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RESEARCH

Collection of Plans for the Woburn Organic Manuring Experiment

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W/RN/12 - Woburn Organic Manuring 2015 - 2019

Rothamsted Research

Rothamsted Research (1966-1988) *W/RN/12 - Woburn Organic Manuring 2015 - 2019* ; Collection Of Plans For The Woburn Organic Manuring Experiment, pp 57 - 66

Code: 2015/W/RN/12

Title: Organic Manuring

Field: Stackyard B

51st 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

No Nitrogen to W Beans for 2015.

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

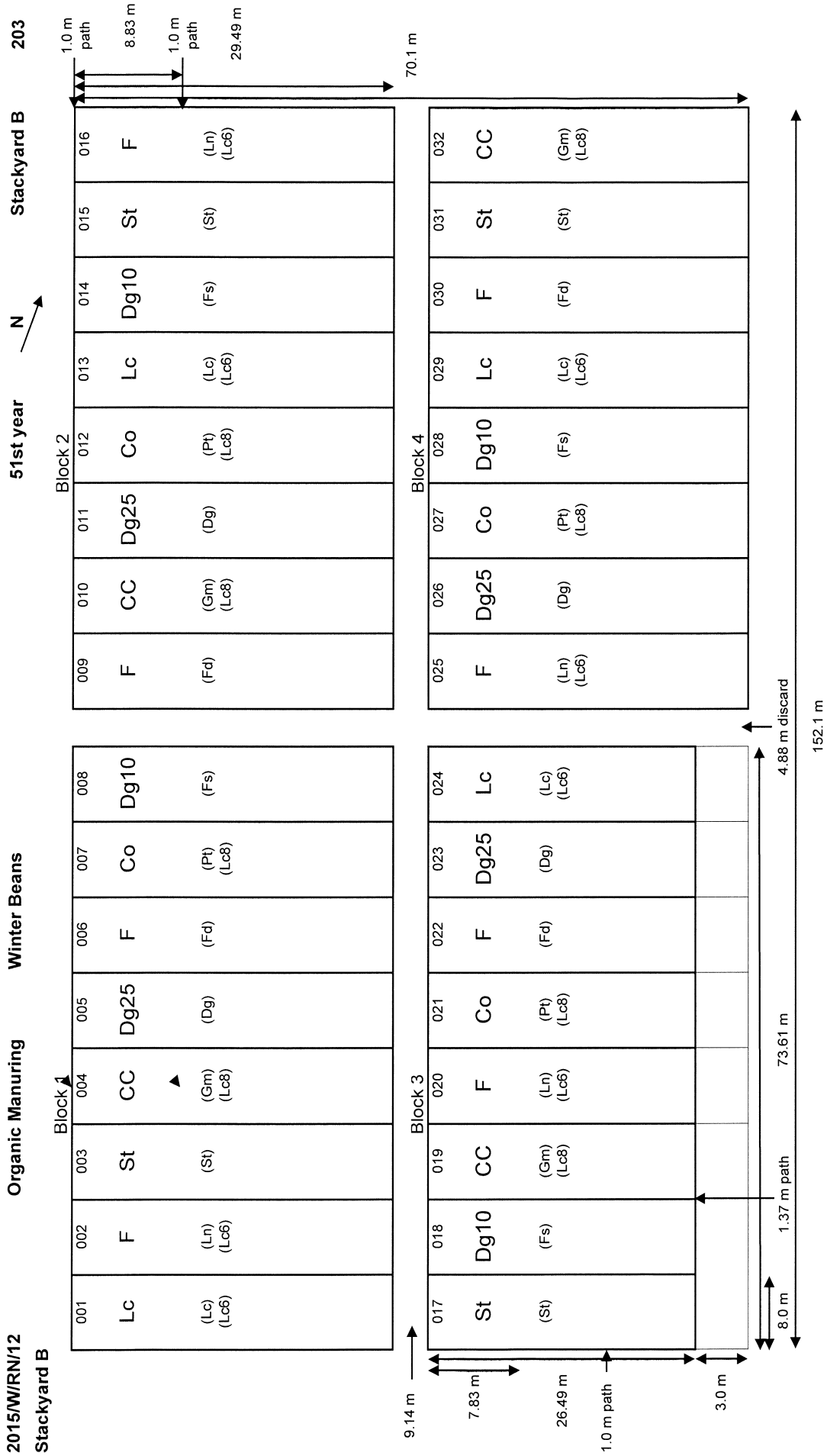
Variety

W Beans: Wizard

//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



52nd year

Plan 203

Code: 2016/W/RN/12

Title: Organic Manuring

Field: Stackyard B

Sponsors:

A Macdonald
2479
K Goulding
2646

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

Nitrogen to Winter Wheat for 2016, kg N/ha, N0-N5.
0, 50, 100, 150, 200 and 250 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

