## Appendix B - Rice Variety Acres by Grain Type

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|----------------------|-----------------------|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                      | 1988                  | 1989                | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   |
| ort Grain            |                       |                     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| S-101                | 20000                 | 13575               | 1974   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| S-102                |                       |                     |        |        |        |        |        |        |        | 7960   | 7070   | 9800   | 10464  | 7546   | 8943   | 9071   | 7879   |
| S-201                | 35000                 | 38473               | 10140  | 3450   | 11610  | 8800   | 25160  | 9860   | 4920   | 7690   | 3680   | 1150   |        |        | 1203   |        |        |
| akomachi             |                       |                     |        |        |        |        |        |        | 4430   | 5270   | 15680  | 25350  | 10175  | 8438   | 5618   | 7497   | 5404   |
| shihikari            |                       |                     |        |        |        |        |        |        | 1995   | 4740   | 9480   | 12100  | 6205   | 6136   | 6320   | 4659   | 6950   |
| nikari-201           |                       |                     |        |        |        |        |        |        |        |        |        |        | 3822   | 1056   |        |        |        |
| nochi-101            | 4200                  | 4327                | 4570   | 4280   | 8510   | 9720   | 14280  | 6240   | 5130   | 12500  | 19110  | 28230  | 11077  | 11230  | 13869  | 15843  | 19834  |
| alpearl              |                       | 6177                | 5940   | 2040   | 3480   | 3240   | 1860   | 3510   | 2680   | 1340   |        |        |        |        |        |        |        |
| ubtotal              |                       | 48977               | 20650  | 9770   | 23600  | 21760  | 41300  | 19610  | 19155  | 39500  | 55020  | 76630  | 41743  | 34406  | 35953  | 40135  | 42250  |
|                      |                       |                     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| ium Grain            |                       |                     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| M-103                |                       | 448                 | 8890   | 11930  | 18580  | 23610  | 13540  | 16060  | 15790  | 16860  | 28425  | 12100  | 11720  | 8055   | 2048   | 7756   | 822    |
| M-104                |                       |                     |        |        |        |        |        |        |        |        |        |        |        | 29199  | 41862  | 62865  | 53964  |
| M-201                | 65400                 | 43503               | 43590  | 46390  | 34060  | 43990  | 26550  | 31530  | 47150  | 33410  | 14860  | 14980  | 6917   | 2440   | 1475   | 4000   |        |
| M-202                | 180000                | 235534              | 268460 | 210180 | 256970 | 305120 | 296330 | 303740 | 323950 | 315410 | 284170 | 335330 | 353879 | 232765 | 247200 | 221883 | 274693 |
| M-204                |                       |                     |        |        |        | 36580  | 79400  | 58890  | 59800  | 67190  | 55490  | 55890  | 76320  | 62999  | 56629  | 33261  | 29116  |
| M-205                |                       |                     |        |        |        |        | .,     |        |        |        |        |        |        | 37594  | 88497  | 69635  | 92746  |
| M-401                | 26600                 | 24534               | 30390  | 26700  | 32120  | 23150  | 37590  | 32770  | 38000  | 42630  | 30780  | 54740  | 33662  | 29898  | 32204  | 18607  | 33133  |
| M-402                |                       | 21001               | 50070  | 20,00  | 02120  | 20100  | 0,0,0  | 02770  |        | 12000  | 00,00  | 01/10  | 9194   | 5319   | 6607   | 9466   | 4628   |
| kuhorose             |                       |                     |        |        |        |        |        |        |        |        |        | 11520  | 12527  | 12176  | 14842  | 7100   | 1020   |
| FD 181               |                       |                     |        |        |        |        |        |        |        |        |        | 5190   | 4620   | 3061   | 3527   |        |        |
| ubtotal              | 272000                | 304019              | 351330 | 295200 | 341730 | 432450 | 453410 | 442990 | 484690 | 475500 | 413725 | 489750 | 508839 | 423506 | 494891 | 440238 | 541001 |
