```
% this is ../../crops/18r/planning/current pedigrees/primary dominants/les12- w23
% generated Friday, June 01, 2018 at 21:28:50 UTC (=1527888530.870986) by compute_pedigrees/1.
% Horizontal pedigrees, generations at same indentation. S: Mo20W; W: W23; M: M14.
% !!! => cross was not by Toni; references to image locations on right.
% W23/Les12-
 06R0027:0000000 x 06R0027:0000000
      06R0027:0002701 x 06R0027:0002702
           06N301:W0009302 x 06N1357:0015712
           06N301:W0009304 x 06N1357:0015713
           06N301:W0009610 x 06N1357:0015713
           06N301:W0009902 x 06N1357:0015710
           06N301:W0009908 x 06N1357:0015703
           06N301:W0010201 x 06N1357:0015707
           06N301:W0010506 x 06N1357:0015710
                07R201:S0033607 x 07R2836:0059002
                07R301:W0024509 x 07R2836:0059002
                07R301:W0027212 x 07R2836:0059004
                                                       !!!
                07R301:W0027810 x 07R2836:0059012
                                                       !!!
                07R301:W0085311 x 07R2836:0059004
                                                       111
      06R0027:0002707 x 06R0027:0002706
           06N301:W0009613 x 06N1356:0015601
      06R0027:0002708 x 06R0027:0002710
      06R200:S00I9809 x 06R0027:0002711
           11R205:S0050109 x 11R1255:0023104
           11R205:S0050111 x 11R1255:0023108
                                                        11R1255:0023108: [11r/aleph/19.8-[1124]]
                12N205:S0037904 x 12N3454:0027603
                                                              12N3454:0027603: [12n/bet/11.1-[676]]
                12N205:S0037907 x 12N3454:0027603
                                                             12N3454:0027603: [12n/bet/11.1-[676]]
                12N205:S0037910 x 12N3454:0027603
                                                             12N3454:0027603: [12n/bet/11.1-[676]]
                12R205:S0002217 x 12R3454:0028708
                                                              12R3454:0028708: [12r/aleph/9.8-[2035]]
                     16R205:S0000604 x 16R4011:0011703
                                                                   16R4011:0011703: [16r/gimmel/27.7-[185]]
                          17R205:S0001204 x 17R4545:0018105
                                                                        17R4545:0018105: [17r/bet/2.8-[415]]
                          17R205:S0001206 x 17R4545:0018105
                                                                        17R4545:0018105: [17r/bet/2.8-[415]]
                          17R205:S0001208 x 17R4545:0018105
                                                                        17R4545:0018105: [17r/bet/2.8-[415]]
                          17R205:S0001514 x 17R4545:0018107
                                                                        17R4545:0018107: [17r/bet/2.8-[411]]
                          17R205:S0003301 x 17R4545:0018107
                                                                        17R4545:0018107: [17r/bet/2.8-[411]]
                          17R205:S0003306 x 17R4545:0018107
                                                                        17R4545:0018107: [17r/bet/2.8-[411]]
                          17R205:S0003307 x 17R4545:0018107
                                                                        17R4545:0018107: [17r/bet/2.8-[411]]
                          17R205:S0003308 x 17R4545:0018107
                                                                        17R4545:0018107: [17r/bet/2.8-[411]]
                         17R205:S0003410 x 17R4545:0018107
                                                                        17R4545:0018107: [17r/bet/2.8-[411]]
                     17R205:S0001114 x 17R4011:0018002
                                                                   17R4011:0018002: [17r/bet/2.8-[413]]
                     17R205:S0001115 x 17R4011:0018002