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
2016 W. Wheat

Variety

W Wheat: Gallant

//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

2016/W/RN/12

Stackyard B

Organic Manuring

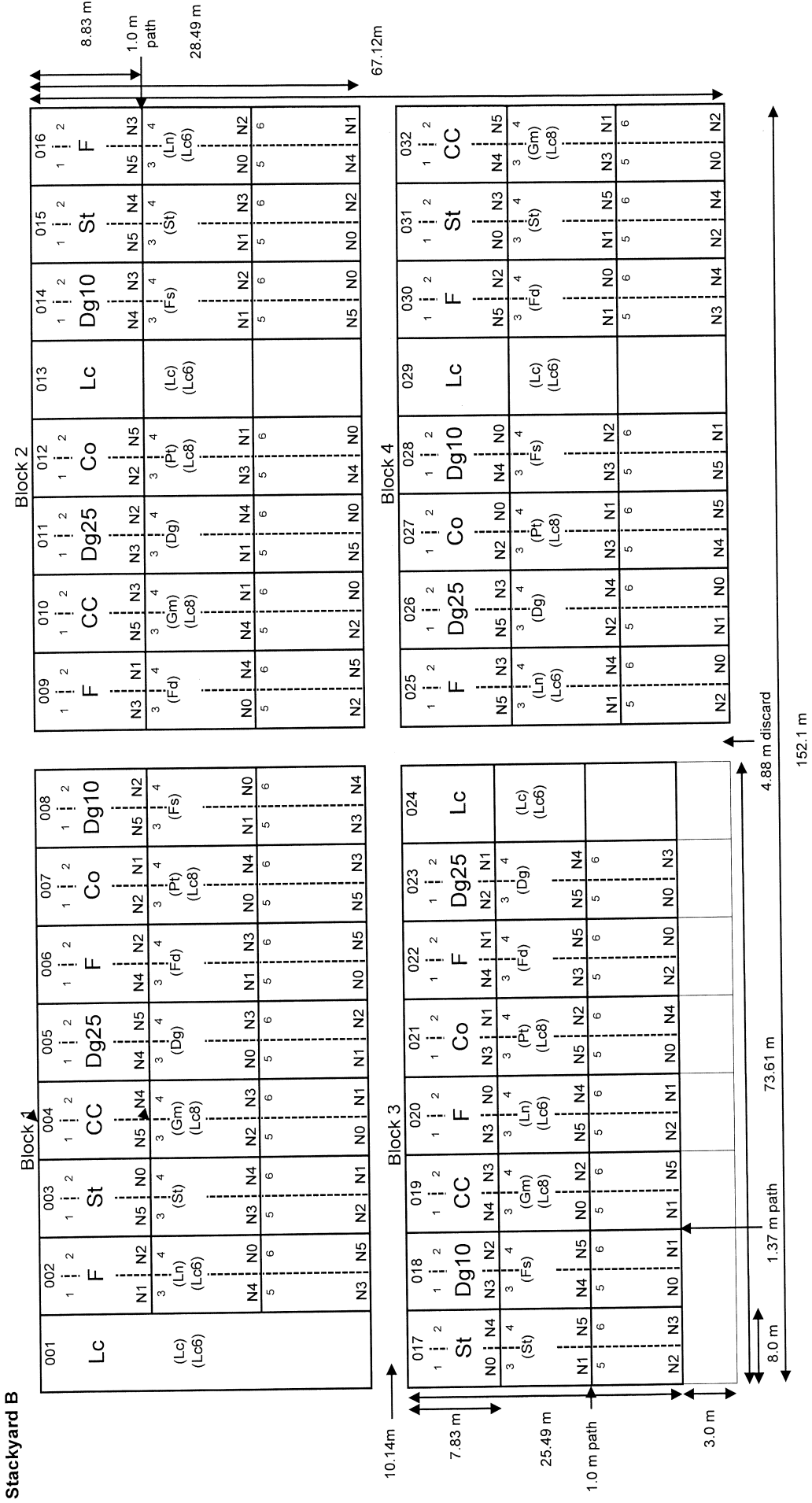
Winter Wheat

52nd year

Stackyard B

203

N



53rd year

Code: 2017/W/RN/12

Title: Organic Manuring

Field: Stackyard B

Sponsors:

A Macdonald
2479

K Goulding
2646

Treatments:

Organic Treatments since 2003

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

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

Nitrogen to F Maize for 2017, kg N/ha, N0-N5.
0, 50, 100, 150, 200 and 250 as Nitrochalk @ 27%N
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) PKMg 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

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
2016 W. Wheat
2017 F. Maize and Mustard