| abtotai              | 27 2000               | 304019              | 331330 | 275200 | 341730 | 102100 | 100110 | F12//0 | 101070 | 175500 | 110720 | 107750 | 300039 | 123300 | 171071 | 110230 | 341001 |
| ng Grain             |                       |                     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| L-202                | 60000                 | 39111               | 16980  | 6650   | 6970   | 460    | 100    | 1200   | 700    | 80     |        |        |        |        |        |        |        |
| L-202<br>L-203       | 00000                 | 37111               | 10,000 | 530    | 10840  | 4170   | 1030   | 2190   | 1975   | 190    |        |        |        |        |        |        |        |
| L 200                |                       |                     |        | 330    | 10040  | 4170   | 1050   | 2170   | 1775   | 170    |        |        |        |        |        |        |        |

| Short Grain   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| S-101         | 20000  | 13575  | 1974   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| S-102         |        |        |        |        |        |        |        |        |        | 7960   | 7070   | 9800   | 10464  | 7546   | 8943   | 9071   | 7879   |
| S-201         | 35000  | 38473  | 10140  | 3450   | 11610  | 8800   | 25160  | 9860   | 4920   | 7690   | 3680   | 1150   |        |        | 1203   |        |        |
| Akitakomachi  |        |        |        |        |        |        |        |        | 4430   | 5270   | 15680  | 25350  | 10175  | 8438   | 5618   | 7497   | 5404   |
| Koshihikari   |        |        |        |        |        |        |        |        | 1995   | 4740   | 9480   | 12100  | 6205   | 6136   | 6320   | 4659   | 6950   |
| Calhikari-201 |        |        |        |        |        |        |        |        |        |        |        |        | 3822   | 1056   |        |        |        |
| Calmochi-101  | 4200   | 4327   | 4570   | 4280   | 8510   | 9720   | 14280  | 6240   | 5130   | 12500  | 19110  | 28230  | 11077  | 11230  | 13869  | 15843  | 19834  |
| Calpearl      |        | 6177   | 5940   | 2040   | 3480   | 3240   | 1860   | 3510   | 2680   | 1340   |        |        |        |        |        |        |        |
| Subtotal      |        | 48977  | 20650  | 9770   | 23600  | 21760  | 41300  | 19610  | 19155  | 39500  | 55020  | 76630  | 41743  | 34406  | 35953  | 40135  | 42250  |
|               |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Medium Grain  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| M-103         |        | 448    | 8890   | 11930  | 18580  | 23610  | 13540  | 16060  | 15790  | 16860  | 28425  | 12100  | 11720  | 8055   | 2048   | 7756   | 822    |
| M-104         |        |        |        |        |        |        |        |        |        |        |        |        |        | 29199  | 41862  | 62865  | 53964  |
| M-201         | 65400  | 43503  | 43590  | 46390  | 34060  | 43990  | 26550  | 31530  | 47150  | 33410  | 14860  | 14980  | 6917   | 2440   | 1475   | 4000   |        |
| M-202         | 180000 | 235534 | 268460 | 210180 | 256970 | 305120 | 296330 | 303740 | 323950 | 315410 | 284170 | 335330 | 353879 | 232765 | 247200 | 221883 | 274693 |
| M-204         |        |        |        |        |        | 36580  | 79400  | 58890  | 59800  | 67190  | 55490  | 55890  | 76320  | 62999  | 56629  | 33261  | 29116  |
| M-205         |        |        |        |        |        |        |        |        |        |        |        |        |        | 37594  | 88497  | 69635  | 92746  |
| M-401         | 26600  | 24534  | 30390  | 26700  | 32120  | 23150  | 37590  | 32770  | 38000  | 42630  | 30780  | 54740  | 33662  | 29898  | 32204  | 18607  | 33133  |
| M-402         |        |        |        |        |        |        |        |        |        |        |        |        | 9194   | 5319   | 6607   | 9466   | 4628   |
| Kukuhorose    |        |        |        |        |        |        |        |        |        |        |        | 11520  | 12527  | 12176  | 14842  |        |        |
| NFD 181       |        |        |        |        |        |        |        |        |        |        |        | 5190   | 4620   | 3061   | 3527   |        |        |
| Subtotal      | 272000 | 304019 | 351330 | 295200 | 341730 | 432450 | 453410 | 442990 | 484690 | 475500 | 413725 | 489750 | 508839 | 423506 | 494891 | 440238 | 541001 |
|               |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Long Grain    |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| L-202         | 60000  | 39111  | 16980  | 6650   | 6970   | 460    | 100    | 1200   | 700    | 80     |        |        |        |        |        |        |        |
