

## Appendix I- NESARE 2015 management tables (Planting and harvesting information in Manure and Pest Rotation)

| Rotation        | Crop                                | Variety  | Date of planting  | Date of harvest / termination   | Seed rate (per acre)                             | Seed depth (in)     | Row spacing (in) | Maturity           | Transgenic Traits |
|-----------------|-------------------------------------|--|---|---|--|---------------------|------------------|--------------------|-------------------|
| Manure Rotation | Alfalfa & Orchard-grass (Yr 1)      | <b>BM</b> Alfalfa: 6422Q<br><b>IM</b> Alfalfa: SW420LH<br>Orchardgrass: Extend | 4/18/2015   | 6/22/2015, 8/04/15, 9/8/15  | alf: 10 lb<br>grass: 10 lb                       | 1/4-1/2             | 7.5              |                    |                   |
|                 | Alfalfa & Orchard-grass (Yr 2)      | <b>BM</b> Alfalfa: 6422Q<br><b>IM</b> Alfalfa: SW420LH<br>Orchardgrass: Extend | 4/14/2014   | 5/26/2015, 7/02/15, 8/04/15, 9/17/15  | alf: 10 lb<br>grass: 4 lb                        | 1/4-1/2             | 7.5              |                    |                   |
|                 | Clover Mix Interseed into Cg        | An. Ryegr: KB Supreme<br>RC: Common<br>Radish: CC solutions<br>Og:Potomac      | 6/18/15   | Spring 2016   | AR: 10 lb<br>RC: 10 lb<br>Rad: 3 lb<br>Og: 10 lb | 1/4-1/2             | 7.5              |                    |                   |
|                 | Rye, RCunderseed                    | Rye: Aroostock<br>RC: Freedom  | <b>Rye:</b> 10/9-10/10/14<br>10/27/14 (replant)<br><b>RC:</b> 4/18/15 | 5/22/15 - rye<br>7/23 - RC<br>termination: spr '16 - RC<br>9/8/2015: RC harvest   | 120 lb<br>6.5 lb                                 | 1-1.25<br>3/4       | 7.5              |                    |                   |
|                 | Rye, SSgrass,CC                     | Rye: Aroostock<br>SSgrass: Green<br>Grazier<br>CC: Fall 2014                   | <b>Rye:</b> 10/9-10/10/14<br>10/27/14 (replant)<br><b>SS:</b> 6/05/15 | 5/22/15 - rye<br>7/23 & 8/21- SSg harvest<br>8/24/: SSg spray, Glypho (32oz)<br>9/28/15: Poast (3pts/A, crop oil (2pt/A) on SSg regrow<br>termination: spr '16 - CC | 120 lb<br>25 lb<br>20 lb                         | 1-1.25<br>3/4<br>≤1 | 7.5              |                    |                   |
|                 | Corn Grain after Alf + Orch. Grass  | TA566-18   | 5/14/15   | 11/5/2015   | 33 K   | 1.5                 | 30               | 105 <sub>CRM</sub> | GT Agrisure       |
|                 | Corn Silage after Interseeded CCs   | TA089-00   | 5/14/15   | 9/8/15: Cs harvest  | 35 k   | 1.5                 | 30               | 89 <sub>CRM</sub>  | none              |
|                 | Corn Silage after RC/CC             | TA089-00   | 5/14/15   | 9/8/15: Cs harvest  | 35 k   | 1.5                 | 30               | 89 <sub>CRM</sub>  | none              |
|                 | Oats (after Cs after RC/CC)         | Hercules? Blaze?<br>(check with Scott0   | 10/3/2014, 9/26/15  | winterkills   | 96 lb or 3 Bu                                    | 1-1.25              | 7.5              |                    |                   |
|                 | Rye (fall plant 2015)               | Aroostock  | 9/24/15   | to be harvested in 2016   | 120 lb   | 1-1.25              | 7.5              |                    |                   |
|                 | Red Clover (Spring underseed '14)   | Freedom  | 4/2/14  |   | 6.5 lb   | 0.75                | 7.5              |                    |                   |
|                 | Clover Mix Interseed into Cg (2014) | See 2014 table.  | 7/1/14  |   |  | 1/4-1/2             | 7.5              |                    |                   |
|                 | Crimson Clover (fall plant 2014)    | Dixie  | 8/29 & 9/12/14  |   | 20 lb  | ≤1                  | 7.5              |                    |                   |

