

Betning mot skadegörare i sockerbetor 2012

Insecticide seed treatments against pests in sugar beet 2012

Syngenta Seeds AB

Dokumentation och tabeller med resultat

Trial data and tables of results

Bilaget innehåller dokumentation från försøgsserien och projektet.
Der kan forekomme mindre sproglige fejl og uhensigtsmæssigheder i forhold til layout.
Spørgsmål kan rettes til projektlederen.

The appendix comprises documentations from the research project. Minor mistakes in language and lack of adjustments in layout may occur. Questions may be addressed to the project manager.

Åsa Olsson
ao@nordicbeetresearch.nu
+46 709 53 72 62

NBR Nordic Beet Research Foundation (Fond)
DK: Højbygårdvej 14, DK-4960 Holeby
SE: Borgeby Slottsväg 11, SE-237 91 Bjärred

<http://www.nordicbeet.nu/>

Syfte / aim:

Att jämföra effekten av nya betningsmedel mot insekter i sockerbeter

Compare the effect of different insecticide seed treatments on insect

Försöksplan / Trial plan

| | Produkt / Product | Aktiv substans Active ingredient | Insekticid g a.i./unit |
|---|--------------------------|--|----------------------------------|
| 1 | Obehandlat | - | 0 |
| 2 | Gaucho | Imidaklopid | 60 |
| 3 | Mundus Forte | Clotianidin+imidaklopid+betacyflutrin | 30+30+8 |
| 4 | Cruiser Force | Tiametoxam+teflutrin | 60+8 |
| 5 | Force Magna | Tiametoxam+teflutrin | 15+8 |
| 6 | Cruiser | Tiametoxam | 45 |

Alla led betade med 14 g a.i. hymexazol

Krav på försöksplats / Demands on trial locations:

Homogen plats med stor risk för insektsangrepp

Homogeneous site with normal - high risk of attack by pests

Fältplan / Field plan

| Land | Serie | Försöksnr | Försöksplats (namn, adress och tel) | |
|---------|--------|-----------|--|-------------|
| Country | Series | Trialno | Site | |
| SE | 450 | 59 | H G Hansson, Lindbyholm, Lindby 617, 274 93 Skurup | 0708-143255 |
| SE | 450 | 60 | Mats Ingvarsson, Brönnestad | 0705-158577 |
| SE | 450 | 61 | Per Olof Malm, Fuglie Grönadal, 231 94 Trelleborg | 0708-487184 |

Fältplan / Field plan

Lindbyholm

| | | | | | | |
|-----|---|---|---|---|---|---|
| IV | 1 | 5 | 6 | 3 | 4 | 2 |
| | | | | | | |
| | | | | | | |
| III | 5 | 3 | 4 | 1 | 2 | 6 |
| II | 2 | 6 | 3 | 4 | 5 | 1 |
| | | | | | | |
| | | | | | | |
| I | 3 | 1 | 2 | 5 | 6 | 4 |

Fuglie

| | | | | | | |
|-----|---|---|---|---|---|---|
| IV | 4 | 5 | 3 | 1 | 2 | 6 |
| | | | | | | |
| | | | | | | |
| III | 2 | 3 | 1 | 5 | 6 | 4 |
| II | 5 | 6 | 4 | 2 | 3 | 1 |
| | | | | | | |
| | | | | | | |
| I | 3 | 4 | 2 | 6 | 1 | 5 |

Brönnestad

| | | | | | | |
|-----|---|---|---|---|---|---|
| IV | 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | | |
| | | | | | | |
| III | 4 | 2 | 5 | 6 | 1 | 3 |
| II | 1 | 5 | 2 | 3 | 4 | 6 |
| | | | | | | |
| | | | | | | |
| I | 5 | 3 | 6 | 1 | 2 | 4 |

Fältplan och bricknr

59 Lindbyholm

| | | | | | | |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|
| IV | 1 6419 | 5 6420 | 6 6421 | 3 6422 | 4 6423 | 2 6424 |
| | | | | | | |
| III | 5 6413 | 3 6414 | 4 6415 | 1 6416 | 2 6417 | 6 6418 |
| II | 2 6407 | 6 6408 | 3 6409 | 4 6410 | 5 6411 | 1 6412 |
| | | | | | | |
| I | 3 6401 | 1 6402 | 2 6403 | 5 6404 | 6 6405 | 4 6406 |

