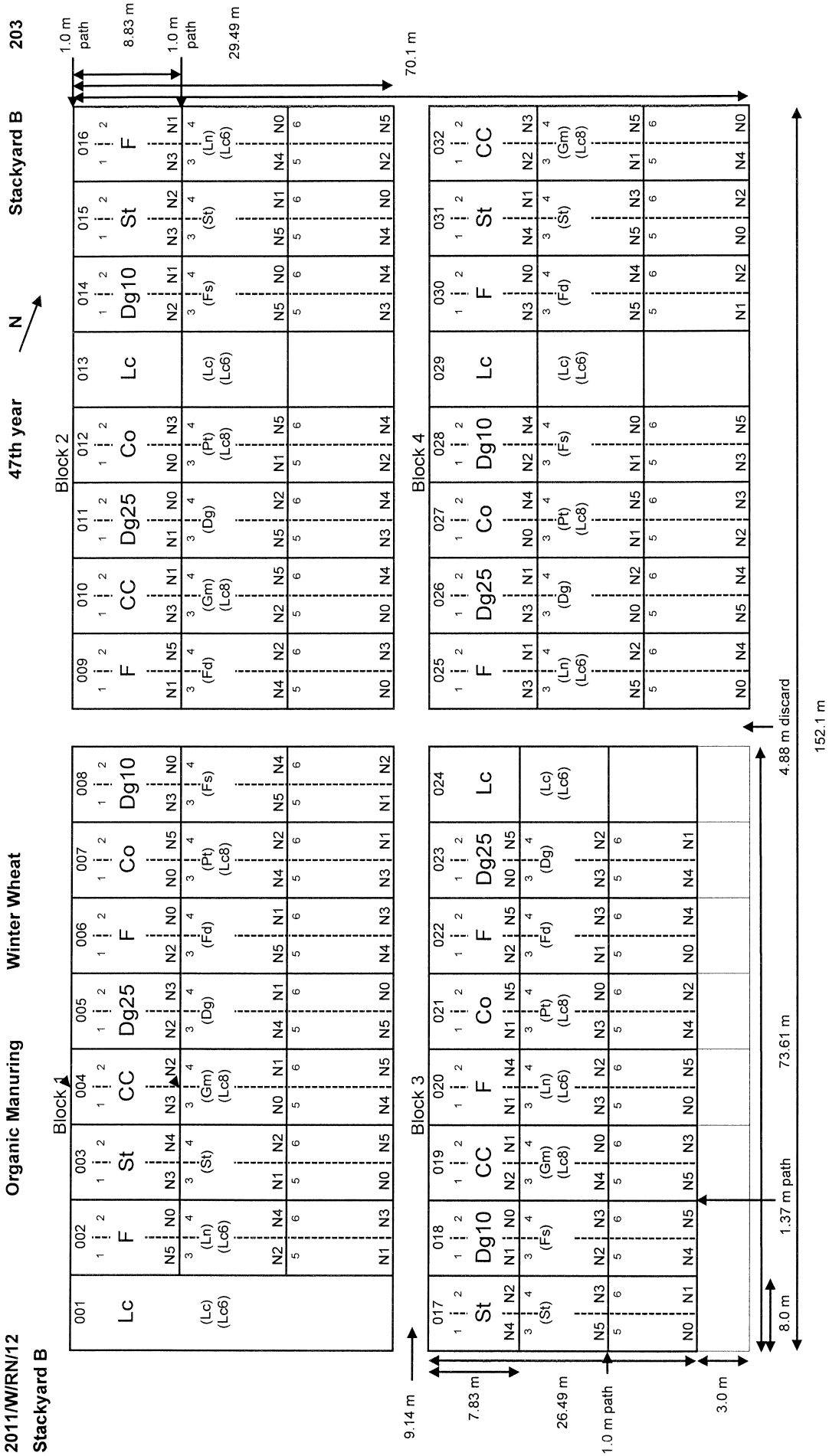
2008 W. Rye

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)