| Rotation          | Crop   | Variety   | Date of planting                                       | Date of harvest / termination  | Seed rate (per acre)                     | Seed depth (in) | Row spacing (in) | Maturity           | Transgenic Traits |
|-------------------|--|---|--|--|--|-----------------|------------------|--------------------|-------------------|
| Pest Rotation     | SH: Alfalfa Yr 1                             | 6422Q   | 4/18/15  | 6/22/2015, 8/04/2015, 9/17/15  | 18 lb                                    | 1/4-1/2         | 7.5              |                    |                   |
|                   | RH: Triticale, Alfalfa, & Orchard-grass Yr 1 | Triticale: 336<br>Alfalfa: SW420LH<br>Grass: Extend | 4/18/15  | 6/22/2015,8/04/2015, 9/17/15   | trit: 45 lb<br>alf: 10 lb<br>grass: 4 lb | 1/4-1/2         | 7.5              |                    |                   |
|                   | Alfalfa (Yr 2)                               | Genoa   | 4/14/14  | 5/26/2015, 7/02/15, 8/04/15, 9/17/15   | 18 lb                                    | 1/4-1/2         | 7.5              |                    |                   |
|                   | Alfalfa (Yr 3)                               | Genoa   | 4/24/13  | 5/26/2015, 7/02/15, 8/04/15  | 18 lb                                    | 1/4-1/2         | 7.5              |                    |                   |
|                   | Alfalfa & Orchard-grass (Yr 2)               | Alfalfa: SW420LH<br>Orchardgrass: Extend            | 4/14/14  | 5/26/2015, 7/02/15, 8/04/15, 9/17/15   | alf: 10 lb<br>grass: 4 lb                | 1/4-1/2         | 7.5              |                    |                   |
|                   | Alfalfa & Orchard-grass (Yr 3)               | Alfalfa: Genoa<br>Orchardgrass: Extend              | 4/24/13  | 5/26/2015, 7/02/15, 8/04/15  | alf: 10 lb<br>grass: 4 lb                | 1/4-1/2         | 7.5              |                    |                   |
|                   | Canola (fall plant 2014)                     | Wichita   | 8/29/14  | 07/01/2015 (Block 1)<br>07/07/15 (Blocks 2,3,4)<br>8/18/15: Canola mowed (RH & SH) | can: 6.5 lb                              | 3/4             | 7.5              |                    | None              |
|                   | Canola (fall plant 2015)                     | Wichita   | 8/28/2015  |  | 6.5 lb                                   | 3/4             | 7.5              |                    | None              |
|                   | Corn Silage                                  | TA-089-00   | 5/15/15  | 9/8/15: Cs harvest   | 35K                                      | 1 1/2           | 30               | 89 <sub>CRM</sub>  | None              |
|                   | Oats (after Cs, 2015)                        | Corral  | 9/25/15  | winterkills.   | 96 lb or 3 Bu                            | 1-1.5           | 7.5              |                    |                   |
|                   | Soybeans                                     | TS2849-R2S  | 15"/SH: 5/22/15<br>30"/RH & SH: 5/22/15                | 10/8/15  | 200 k                                    | 1-1.5           | 7.5/30           | 2.7                | RR2 Yield STS     |
|                   | Rye  | Farm Aroostock                                      | Ca,R: 10/9/14<br>replanted 10/27/14<br>R,S,R: 10/29/14 | R,Cs: 5/18/14<br>R,S,R (SH): 5/18/14<br>R,S,R (RH): 5/18/14                        | 120 lb                                   | 1-1.25          | 7.5              |                    |                   |
|                   | Rye (fall plant 2015)                        | Aroostock   | Ca,R: 9/24/15<br>R,S,R: 10/26/15                       | Spring 2016  | 120 lb                                   | 1-1.25          | 7.5              |                    |                   |
| Corn-Soy Rotation | Corn Grain                                   | TA566-31  | 5/14/15  | 11/5/2015  | 32 k                                     | 1.5             | 30               | 105 <sub>CRM</sub> | GT,CB,LL,Bt       |
|                   | Soybean                                      | TS3159-R2   | 5/22/15  | 10/08/2015   | 200 k                                    | 1-1.5           | 7.5/30           | 3.2                | Genuity RR2 Yield |