60 Brönnestad

| | | | | | | |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|
| IV | 1 6443 | 2 6444 | 3 6445 | 4 6446 | 5 6447 | 6 6448 |
| | | | | | | |
| III | 4 6437 | 2 6438 | 5 6439 | 6 6440 | 1 6441 | 3 6442 |
| II | 1 6431 | 5 6432 | 2 6433 | 3 6434 | 4 6435 | 6 6436 |
| | | | | | | |
| I | 5 6425 | 3 6426 | 6 6427 | 1 6428 | 2 6429 | 4 6430 |

61 Fuglie

| | | | | | | |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|
| IV | 4 6467 | 5 6468 | 3 6469 | 1 6470 | 2 6471 | 6 6472 |
| | | | | | | |
| III | 2 6461 | 3 6462 | 1 6463 | 5 6464 | 6 6465 | 4 6466 |
| II | 5 6455 | 6 6456 | 4 6457 | 2 6458 | 3 6459 | 1 6460 |
| | | | | | | |
| I | 3 6449 | 4 6450 | 2 6451 | 6 6452 | 1 6453 | 5 6454 |

Bedömningar och provtagningar

Measures and assessments

59 Lindbyholm

| Aktivitet Activity | Tid Time | PM (SE) | Ansvarig Responsible | Datum Date | Signatur Signature |
|-----------------------------------|---|---------------|-------------------------|---------------|-----------------------|
| Jordprov (nutrition, texture) | Soil analyses (nutrients, N-min, texture) | | 2.6.1 | HS | 25-mar JM |
| Jordprov (betcystnematoder) | Soil analyses (beet cyst nematodes) | | 2.4.1 | HS | |
| Anläggning och sådd | Lay out and sowing | | 2.4.2 | HS | 28-mar HJ |
| Planträkning 50 % | Plant countings at 50% emergence | | 2.5.4 | HS | 24-apr CN MN |
| Planträkning 100 % | Plant countings at 100% emergence | | 2.5.4 | HS | 11-jun RM WM |
| Betsundhed vid planträkning 100 % | Beet vigour at plant counting 100 % | | 2.5.20 | NBR | 13-jun ÅO |
| Radtäckning | Row coverage | | | | 13-jun ÅO |
| Trips | Thrips Spp. | If occurrence | 2.5.12 | HS | 09-maj ÅO |
| Lilla betbaggen | Atomaria linearis | If occurrence | 2.5.12 | HS | - - |
| Lilla betbaggen | Atomaria linearis | If occurrence | 2.5.12 | HS | - - |
| Andra skadedjur | Other pests | If occurrence | 2.5.12 | HS | - - |
| Bladlöss | Aphis fabae count 1 | | 2.5.12 | HS | 28-maj JM RM |
| Bladlöss 1 | Aphis fabae count 1 | medio juni | 2.5.12 | HS | 11-jun RM WM |
| Bladlöss 2 | Aphis fabae count 2 | primo juli | 2.5.12 | HS | 19-jun JOM WM |
| Bladlöss 3 | Aphis fabae count 3 | medio juli | 2.5.12 | HS | 28-jun MN RM |
| Besiktning | Inspection | September | | HS | 19-sep SR |
| Standard skörd | Standard harvest | October | 2.4.7 | HS | 01-nov JMY BN |
| | | | | | |