                                                                   17R4011:0018002: [17r/bet/2.8-[413]]
                     17R205:S0001116 x 17R4011:0018002
                                                                   17R4011:0018002: [17r/bet/2.8-[413]]
                     17R205:S0003711 x 17R4011:0018010
                                                                   17R4011:0018010: [17r/bet/2.8-[414]]
                     17R205:S0003712 x 17R4011:0018010
                                                                   17R4011:0018010: [17r/bet/2.8-[414]]
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les12- w23
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                12R205:S0008508 x 12R3454:0028704
                                                             12R3454:0028704: [12r/aleph/9.8-[2042]]
           11R205:S0050115 x 11R1255:0023110
      06R300:W00I8308 x 06R0027:0002711
           06N301:W0007209 x 06N1285:0017107
                10R305:W0005911 x 10R2859:0031010
                                                            10R2859:0031010: [10r/bet/18.8-[69,75],10r/gimmel/18.8-[674,6
75,803,816]]
                     11R305:W0046601 x 11R3294:0023209
                                                                   11R3294:0023209: [11r/aleph/19.8-[1126]]
                          11N305:W0032005 x 11N3455:0017207
                               12R305:W0011317 x 12R3632:0028810
                                    12N504:B0040509 x 12N4012:0027802
                                                                                  12N4012:0027802: [12n/bet/11.1-[685]]
                                    12N504:B0040607 x 12N4012:0027805
                                                                                  12N4012:0027805: [12n/bet/11.1-[687]]
                                    12N504:B0040611 x 12N4012:0027804
                                                                                  12N4012:0027804: [12n/bet/11.1-[686]]
                                    14R4012:0013304 x 14R4012:0013317
                                                                                  14R4012:0013317: [14r/bet/20.8-[2235]]
                                    14R4012:0013306 x 14R4012:0013317
                                                                                  14R4012:0013317: [14r/bet/20.8-[2235]]
                                    14R4012:0013310 x 14R4012:0013317
                                                                                  14R4012:0013317: [14r/bet/20.8-[2235]]
                                    14R4012:0013311 x 14R4012:0013317
                                                                                  14R4012:0013317: [14r/bet/20.8-[2235]]
                                    14R4012:0013313 x 14R4012:0013317
                                                                                  14R4012:0013317: [14r/bet/20.8-[2235]]
                               12R305:W0011613 x 12R3632:0028804
                                                                             12R3632:0028804: [12r/aleph/9.8-[2065],12r/bet
/6.8-[96],12r/bet/8.8-[193]]
                               12R503:B0012509 x 12R3632:0028810
                          11N305:W0032006 x 11N3455:0017203
                     11R305:W0046908 x 11R3294:0023210
           06N301:W0033208 x 06N1285:0017103
           06N301:W0033808 \times 06N1285:0017107
      06R400:M00I8409 x 06R0027:0002711
           06N201:S0008909 x 06N1713:0021902
           06N201:S0009506 x 06N1713:0021905
           06N201:S0010102 x 06N1713:0021911
           06N201:S0013705 x 06N1713:0021912
           06N201:S0013706 x 06N1713:0021913
           06N301:W0009310 x 06N1713:0021913
           06N301:W0029305 x 06N1713:0021905
                07R201:S0119413 x 07R2851:0060001
                07R301:W0024508 x 07R2851:0060001
                                                      !!!