**Appendix II- NESARE 2015 management tables (Nutrient management information in Pest and Manure Rotation)**

| Rotation      | Crop                        | Manure App Date                | Actual Rate of Manure App (T/A) | Fertilizer at Planting | Sidedress N (lb N/A)                                     | POST Fertilizer App Date | POST Rate of Fertilizer Application     |
|---------------|-----------------------------|--------------------------------|---------------------------------|------------------------|--|--------------------------|---|
| Pest Rotation | Alf (SH) - Yr. 1            |                                |                                 |                        |  |                          | 60 lb K2O                               |
|               | Alf (SH) - Yr. 2            |                                |                                 |                        |  | 6/8                      | 90lb K2O                                |
|               | Alf (SH) - Yr. 3            | 8/24/2015                      |                                 |                        |  | 6/8                      | 90lb K2O                                |
|               | Alf & Og, Trit (RH) - Yr. 1 |                                |                                 |                        |  |                          | 60 lb K2O                               |
|               | Alf & Og (RH) Yrs. 2        |                                |                                 |                        |  | 6/8                      | 90lb K2O                                |
|               | Alf & Og (RH) Yrs. 3        | 08/11/2015 (+Moldboard Plough) | BM: 28.3 T/A                    |                        |  | 6/8                      | 90lb K2O                                |
|               | Canola (Planted Fall 2014)  | 8/18/14                        | BM: 26.1 T/A<br>IM: 29.7 T/A    |                        |  | 4-25-15                  | 100 lb N as AMS/Urea blend; 33.5-0-0-12 |
|               | Canola (Planted Fall 2015)  | TBD.                           |                                 |                        |  | Spring 2015              |   |
|               | Corn Silage                 |                                |                                 | 10 gal 7-21-7          | 6/24/15: SH: 75 lb N as UAN; RH: 75 lb N in Block 3 only |                          |   |
|               | Rye before Cs, fall 2014    | 10/28/14                       | IM: 17.5 T/A                    |                        |  |                          |   |
|               | Rye before Cs, fall 2015    | TBD.                           |                                 |                        |  |                          |   |
|               | Soybeans (R,S,R)            | 10/19/15 (After S              | IM: 24.6 T/A                    |                        |  |                          |   |

| Rotation          | Crop                                   | Manure App Date | Actual Rate of Manure App (T/A)    | Fertilizer at Planting                                  | Sidedress N (lb N/A)   | POST Fertilizer App Date | POST Rate of Fertilizer Application            |
|-------------------|--|-----------------|------------------------------------|---|--|--------------------------|--|
| Manure Rotation   | Alf & Og - Yr. 1                       |                 |                                    |   |  | Spring                   | No sidedress fertilizer                        |
|                   | Alf & Og - Yr. 2                       |                 |                                    |   |  |                          |  |
|                   | Rye,RC underseed                       | 10-3-14         | <b>BM:</b> 20.0<br><b>IM:</b> 20.8 |   |  | 4-16-15                  | <b>BM:</b> 80 lbs N/A<br><b>IM:</b> 50 lbs N/A |
|                   | Rye,SSgrass,CC                         | 10-3-14         | <b>BM:</b> 20.0<br><b>IM:</b> 20.8 |   |  | 4-16-15                  | <b>BM:</b> 80 lbs N/A<br><b>IM:</b> 50 lbs N/A |
|                   | Rye (fall plant 2015)                  |                 |                                    |   |  |                          |  |
|                   | Corn Grain (after alf + orchard grass) | 5/11/15         | <b>BM:</b> 19.3<br><b>IM:</b> 20.4 | 4.7 gal 7-21-7  | 6/24: No sidedress N on IM or BM.  |                          |  |
|                   | Corn Silage (after interseed covers)   | 5/12/15         | <b>BM:</b> 19.0<br><b>IM:</b> 19.7 | 160 lbs 12-40-0   | 6/24: <b>BM:</b> 75 lb N as UAN; <b>IM:</b>                                    |                          |  |
|                   | Corn Silage (after RC/CC)              | 5/11/15         | <b>BM:</b> 20.1<br><b>IM:</b> 20.6 | 160 lbs 12-40-0   | 6/24: No sidedress N on IM or BM.  | 6/8                      | <b>BM:</b> 90 lb K2O                           |
| Corn-Soy Rotation | Corn Grain                             | 5/12/15         | <b>BM:</b> 19.4<br><b>IM:</b> 21.2 | 160 lbs 12-40-0<br><b>Fert:</b> 30 lb N/A urea at plant | 6/24: <b>BM:</b> 50 lb N as UAN; <b>Fert:</b> 115 lb N as UAN; <b>IM:</b> none |                          |  |
|                   | Soybean                                |                 |                                    |   |  |                          | Low amount recommend - not                     |