Variety

F. Maize (var. Severus) and W. Mustard (var. Zlata)

//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

203

Stackyard B

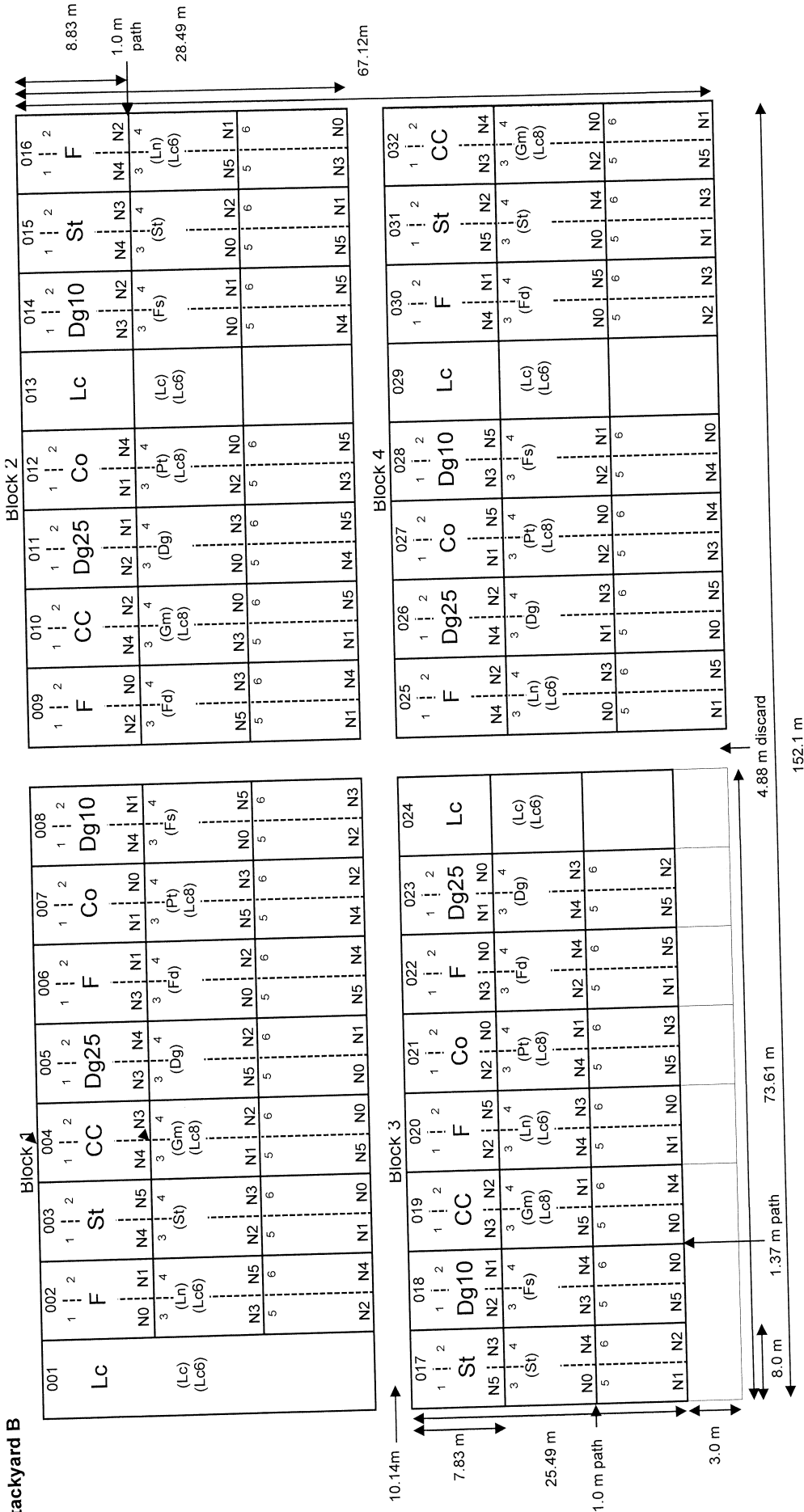
53rd year

Forage Maize & White Mustard

Organic Manuring

2017/W/RN/12

Stackyard B



Code: 2018/W/RN/12

Title: Organic Manuring

Field: Stackyard B

54th year

Plan 203

Sponsors:

A Macdonald 2479 S McGrath 2631 A Gregory 2482

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
Liming: Chalk to be applied to all plots every five years @ 5t/ha. Next due Spring 2022.