Bedömningar och provtagningar

Measures and assessments

60 Brännestad

| Aktivitet Activity | Tid Time | PM (SE) | Ansvarig Responsible | Datum Date | Signatur Signature |
|-----------------------------------|---|---------------|-------------------------|---------------|-----------------------|
| Jordprov (nutrition, texture) | Soil analyses (nutrients, N-min, texture) | | 2.6.1 HS | 27-mar | JM |
| Jordprov (betcystnematoder) | Soil analyses (beet cyst nematodes) | | 2.4.1 HS | | |
| Anläggning och sådd | Lay out and sowing | | 2.4.2 HS | 29-mar | JMY JL |
| Planträkning 50 % | Plant countings at 50% emergence | | 2.5.4 HS | 23-apr | HH MN |
| Planträkning 100 % | Plant countings at 100% emergence | | 2.5.4 HS | 11-jun | JM |
| Betsundhed vid planträkning 100 % | Beet vigour at plant counting 100 % | | 2.5.20 NBR | 13-jun | ÅO |
| Radtäckning | Row coverage | | NBR | 13-jun | ÅO |
| Trips | Thrips Spp. | If occurrence | 2.5.12 HS | 09-maj | ÅO |
| Lilla betbaggen | Atomaria linearis | If occurrence | 2.5.12 HS | - | - |
| Lilla betbaggen | Atomaria linearis | If occurrence | 2.5.12 HS | - | - |
| Andra skadedjur | Other pests | If occurrence | 2.5.12 HS | - | - |
| Bladlöss | Aphis fabae count 1 | | 2.5.12 HS | 28-maj | JM RM |
| Bladlöss 1 | Aphis fabae count 1 | medio juni | 2.5.12 HS | 11-jun | RM WM |
| Bladlöss 2 | Aphis fabae count 2 | primo juli | 2.5.12 HS | 19-jun | JOM WM |
| Bladlöss 3 | Aphis fabae count 3 | medio juli | 2.5.12 HS | 28-jun | MN RM |
| Besiktning | Inspection | September | HS | 19-sep | SR |
| Standard skörd | Standard harvest | October | 2.4.7 HS | 31-okt | JMY JM |
| | | | | | |
| | | | | | |

Bedömningar och provtagningar

Measures and assessments

61 Fuglie

| Aktivitet Activity | Tid Time | PM (SE) | Ansvarig Responsible | Datum Date | Signatur Signature |
|-----------------------------------|---|---------------|-------------------------|---------------|-----------------------|
| Jordprov (nutrition, texture) | Soil analyses (nutrients, N-min, texture) | | 2.6.1 | HS | 17-mar JM |
| Jordprov (betcystnematoder) | Soil analyses (beet cyst nematodes) | | 2.4.1 | HS | |
| Anläggning och sådd | Lay out and sowing | | 2.4.2 | HS | 30-mar JMY CN |
| Planträkning 50 % | Plant countings at 50% emergence | | 2.5.4 | HS | 23-apr HH MN |
| Planträkning 100 % | Plant countings at 100% emergence | | 2.5.4 | HS | 28-jun MN RM JOM |
| Betsundhed vid planträkning 100 % | Beet vigour at plant counting 100 % | | 2.5.20 | HS | - - |
| Radtäckning | Row coverage | | | | - - |
| Trips | Thrips Spp. | If occurrence | 2.5.12 | HS | 14-maj LE, LP |
| Lilla betbaggen | Atomaria linearis | If occurrence | 2.5.12 | HS | - - |
| Lilla betbaggen | Atomaria linearis | If occurrence | 2.5.12 | HS | - - |
| Andra skadedjur | Other pests | If occurrence | 2.5.12 | HS | - - |
| Bladlöss | Aphis fabae count 1 | | 2.5.12 | HS | 28-maj JM RM |
| Bladlöss 1 | Aphis fabae count 1 | medio juni | 2.5.12 | HS | 11-jun RM WM |
| Bladlöss 2 | Aphis fabae count 2 | primo juli | 2.5.12 | HS | 19-jun JOM WM |
| Bladlöss 3 | Aphis fabae count 3 | medio juli | 2.5.12 | HS | 28-jun MN RM |
| Besiktning | Inspection | September | | HS | |
| Standard skörd | Standard harvest | October | 2.4.7 | HS | 19-okt JM BN |
| | | | | | |
| | | | | | |