### Appendix III- NESARE 2015 management tables (Pest management information in Manure and Pest Rotation)

| Rotation               | Crop                                   | Date of planting                             | Seed Treatments   | Pre-emergence Treatment(s) or Burn-downs   | Post-emergence Treatment(s)   |
|------------------------|--|--|---|--|---|
| <b>Manure Rotation</b> | Alfalfa and Orchardgrass (Year 1)      | 4/18/15                                      | Alf/6422Q - Mefenoxam fung<br><br>Alf/ SW420LH - aquabond | 4/19: 22 oz/A Roundup Powermax.  | 5/4: Rotary harrow to break up soil crust and improve seedling emergence<br>5/22: 2 qts Butyrac<br>07/11/15: Warrior (3 fl. oz./acre) |
|                        | Alfalfa and Orchardgrass (Year 2)      | 4/14/14                                      | Alf/6422Q - Mefenoxam fung<br><br>Alf/ SW420LH - aquabond | N/A  |   |
|                        | Rye/RCunderseed                        | Rye: 10/9 & 10/27/14<br>RC: 4/18/15          | Rye: none<br>RC: none                                     | 9/29/14: 32 oz Roundup Powermax for perennial weeds in corn before manure + planting | 6/22/15: Rye regrowth clipped off in RC plots.  |
|                        | Rye/SSgrass,CC                         | Rye: 10/9 & 10/27/14<br>SSgrs: 6/5/15<br>CC: | Rye: none<br>SSgrass: none<br>CC: none                    | 9/29/14: 32 oz Roundup Powermax for perennial weeds in corn before manure + planting | 6/8/15: 1 qt RPM to kill rye.   |
|                        | Rye, fall plant 2015                   | Fall 2015                                    | None  | TBD.   |   |
|                        | Corn Grain (after alf + orchard grass) | 5/14/15                                      | None  | 5/8: Alf+grs burndown of 32 oz RPM, 16 oz 2,4D-LVE, and 8 oz Banvel                  | 6/17: 22 oz RPM   |
|                        | Corn Silage (after interseeded CCs)    | 5/14/15                                      | None  | 5/8: Interseed CCs burndown of 32 oz RPM, 16 oz 2,4D-LVE, and 8 oz Banvel            | 6/17: 5oz Status and 1.5 oz Steadfast Q   |
|                        | Corn Silage (after RC/CC)              | 5/14/15                                      | None  | 5/8: RC/CC burndown of 32 oz RPM, 16 oz 2,4D-LVE, and 8 oz Banvel                    | 6/17: 5oz Status and 1.5 oz Steadfast Q   |
|                        | Oats (after Cs after RC/CC)            | Fall 2015                                    | None  | TBD.   |   |
|                        | Crimson Clover (Planted Fall 2015)     | Fall 2015                                    | None  | TBD.   |   |