| L-203         |        |        |        | 530    | 10840  | 4170   | 1030   | 2190   | 1975   | 190    |        |        |        |        |        |        |        |
| L-204         |        |        |        |        |        |        |        |        |        | 2210   | 15580  | 3460   | 2093   | 1235   | 1200   | 1929   | 1812   |
| L-205         |        |        |        |        |        |        |        |        |        |        |        |        | 2647   | 6472   | 2099   | 1893   | 86     |
| A-201         |        |        |        |        |        |        |        |        |        | 470    |        |        | 1025   | 799    | 1203   | 1455   | 1002   |
| A-301         |        | 357    | 1590   |        |        |        |        |        |        | 1390   |        |        | 1449   | 1700   | 1469   | 790    | 1562   |
| Calmati-201   |        |        |        |        |        |        |        |        |        |        |        |        | 1202   | 1507   | 336    | 874    | 550    |
| Subtotal      | 60000  | 39468  | 18570  | 7180   | 17810  | 4630   | 1130   | 3390   | 2675   | 4340   | 15580  | 3460   | 8416   | 11713  | 6307   | 7441   | 5012   |
|               |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Other         | 28800  | 4134   | 2430   | 3700   | 6630   | 4160   | 8160   | 9320   | 6190   | 9140   | 14495  | 6340   | 4550   | 1292   | 4153   | 2235   | 1980   |
| Grand Total   | 400000 | 396598 | 392980 | 315850 | 389770 | 463000 | 504000 | 475310 | 512710 | 528480 | 498820 | 576180 | 563548 | 470917 | 541304 | 490049 | 590243 |

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Appendix C - Characteristics of ublic Varieites

| Grain Type             | Maturity                  | Year seed<br>widely avail-<br>able | Stem Rot<br>score <sup>1</sup><br>(0-10) | Seedling<br>vigor <sup>2</sup><br>(1-5) | Comments   |
|------------------------|---------------------------|------------------------------------|--|---|--|
| Short Grain            |                           |                                    |  |   |  |
| S-102                  | Very Early <sup>3</sup>   | 1998                               | 5.6                                      | 4.3                                     | Very high yield potential, tow weeks earlier that S-201. Good resistance to blanking. Grain is 8% larger that S-201 and less chalky. Rough leaves and hulls, grain dries down rapidly during ripening. Susceptible to stem rot.  |
| Medium Grain           |                           |                                    |  |   |  |
| M-103                  | Very Early <sup>3</sup>   | 1990                               | 5.5                                      | 3.9                                     | Earliest medium grain, vigor less than M-202. Excellent resistance to blanking. Very good head and total milled rice yields. Moderate lodging and good yield potential. Alternative variety for M-202 in coldest rice areas and for late planting in warmer areas.   |
| M-104                  | Very Early <sup>3</sup>   | 2002                               | 5.6                                      | 4.4                                     | Has potential as replacement for M-103 in San Joaquin Valley and as an alternative to M-202 in other cool rice areas. Improved seedling vigor, lodging resistance, and yield compared to M-103. Milling yields similar to M-103. Heads 8 to 10 days earlier than M-202. Early planting in warm areas could limit yield and quality.                                    |
| M-202                  | Early                     | 1987                               | 5.8                                      | 4.4                                     | Very high yield potential. Moderate lodging potential. Long time favorite variety that threshes easily.  |
| M-204                  | Early                     | 1993                               | 5.7                                      | 4.2                                     | Very high yield potential. Seedling vigor slightly less than M-202. Height 3 inches shorter and heading 3 days later than M-202. Better lodging resistance and improved total and head rice yields than M-202. Resistance to blanking similar to M-202. Threshes easily. Not recommended for Escalon, Natomas or other cool areas.                                     |