Planträkning / Emergence

| Treatment | | g a.i. | Plants, 1000/ha | | Row cover | Vigour | Thrips |
|-------------------------|---------------|---------|-----------------|------------|-------------|------------|-----------------|
| | | | 50% | 100% | Radtäckning | Sundhet | pct inf. plants |
| Lindbyholm | | | 24-04-2012 | 11-06-2012 | 13-06-2012 | 13-06-2012 | 09-05-2012 |
| 1 | Untreated | 0 | 77,2 | 103,1 | 48 | 79 | 6,0 |
| 2 | Gaicho | 60 | 45,8 | 104,2 | 45 | 73 | 5,0 |
| 3 | Mundus Forte | 30+30+8 | 53,6 | 105,3 | 48 | 78 | 14,0 |
| 4 | Cruiser Force | 60+8 | 58,8 | 104,6 | 50 | 82 | 6,7 |
| 5 | Force Magna | 15+8 | 67,8 | 103,9 | 49 | 79 | 5,0 |
| 6 | Cruiser | 45 | 59,2 | 102,2 | 48 | 79 | 5,0 |
| | RSQ | | 78,5 | 13,4 | 26,7 | 50,3 | 37,3 |
| | CV | | 12,6 | 3,2 | 7,3 | 5,1 | 89,8 |
| | LSD | | 11,5 | 5,1 | 5,3 | 6,0 | 9,5 |
| | Prob | | 0,0008 | 0,8314 | 0,4436 | 0,1008 | 0,3293 |
| Brönnestad | | | 23-04-2012 | 11-06-2012 | 13-06-2012 | 13-06-2012 | 09-05-2012 |
| 1 | Untreated | 0 | 51,4 | 100,8 | 69 | 90 | 6,0 |
| 2 | Gaicho | 60 | 41,1 | 100,6 | 69 | 89 | 10,0 |
| 3 | Mundus Forte | 30+30+8 | 40,3 | 100,8 | 67 | 89 | 8,0 |
| 4 | Cruiser Force | 60+8 | 32,5 | 101,9 | 65 | 88 | 10,0 |
| 5 | Force Magna | 15+8 | 51,1 | 103,9 | 69 | 91 | 6,0 |
| 6 | Cruiser | 45 | 35,6 | 98,1 | 65 | 88 | 7,0 |
| | RSQ | | 59,19 | 36,85 | 40,3 | 30,8 | 13,62 |
| | CV | | 19,2 | 3,0 | 4,9 | 2,9 | 85,7 |
| | LSD | | 12,2 | 4,6 | 4,9 | 4,0 | 10,1 |
| | Prob | | 0,0206 | 0,237 | 0,2311 | 0,3382 | 0,9062 |
| Fuglie | | | 23-04-2012 | 28-06-2012 | | | 09-05-2012 |
| 1 | Untreated | 0 | 53,8 | 115,7 | - | - | 18,0 |
| 2 | Gaicho | 60 | 48,3 | 118,6 | - | - | 11,0 |
| 3 | Mundus Forte | 30+30+8 | 62,5 | 116,3 | - | - | 13,0 |
| 4 | Cruiser Force | 60+8 | 53,8 | 116,0 | - | - | 11,0 |
| 5 | Force Magna | 15+8 | 52,1 | 116,9 | - | - | 9,0 |
| 6 | Cruiser | 45 | 52,1 | 115,7 | - | - | 5,0 |
| | RSQ | | 43,02 | 30,41 | | | 36,06 |
| | CV | | 24,0 | 3,3 | | | 68,6 |
| | LSD | | 19,4 | 5,8 | | | 11,5 |
| | Prob | | 0,7451 | 0,8879 | | | 0,3284 |
| 3 trials average | | | | | | | |
| 1 | Untreated | 0 | 60,8 | 106,5 | 58 | 84 | 10,0 |
| 2 | Gaicho | 60 | 45,1 | 107,8 | 57 | 81 | 8,7 |
| 3 | Mundus Forte | 30+30+8 | 52,1 | 107,5 | 58 | 83 | 11,7 |
| 4 | Cruiser Force | 60+8 | 48,1 | 107,4 | 57 | 84 | 9,3 |
| 5 | Force Magna | 15+8 | 57,0 | 108,2 | 59 | 85 | 6,7 |
| 6 | Cruiser | 45 | 48,9 | 105,3 | 56 | 83 | 5,7 |
| | RSQ | | 42,31 | 83,49 | 90,5 | 75,8 | 16,05 |
| | CV | | 22,3 | 3,0 | 5,9 | 4,2 | 76,0 |
| | LSD | | 9,4 | 2,6 | 3,4 | 3,6 | 5,4 |
| | Prob | | 0,0144 | 0,3051 | 0,5635 | 0,1984 | 0,2622 |