| Rotation      | Crop                                      | Date of planting                 | Seed Treatments   | Pre-emergence Treatment(s)   | Post-emergence Treatment(s)  |
|---------------|---|----------------------------------|---|--|--|
| Pest Rotation | Alfalfa (SH)<br>(Establish- Year 1)       | 4/18/15                          | Alf/6422Q - Mefenoxam fungicide   | 4/19: 22 oz Roundup Powermax   | 5/4: Rotary harrow to break up soil crust and improve seedling emergence<br>5/22: 2 qts Butyrac<br>6/12: 3 oz Warrior (above econ threshold)<br>07/11/15: Warrior (3 fl. oz./acre) |
|               | Alf+Og, Trit (RH),<br>(Establish- Year 1) | 4/18/15                          | Alf/SW420LH - Aquabond<br>Og: none<br>Trit: none  | 4/19: 22 oz Roundup Powermax   | 5/4: Rotary harrow to break up soil crust and improve seedling emergence<br>5/22: 2 qts Butyrac<br>07/11/15: Warrior (3 fl. oz./acre)  |
|               | Alfalfa (SH) &<br>(Years 2 & 3)           | See 2013 and 2014 tables.        | Alf - Mefenoxam fungicide   | N/A  | 08/18/15: 32 fl oz RPM, 16 fl oz 2,4-D, and 8 fl oz Clarity  |
|               | Alf+Og (RH)<br>(Years 2 & 3)              | See 2013 and 2014 tables.        | Alf(Yr2)-Aquabond<br>Alf(Yr3)-Mefenoxam   | N/A  |  |
|               | Canola<br>(Planted Fall 2014)             | Can: 8/29/14                     | None  | RH: 8/18, 8/25, 8/26, 8/27: Moldboard Plow, Disc, S-tine, Culti-mulch<br>SH: 8/15: 32 oz Bullseye (Growmark's glyph), 16 oz 2-4-D, and 8 oz Banvel to burn-down alfalfa                    | None.  |
|               | Canola<br>(Planted Fall 2015)             | Fall 2015                        | None  | TBD.   |  |
|               | Corn Silage                               | 5/15/15                          | None  | 5/8/15: Rye burndown of 22 oz RPM + 16 oz 2,4D LVE<br>5/15/15: RH: BANDED 3 oz Callisto + 26.7 oz (1.67 pints) Dual II Mag; SH: Broadcast 3 oz Callisto + 26.7 oz (1.67 pints) Dual II Mag | 6/17: SH: 5oz Status and 1.5 oz Steadfast Q<br>6/17: RH: Cultivation<br>6/22: RH: Cultivation  |
|               | Oats after corn sil.                      | fall 2015                        | none  | TBD.   |  |
|               | Rye (fall plant 2014)                     | Ca,R: 10/9&27<br>R,S,R: 10/29/14 | none  | No pre-emergence herbicide   | Burned down in spring 2015/ see above.   |
|               | Rye (fall plant 2015)                     | Ca,R:<br>R,S,R:                  | none  | TBD.   |  |
| Soybeans      | 30": 5/22/15<br>15": 5/22/15              | None                             | 5/8/15: Rye burndown of 22 oz RPM + 16 oz 2,4D LVE<br>5/22: RH: BANDED 3.75 oz Fierce; SH: Broadcast 3.75 oz Fierce | 6/18: Gaps in soybean replanted<br>6/24: SH & RH/PH: 22 oz RPM<br>6/24: RH: Cultivation<br>6/26: RH: Cultivation   |  |

|                          |            |         |  |  |  |
|--------------------------|------------|---------|--|--|--|
| <b>Corn-Soy Rotation</b> | Corn Grain | 5/14/15 | Fludioxonil, mefenoxam, & azoxystrobin fungicides + clothianidin & thiamexotham insecticides, + tebuconazole | 5/8/15: Pre-burndown of 22 oz RPM + 16 oz 2,4D LVE<br>5/15/15: At plant: 1.75 pt Sure Start, 1 qt AAtrex, and 3.5 oz Warrior | 6/17: 22 oz RPM                                    |
|                          | Soybean    | 5/22/15 | Cruiser Maxx: Thiamexotham insecticide & mefenoxam + fludioxonil fungicides                                  | 5/14/15: Rye burndown of 22 oz RPM + 16 oz 2,4D LVE  | 6/18: Gaps in soybean replanted<br>6/24: 22 oz RPM |

Cg: Cruiser Extreme 250: thiamexotham insecticide + 3 fungicides (Apron [mefanoxam], Maxim [mefanoxam + fludioxonil], Dynasty [azoxystrobin])

**2,4 D LVE:** 2,4 D

**Accent:** nicosulfuron

**AAtrex 4L:** atrazine

**Buctril:** bromoxynil

**Butyrac:** 2,4 DB

**Cadet:** Fluciathet methyl

**Callisto:** mesotrione

**Dual II Mag:** S-metolachlor

**Fierce:** flumioxizan + pyroxasulfone

**Ignite:** glufosinate

**Permit:** halosulfuron

**Prowl H2O:** pendimethalin

**Status:** dicamba + diflufenzopor

**Stinger:** clopyralid + monoethylamine salt

**SureStart:** acetochlor + flumetsulam + clopyralid

**Valor XLT:** fumioxazin + cloransulam methyl

**Roundup Powermax:** glyphosate

\* 22 oz (0.75 lb/A)

\* 32 oz (1.125 lb/A glyphosate + 2 lb AMS/A)

**Warrior Insecticide:** lambda-cyhalothrin