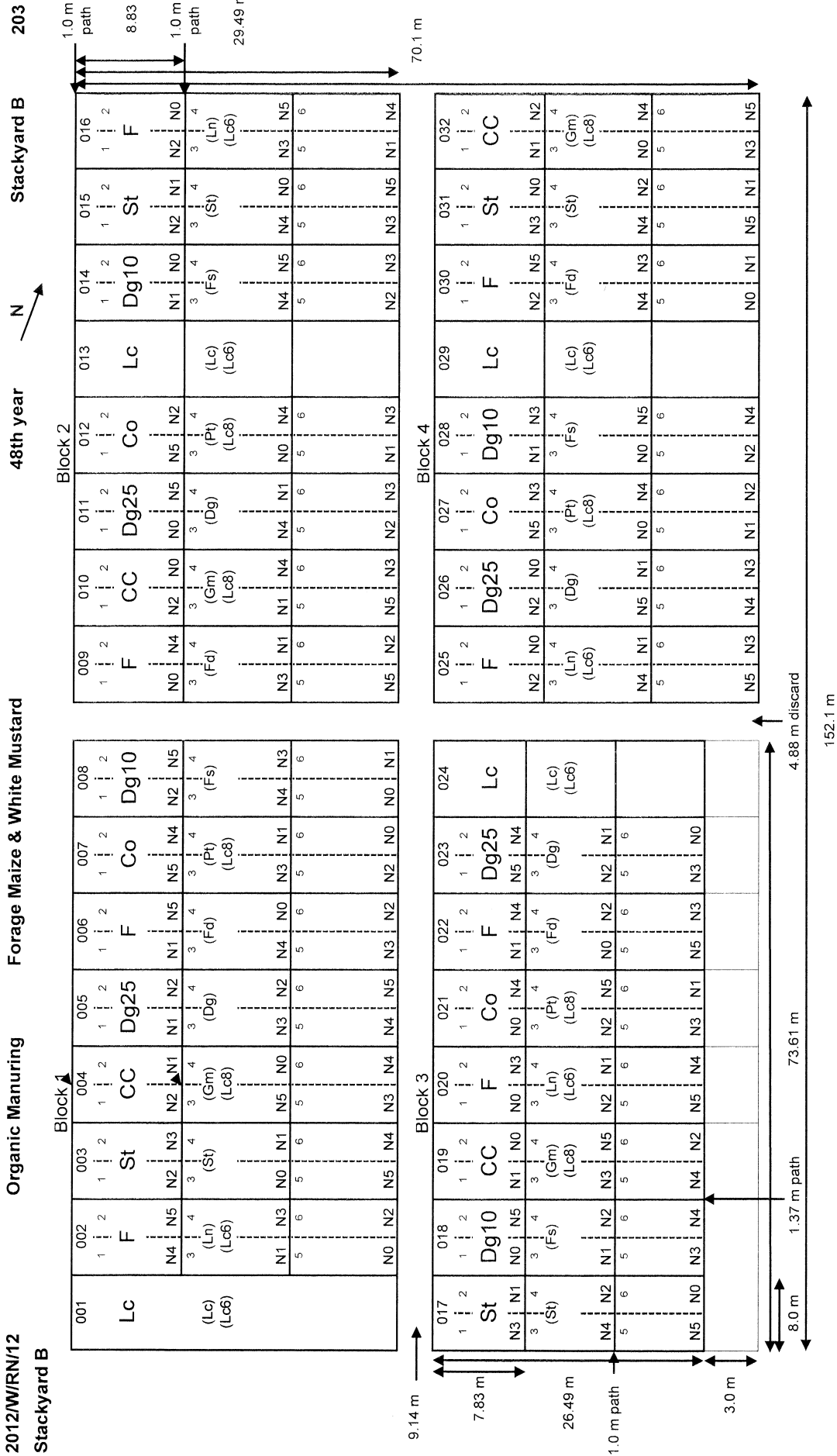
Crop rotation

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
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 // 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 K₂SO₄ (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)