450-2012 Betning mot skadegörare i sockerbetor

450-2012

| Treatment | | <i>Aphis fabae</i> | | <i>Aphis fabae</i> | | <i>Aphis fabae</i> | | <i>Aphis fabae</i> | | |
|-------------------|---------------|----------------------|-----------|----------------------|-----------|----------------------|-----------|----------------------|-----------|--------|
| g a.i. | | % plants with aphids | Aphids/pl | % plants with aphids | Aphids/pl | % plants with aphids | Aphids/pl | % plants with aphids | Aphids/pl | |
| Lindbyholm | | 11-06-2012 | | 19-06-2012 | | 28-06-2012 | | 05-07-2012 | | |
| 1 | Untreated | 0 | 9 | 90 | 21 | 8 | 91 | 137 | 100 | 208 |
| 2 | Gaucho | 60 | 2 | 1 | 2 | 1 | 61 | 10 | 97 | 22 |
| 3 | Mundus Forte | 30+30+8 | 0 | 0 | 6 | 30 | 71 | 11 | 100 | 28 |
| 4 | Cruiser Force | 60+8 | 0 | 5 | 5 | 1 | 75 | 16 | 99 | 39 |
| 5 | Force Magna | 15+8 | 0 | 0 | 15 | 5 | 81 | 30 | 100 | 69 |
| 6 | Cruiser | 45 | 1 | 1 | 9 | 7 | 77 | 17 | 100 | 39 |
| | RSQ | | 68,4 | 66,2 | 38,0 | 54,1 | 90,1 | 54,1 | 37,3 | 80,1 |
| | CV | | 140,3 | 205,9 | 134,7 | 162,9 | 11,9 | 163,8 | 2,5 | 62,4 |
| | LSD | | 4,4 | 49,9 | 20,3 | 22,5 | 13,7 | 94,4 | 3,8 | 64,4 |
| | Prob | | 0,0046 | 0,0091 | 0,4005 | 0,1161 | 0,0082 | 0,0790 | 0,4890 | 0,0002 |
| Brönnestad | | 11-06-2012 | | 2012-06-20 | | 28-06-2012 | | 05-07-2012 | | |
| 1 | Untreated | 0 | 3 | 1 | 33 | 6 | 40 | 3 | 60 | 7 |
| 2 | Gaucho | 60 | 1 | 1 | 22 | 4 | 38 | 3 | 55 | 6 |
| 3 | Mundus Forte | 30+30+8 | 1 | 0 | 28 | 3 | 23 | 4 | 57 | 7 |
| 4 | Cruiser Force | 60+8 | 3 | 2 | 36 | 5 | 39 | 4 | 54 | 6 |
| 5 | Force Magna | 15+8 | 2 | 1 | 34 | 4 | 25 | 3 | 54 | 7 |
| 6 | Cruiser | 45 | 4 | 1 | 32 | 4 | 28 | 3 | 53 | 7 |
| | RSQ | | 33,7 | 43,7 | 29,9 | 64,4 | 58,3 | 41,4 | 79,7 | 45,9 |
| | CV | | 143,4 | 142,0 | 31,6 | 32,2 | 39,1 | 65,5 | 26,4 | 37,4 |
| | LSD | | 5,0 | 1,9 | 14,7 | 2,1 | 18,9 | 3,4 | 22,1 | 3,8 |
| | Prob | | 0,7547 | 0,6455 | 0,4074 | 0,1254 | 0,2503 | 0,8920 | 0,9845 | 0,9493 |
| Fuglie | | 11-06-2012 | | 2012-06-20 | | 28-06-2012 | | 05-07-2012 | | |
| 1 | Untreated | 0 | 10 | 2 | 73 | 7 | 92 | 20 | 94 | 48 |
| 2 | Gaucho | 60 | 10 | 2 | 73 | 7 | 92 | 19 | 96 | 35 |
| 3 | Mundus Forte | 30+30+8 | 12 | 3 | 72 | 8 | 87 | 21 | 98 | 49 |
| 4 | Cruiser Force | 60+8 | 8 | 2 | 77 | 8 | 90 | 20 | 97 | 34 |
| 5 | Force Magna | 15+8 | 5 | 1 | 70 | 8 | 86 | 20 | 97 | 41 |
| 6 | Cruiser | 45 | 8 | 2 | 78 | 7 | 88 | 20 | 97 | 29 |
| | RSQ | | 54,3 | 39,0 | 12,8 | 19,1 | 28,1 | 31,4 | 71,2 | 54,4 |
| | CV | | 62,2 | 76,9 | 16,0 | 33,7 | 8,9 | 22,7 | 3,6 | 23,8 |
| | LSD | | 8,3 | 2,1 | 17,8 | 3,8 | 12,0 | 6,9 | 5,2 | 14,1 |
| | Prob | | 0,5894 | 0,7852 | 0,9233 | 0,9332 | 0,8324 | 0,9843 | 0,6726 | 0,0530 |