           06N301:W0029906 x 06N1713:0021912
           06N301:W0036301 x 06N1713:0021902
                07R201:S0030108 x 07R2856:0059701
                                                              07R2856:0059701: [07r/bet/12.8-[100,101,102]]
                07R301:W0032307 x 07R2856:0059701
                                                              07R2856:0059701: [07r/bet/12.8-[100,101,102]]
           06N301:W0036305 x 06N1713:0021911
           06N401:M0007906 x 06N1713:0021903
                07R401:M0028312 x 07R2854:0059904
                     10R405:M0006005 \times 10R2051:0031106
                                                                   10R2051:0031106: [10r/bet/18.8-[54,56],10r/gimmel/18.8-[
683,684,751,754]]
                          11N405:M0033302 x 11N3328:0017301
                               12R3633:0028901 x 12R3633:0028901
                                                                             12R3633:0028901: [12r/bet/3.8-[54],12r/bet/8.8
-[194]] 12R3633:0028901: [12r/bet/3.8-[54],12r/bet/8.8-[194]]
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12R3633:0028905: [12r/bet/3.8-[53],12r/bet/8.8

12R3633:0028905 x 12R3633:0028905

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les12- w23
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-[195]] 12R3633:0028905: [12r/bet/3.8-[53],12r/bet/8.8-[195]]
                               12R3633:0028909 x 12R3633:0028909
                                                                             12R3633:0028909: [12r/bet/3.8-[52],12r/bet/8.8
-[196]] 12R3633:0028909: [12r/bet/3.8-[52],12r/bet/8.8-[196]]
                               12R405:M0003302 x 12R3633:0028909
                                                                             12R3633:0028909: [12r/bet/3.8-[52],12r/bet/8.8
-[196]]
                                                                                  13R4013:0008701: [13r/bet/6.8-[1811]]
                                    13R4013:0008703 x 13R4013:0008701
                                    13R4013:0008704 x 13R4013:0008701
                                                                                  13R4013:0008701: [13r/bet/6.8-[1811]]
                                                                                  13R4013:0008705: [13r/bet/6.8-[1798]]
                                    13R4013:0008705 x 13R4013:0008701
    13R4013:0008701: [13r/bet/6.8-[1811]]
                                    13R4013:0008708 x 13R4013:0008701
                                                                                  13R4013:0008701: [13r/bet/6.8-[1811]]
                                    14R4013:0013403 x 14R4013:0013402
                                                                                  14R4013:0013402: [14r/bet/22.8-[2290]]
                                    14R4013:0013404 x 14R4013:0013402
                                                                                  14R4013:0013402: [14r/bet/22.8-[2290]]
                                    14R4013:0013407 x 14R4013:0013402
                                                                                  14R4013:0013402: [14r/bet/22.8-[2290]]
                                    14R4013:0013412 x 14R4013:0013402
                                                                                  14R4013:0013402: [14r/bet/22.8-[2290]]
                                    14R4013:0013414 x 14R4013:0013402
                                                                                  14R4013:0013402: [14r/bet/22.8-[2290]]
                                    14R505:B0002001 x 14R4013:0013402
                                                                                  14R4013:0013402: [14r/bet/22.8-[2290]]
                                12R405:M0003304 x 12R3633:0028901
                                                                             12R3633:0028901: [12r/bet/3.8-[54],12r/bet/8.8
-[194]]
                               12R405:M0003603 x 12R3633:0028905
                                                                             12R3633:0028905: [12r/bet/3.8-[53],12r/bet/8.8
-[195]]
                          11N405:M0033701 x 11N3328:0017305
                          11N405:M0035202 x 11N3328:0017303
                     10R405:M0008401 x 10R2051:0031110
                                                                   10R2051:0031110: [10r/bet/18.8-[49,50,52],10r/gimmel/18.
8-[685,686,687,689,730,735,740]]
           06N401:M0008805 x 06N1713:0021902
                07R201:S0030111 x 07R2857:0059801
                                                              07R2857:0059801: [07r/bet/12.8-[103,105]]
                07R201:S0119108 x 07R2857:0059806
                07R301:W0085312 x 07R2857:0059803
                                                      !!!
                07R401:M0013907 x 07R2857:0059803
                                                      111
                07R401:M0031607 x 07R2857:0059814
                07R401:M0034204 x 07R2857:0059803
                                                      !!!
                07R401:M0034213 x 07R2857:0059808
                                                      111
           06N401:M0009104 x 06N1713:0021908
                07R201:S0033608 x 07R2849:0060206
                07R401:M0031909 x 07R2849:0060206
           06N401:M0009705 \times 06N1713:0021913
                07R201:S0034612 x 07R2842:0060806
                                                      111
                07R401:M0031612 x 07R2842:0060806
           06N401:M0010302 x 06N1713:0021911
           06N401:M0010904 x 06N1713:0021912
                07R401:M0033411 x 07R2845:0060608
           06N401:M0011708 x 06N1713:0021901
           06N401:M0012203 x 06N1713:0021903
           06N401:M0012406 x 06N1713:0021905
```