| M-205                  | Early                     | 2002                               | 5.5                                      | 4.1                                     | Very high yield potential. Seedling vigor slightly lower than M-202. Height and heading like M-204. Improved milling yields relative to M-202. Blanking resistance similar to M-204. Area of primary adaptation west of Hwy 70 and north of Hwy 20. Not recommended for Escalon, Natomas or other cool areas.  |
| Long Grain             |                           |                                    |  |   |  |
| L-204                  | Early                     | 1998                               | 5.6                                      | 4.1                                     | High yield potential. Two days earlier than L-203. Resistant to lodging. Seedling vigor fair, may be affected by deep water. Improved head rice and cooking characteristics, better than L-202 and L-203. Avoid early draining (requires 40-45 days after 50% heading to mature) and harvest at 18-19% moisture to maximize milling yield.                             |
| L-205                  | Early                     | 2001                               | 5.7                                      | 3.9                                     | Newrex type, dry cooking long grain. High yield potential. Two days later than L-204. Resistant to lodging. More resistant to blanking than L-204. Seedling vigor fair. Seed size smaller than L-204. Similar milling yield to L-204. Avoid early draining (requires 40-45 days after 50% heading to mature) and harvest at 16-18% moisture to maximize milling yield. |
| <b>Premium Quality</b> |                           |                                    |  |   |  |
| M-401                  | Late                      | 1083                               | 5.4                                      | 4.3                                     | Premium quality medium grain rice with large kernels. Good yield potential but susceptible to blanking, lodging and damage from premature drainage. Use 20-25% less nitrogen than on other medium grain varieties. Best adapted to warmer areas. Milling yields lower than other medium grain varieties.   |
| M-402                  | Late                      | 2001                               | 5.4                                      | 4.2                                     | Premium quality medium grain. Kernel size is smaller than M-401, much higher head rice potential. About 5-7 days earlier than M-401 with better straw strength. Adapted to warmer areas.   |
| Calhikari-201          | Early                     | 2001                               | 6.0                                      | 4.4                                     | Premium quality short grain developed for the Japanese premium short-grain market. Has very good seedling vigor. A semi-dwarf with much greater yield potential and resistance to lodging than Japanese varieties. Rough leaves and hulls. Cold delays maturity and increases blanking. Use low nitrogen to maximize market quality.                                   |
| Specialty Rice         |                           |                                    |  |   |  |
| Calmochi-101           | Very Early <sup>3,4</sup> | 1987                               | 5.6                                      | 4.2                                     | A sweet glutinous rice. Two weeks earlier than S-201. Excellent resistance blanking. has rough leaves and hulls, no awns. Grain dries down rapidly during ripening.  |
| A-201                  | Early <sup>4</sup>        | 1998                               | 6.2                                      | 4.2                                     | Aromatic (popcorn aroma) long grain, eight days earlier than A-301. Moderate yield potential similar to L-202 and A-301. Becomes leafy under excessive nitrogen. Poor milling yield, use slower cylinder speed and harvest at 18-20% grain moisture. Air dry without heat to retain aroma.   |
| Calmati-201            | Early <sup>4</sup>        | 2001                               | 5.4                                      | 3.9                                     | A basmati type aromatic long grain. Moderate yield potential. Five days later than L-204. Pubescent leaves and hull. Milling yield is considerably higher than A-201. Very susceptible to blanking and should not be grown in cool areas. Excessive nitrogen and late planting will delay maturity and increase blanking. Harvest at 17-18% grain moisture.            |

- 1 Average Stem rot score over the last four years where 0 = no damage and 10 = plant killed 2 Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling vigor 3 Milling quality and yield may be reduced by early planting in warmer areas

- 4 Specialty varieties should not be grown unless arrangements have first been made with a marketing agency