450-2012 Betning mot skadegörare i sockerbeter

450-2012

Skörd / Yield

| Treatment | Plant number | Roots | | Sugar | | Amino-N | K+Na | Clean-ness | | |
|-------------------|---------------|---------|---------|--------|--------|---------|------|---------------|---------------|--------|
| | | g a.i. | 1000/ha | t/ha | % | t/ha | Rel | mg/100 g beet | mM/100 g beet | % |
| Lindbyholm | | | | | | | | | | |
| 1 | Untreated | 0 | | 76,4 | 17,5 | 13,4 | 100 | 12,8 | 3,0 | 90,3 |
| 2 | Gaucho | 60 | | 76,5 | 17,7 | 13,1 | 98 | 15,2 | 3,1 | 91,0 |
| 3 | Mundus Forte | 30+30+8 | | 80,4 | 17,6 | 14,2 | 106 | 11,0 | 2,9 | 90,8 |
| 4 | Cruiser Force | 60+8 | | 79,1 | 17,5 | 13,9 | 104 | 12,7 | 2,9 | 91,1 |
| 5 | Force Magna | 15+8 | | 79,6 | 17,6 | 14,0 | 105 | 14,3 | 3,0 | 90,3 |
| 6 | Cruiser | 45 | | 82,8 | 17,7 | 14,6 | 109 | 12,3 | 3,1 | 91,3 |
| | RSQ | | | 40,5 | 32,5 | 54,6 | | 43,4 | 34,5 | 55,9 |
| | CV | | | 4,5 | 1,4 | 4,4 | | 21,2 | 4,0 | 1,0 |
| | LSD | | | 5,6 | 0,4 | 1,0 | | 4,4 | 0,2 | 1,5 |
| | Prob | | | 0,1646 | 0,8796 | 0,0577 | | 0,4344 | 0,3194 | 0,5576 |
| Brönnestad | | | | | | | | | | |
| 1 | Untreated | 0 | | 93,9 | 18,2 | 17,1 | 100 | 9,8 | 3,1 | 89,0 |
| 2 | Gaucho | 60 | | 93,6 | 18,2 | 17,0 | 100 | 10,5 | 3,0 | 90,4 |
| 3 | Mundus Forte | 30+30+8 | | 92,4 | 18,2 | 16,8 | 98 | 9,8 | 3,1 | 90,0 |
| 4 | Cruiser Force | 60+8 | | 94,2 | 18,3 | 17,2 | 101 | 10,5 | 3,1 | 89,8 |
| 5 | Force Magna | 15+8 | | 94,1 | 18,3 | 17,2 | 100 | 9,0 | 3,0 | 88,7 |
| 6 | Cruiser | 45 | | 90,8 | 18,3 | 16,7 | 97 | 9,8 | 3,1 | 89,5 |
| | RSQ | | | 16,8 | 57,4 | 21,6 | | 31,0 | 18,1 | 39,4 |
| | CV | | | 4,7 | 0,6 | 4,6 | | 12,0 | 5,1 | 1,1 |
| | LSD | | | 6,6 | 0,2 | 1,2 | | 1,8 | 0,2 | 1,4 |
| | Prob | | | 0,8618 | 0,4347 | 0,8858 | | 0,5031 | 0,9579 | 0,1706 |
| Fuglie | | | | | | | | | | |
| 1 | Untreated | 0 | | 89,0 | 17,6 | 15,7 | 100 | 10,3 | 3,3 | 90,0 |
| 2 | Gaucho | 60 | | 92,4 | 17,7 | 16,3 | 104 | 8,3 | 3,3 | 90,6 |
| 3 | Mundus Forte | 30+30+8 | | 88,3 | 17,7 | 15,7 | 100 | 8,5 | 3,3 | 91,2 |
| 4 | Cruiser Force | 60+8 | | 89,2 | 17,7 | 15,8 | 101 | 9,0 | 3,3 | 91,2 |
| 5 | Force Magna | 15+8 | | 89,3 | 17,7 | 15,8 | 101 | 9,0 | 3,3 | 90,5 |
| 6 | Cruiser | 45 | | 92,0 | 17,7 | 16,3 | 104 | 9,8 | 3,3 | 90,5 |
| | RSQ | | | 28,9 | 32,0 | 42,2 | | 21,9 | 23,4 | 29,0 |
| | CV | | | 4,8 | 1,2 | 4,2 | | 19,1 | 2,9 | 1,1 |
| | LSD | | | 6,6 | 0,3 | 1,0 | | 2,6 | 0,1 | 1,5 |
| | Prob | | | 0,6839 | 0,9184 | 0,5366 | | 0,6019 | 0,8690 | 0,5079 |