Nitrogen to W Rye for 2018, kg N/ha, N0-N5.
 0, 30, 60, 90, 120 and 150 as Nitrochalk @ 27%N
 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)

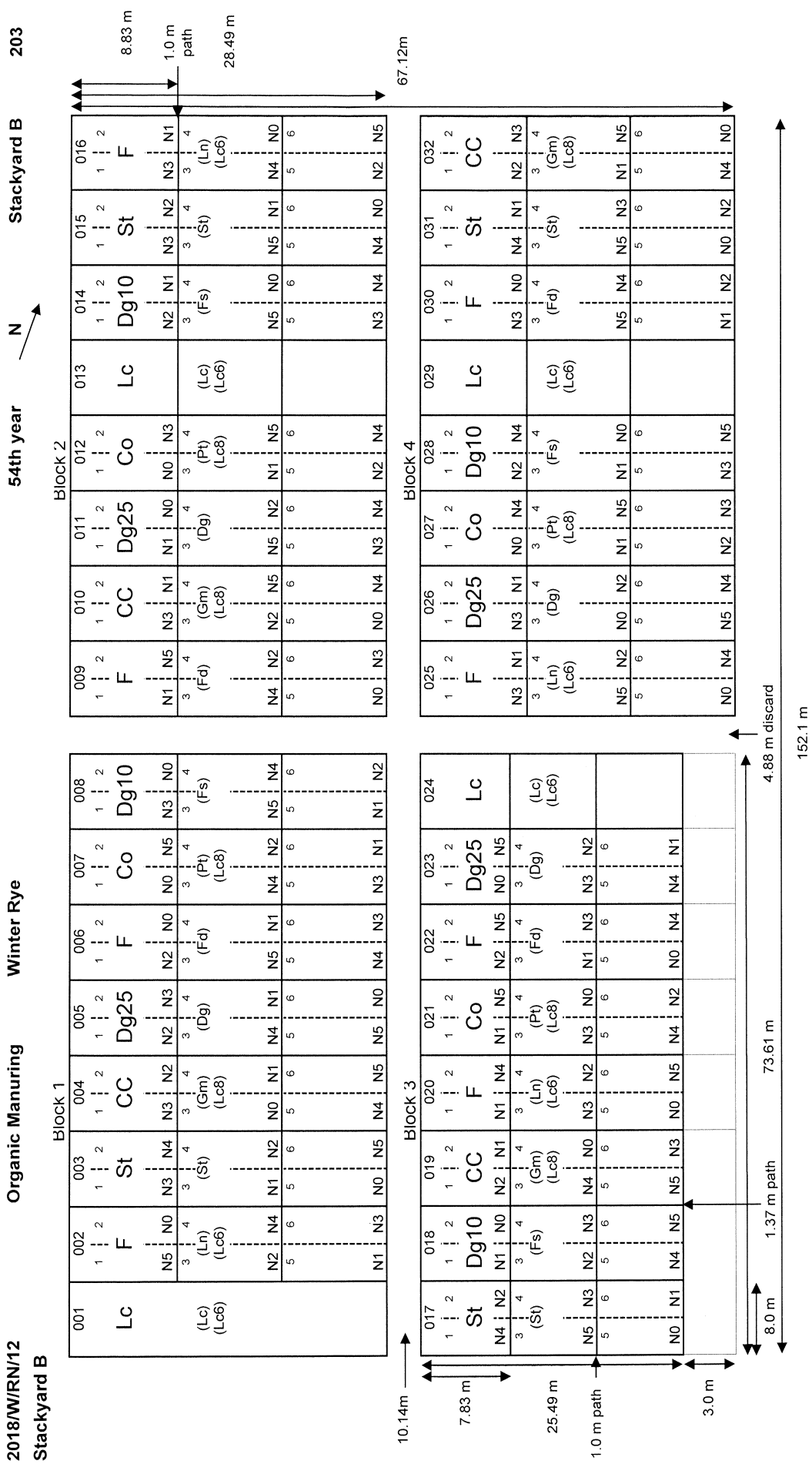
Crop rotation

2011 W.Wheat
 2012 F.Maize and Mustard
 2013 W.Rye
 2014 S. Barley and Mustard
 2015 W. Beans
 2016 W. Wheat
 2017 F.Maize and Mustard
 2018 W. Rye

Variety

W Rye - Mephisto?

//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: 2019/W/RN/12

Title: Organic Manuring

Field: Stackyard B

55th year

Plan 203

Sponsors:

A Macdonald 2479 S McGrath 2631 A Gregory 2482

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
Liming: Chalk to be applied to all plots every five years @ 5t/ha. Next due Spring 2022.

Nitrogen to Spring Barley for 2019, kg N/ha, N0-N5.

0, 35, 70, 105, 140 and 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

- 2012 F Maize and Mustard
- 2013 W. Rye
- 2014 S. Barley and Mustard
- 2015 W. Beans
- 2016 W. Wheat
- 2017 F Maize and Mustard
- 2018 W. Rye
- 2019 S. Barley and Mustard

Variety

S Barley - Irina

//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

2019/W/IRNI/12

Stackyard B

Organic Manuring

S Barley and Mustard

55th year

Stackyard B

203