Crop rotation

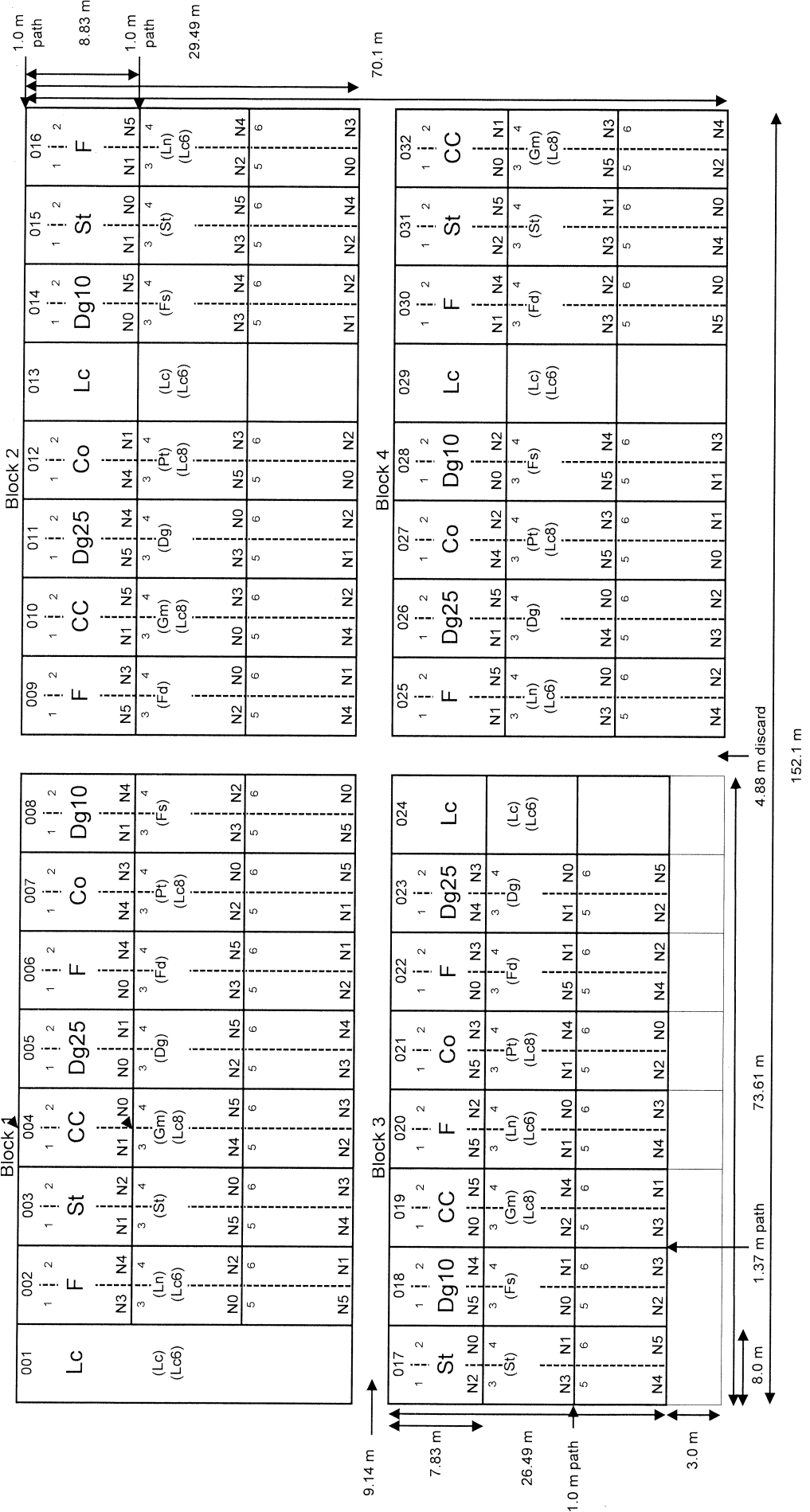
2006 W. Wheat
2007 F Maize and Mustard
2008 W. Rye
2009 S. Barley and Mustard
2010 W. Beans
2011 W. Wheat
2012 F Maize and Mustard
2013 W. Rye

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

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 K₂SO₄ (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