450-2012 Betning mot skadegörare i sockerbetor

450-2012

Skörd / Yield

| Treatment | g a.i. | Plant number 1000/ha | Roots | | Sugar | | Amino-N | K+Na | Clean-ness |
|--|---------|-------------------------|--------|--------|--------|-----|------------------|------------------|------------|
| | | | t/ha | % | t/ha | Rel | mg/100 g beet | mM/100 g beet | % |
| 3 trials | | | | | | | | | |
| 1 Untreated | 0 | 106,5 | 86,4 | 17,8 | 15,4 | 100 | 10,9 | 3,1 | 89,8 |
| 2 Gaucho | 60 | 107,8 | 87,5 | 17,9 | 15,5 | 101 | 11,3 | 3,1 | 90,7 |
| 3 Mundus Forte | 30+30+8 | 107,5 | 87,1 | 17,8 | 15,5 | 101 | 9,8 | 3,1 | 90,7 |
| 4 Cruiser Force | 60+8 | 107,4 | 87,5 | 17,8 | 15,6 | 102 | 10,7 | 3,1 | 90,7 |
| 5 Force Magna | 15+8 | 108,2 | 87,7 | 17,9 | 15,7 | 102 | 10,8 | 3,1 | 89,8 |
| 6 Cruiser | 45 | 105,3 | 88,5 | 17,9 | 15,9 | 103 | 10,6 | 3,1 | 90,4 |
| RSQ | | 83,49 | 93,4 | 97,8 | 94,4 | | 82,8 | 89,1 | 87,4 |
| CV | | 3,0 | 2,5 | 0,3 | 2,7 | | 10,1 | 2,0 | 0,4 |
| LSD | | 2,6 | 3,9 | 0,1 | 0,8 | | 2,0 | 0,1 | 0,6 |
| Prob | | 0,3051 | 0,8903 | 0,1625 | 0,8026 | | 0,6361 | 0,9969 | 0,0168 |
| 2 trials average (excl. Brönnestad) | | | | | | | | | |
| 1 Untreated | 0 | 109,4 | 82,7 | 17,5 | 14,5 | 100 | 11,5 | 3,2 | 90,2 |
| 2 Gaucho | 60 | 111,4 | 84,5 | 17,7 | 14,7 | 101 | 11,7 | 3,2 | 90,8 |
| 3 Mundus Forte | 30+30+8 | 110,8 | 84,4 | 17,7 | 14,9 | 103 | 9,8 | 3,1 | 91,0 |
| 4 Cruiser Force | 60+8 | 110,3 | 84,1 | 17,6 | 14,8 | 102 | 10,9 | 3,1 | 91,2 |
| 5 Force Magna | 15+8 | 110,4 | 84,5 | 17,7 | 14,9 | 103 | 11,6 | 3,2 | 90,4 |
| 6 Cruiser | 45 | 109,0 | 87,4 | 17,7 | 15,5 | 106 | 11,0 | 3,2 | 90,9 |
| RSQ | | 99,16 | 94,8 | 80,8 | 93,2 | | 85,7 | 91,5 | 74,8 |
| CV | | 0,8 | 2,4 | 0,3 | 3,0 | | 11,8 | 2,3 | 0,4 |
| LSD | | 2,3 | 5,3 | 0,1 | 1,1 | | 3,4 | 0,2 | 0,8 |
| Prob | | 0,2454 | 0,4481 | 0,1357 | 0,5024 | | 0,6834 | 0,8931 | 0,1372 |

Betning mot skadegörare i sockerbetor

450-2012

Insecticide seed treatments against pests in sugar beet

Jordanalys / Soil analyses

| | Lindbyholm | | Brönnestad | | Fuglie | |
|----------------------|--------------------|--------------|------------|--------------|----------|--------------|
| | | <i>Klass</i> | | <i>Klass</i> | | <i>Klass</i> |
| pH-värde | 7 | | 7,3 | | 7 | |
| P-AL (mg/100 g jord) | 6,7 | <i>III</i> | 14 | <i>IVB</i> | 10 | <i>IVA</i> |
| K-AL (mg/100 g jord) | 8,1 | <i>III</i> | 14 | <i>III</i> | 9,6 | <i>III</i> |
| Mg-AL (mg/10 g jord) | 3,5 | | 6,5 | | 6,6 | |
| K/Mg-kvot | 2,3 | | 2,2 | | 1,5 | |
| Ca-AL (mg/kg jord) | 190 | | 300 | | 260 | |
| Mullhalt (%) | Organic matter (%) | 1,7 | 2,3 | | 2,2 | |
| Lerhalt (%) | Clay (%) | 14 | 18 | | 14 | |
| Sand + grovmo (%) | Sand+fine sand (%) | 59 | 53 | | 57 | |
| Jordart | Soil type | mf i Mo | nmh saLL | | nmh I Mo | |

Particle size

| | |
|--------|----------------------------|
| Sand | Sand = 2-0,2 mm |
| Grovmo | Fine sand = 0,02-0,06 mm |
| Finmo | Coarse silt = 0,06-0,02 mm |
| Mjäla | Silt = 0,02-0,002 |
| Lera | Clay = <0,002 mm |
| Finler | Fine clay = <0,0006 |

Soil type

nmhISa = medium humus rich light sand
mmhISa = humus rich light sand
mmhIMo = humus rich fine sand soil
mmhmoLL = humus rich loam soil
mfsaLL = humus poor sandy loam soil
mfISa = humus poor clay sand soil
mfIMo = humus poor fine sand
mfmoLL = humus poor loam soil
nmhsaLL = medium humus rich sandy loam soil
mr ML = humus rich clay

Ogräsbekämpning / Weed control

| Plats / Site | Datum date | Produkt och dos / Product and dose G=Goltix, BP=Betanal Power, P=Pyramin, S=Safari, E=Ethosat, O=olja |
|--------------|---------------|--|
| Lindbyholm | 30-04-2012 | 1,25 G + 0,6 BP + 0,5 O |
| | 2012-05-10 | 1,0 G + 0,6 BP + 0,75 P + 20 g S + 0,5 O |
| | 2012-05-19 | 0,5 G + 0,6 BP + 0,75 P + 20 g S + 0,5 O |
| Brönnestad | 2012-04-30 | 1,5 G + 0,6 BP + 0,5 O |
| | 2012-05-14 | 1,0 G + 0,6 BP + 0,1 E + 24 g S + 0,5 O |
| | 2012-05-28 | 0,5 G + 0,6 BP + 0,1 E + 24 g S + 0,5 O |
| Fuglie | 2012-05-01 | 1,0 G + 0,6 BP + 0,35 P + 0,3 O |
| | 2012-05-24 | 1,0 G + 0,6 BP + 0,05 E + 0,3 O |
| | 2012-06-06 | 30 g S + 0,3 O |

Gödning / Fertilization

| Plats / Site | Datum date | Produkt och giva / Product and dose |
|--------------|---------------|-------------------------------------|
| Lindbyholm | 2012-03-21 | NPK 21-3-10 550 kg/ha |
| Brönnestad | 28-03-2012 | Probeta NPK 750 kg/ha |
| Fuglie | 14-03-2012 | NPK 18-4-14 675 kg/ha |
| | 2012-05-13 | Besal 175 kg/ha |
| | 2012-05-24 | Mantrac 1,0 l/ha |
| | 2012-06-04 | Bortrac 3,0 l/ha |

Bladsvampar / Leaf diseases

| Plats / Site | Datum Date | Produkt och giva / Product and dose |
|--------------|---------------|-------------------------------------|
| Lindbyholm | 16-08-2012 | Comet 0,5 l/ha |
| Brönnestad | 14-08-2012 | Comet 0,5 l/ha |
| Fuglie | 15-08-2012 | Comet 0,5 l/ha |

Försöksinformation / Trial information

| Plats / Site | Förrukt Precrops | Sockerbetor: Sugar beet: | Radavstånd Row spacing | Antal frö/m No of seeds/m |
|--------------|---------------------|-----------------------------|---------------------------|------------------------------|
| Lindbyholm | Höstvete | 28-03-2012 | 50 | 5,3 |
| Brönnestad | Höstvete | 29-03-2012 | 50 | 5,3 |
| Fuglie | Höstvete | 30-03-2012 | 48 | 5,4 |