

Supporting Information: Sustainable sesame (*Sesamum indium* L.) production through improved technology: an overview of production, challenges and opportunities in Myanmar By Daisy Myint, Syed Abdullah Gilani, Makoto Kawase and Kazuo N. Watanabe.

Table 1. Sesame sown area, harvested area, yield and production from 1900-01 to 1999–2000.

| Year | Sown Area ('000 ha) | Harvested Area ('000 ha) | Yield (kg/ha) | Production (mt) |
|---------------------|---------------------|--------------------------|---------------|-----------------|
| Colonial Era | | | | |
| 1900-01 | 335 | - | - | - |
| 1901-02 | 33 | - | - | - |
| 1902-03 | 392 | - | - | - |
| 1903-04 | 402 | - | - | - |
| 1904-05 | 420 | - | - | - |
| 1905-06 | 376 | - | - | - |
| 1906-07 | 388 | - | - | - |
| 1907-08 | 400 | - | - | - |
| 1908-09 | 420 | - | - | - |
| 1909-10 | 457 | - | - | - |
| 1910-11 | 380 | - | - | - |
| 1911-12 | 433 | - | - | - |
| 1912-13 | 489 | - | - | - |
| 1913-14 | 498 | - | - | - |
| 1914-15 | 490 | 397 | 307 | 94,000 |
| 1915-16 | 486 | 40 | 215 | 84,000 |
| 1916-17 | 492 | 415 | 207 | 84,500 |
| 1917-18 | 441 | 364 | 226 | 81,190 |
| 1918-19 | 513 | 433 | 192 | 81,541 |
| 1919-20 | 522 | 390 | 184 | 70,245 |
| 1920-21 | 444 | - | - | - |
| 1921-22 | 418 | 293 | 154 | 44,029 |
| 1922-23 | 350 | 247 | 130 | 31,519 |
| 1923-24 | 411 | 271 | 117 | 31,025 |
| 1924-25 | 423 | 332 | 163 | 53,344 |
| 1925-26 | 458 | 349 | 118 | 40,268 |
| 1926-27 | 442 | 289 | 98 | 27,659 |
| 1927-28 | 434 | 346 | 130 | 44,064 |
| 1928-29 | 438 | 338 | 111 | 37,168 |
| 1929-30 | 496 | 368 | 128 | 46,603 |
| 1930-31 | 535 | 434 | 155 | 66,015 |
| 1931-32 | 530 | 253 | 102 | 25,357 |
| 1932-33 | 647 | 456 | 128 | 57,760 |
| 1933-34 | 651 | 472 | 133 | 61,788 |
| 1934-35 | 574 | 389 | 114 | 43,760 |
| 1935-36 | 608 | 366 | 82 | 29,554 |
| 1936-37 | 578 | 345 | 96 | 32,644 |
| 1937-38 | 555 | 378 | 114 | 42,568 |
| 1938-39 | 546 | 393 | 124 | 48,032 |
| 1939-40 | 582 | 388 | 120 | 46,004 |
| 1940-41 | 548 | 404 | 129 | 51,214 |
| 1941-42 | - | - | - | - |

| | | | | |
|--|------|------|-----|---------|
| 1942-43 | 414 | - | - | - |
| 1943-44 | - | - | - | - |
| 1944-45 | - | - | - | - |
| 1945-46 | 493 | 325 | 101 | 32,059 |
| 1946-47 | 505 | 259 | 92 | 23,283 |
| 1947-48 | 559 | 363 | 109 | 38,824 |
| Independent Era | | | | |
| 1948-49 | 554 | 353 | 109 | 37,678 |
| 1949-50 | 541 | 334 | 84 | 27,677 |
| 1950-51 | 534 | 355 | 104 | 36,687 |
| 1951-52 | 539 | 368 | 118 | 42,544 |
| 1952-53 | 530 | 381 | 129 | 48,412 |
| 1953-54 | 541 | 382 | 105 | 39,725 |
| 1954-55 | 561 | 323 | 102 | 32,341 |
| 1955-56 | 575 | 337 | 121 | 40,157 |
| 1956-57 | 587 | 382 | 143 | 53,834 |
| 1957-58 | 769 | 273 | 117 | 31,215 |
| 1958-59 | 567 | 344 | 141 | 48,024 |
| 1959-60 | 620 | 410 | 154 | 62,079 |
| 1960-61 | 594 | 411 | 155 | 62,263 |
| 1961-62 | 619 | 439 | 169 | 73,063 |
| 1962-63 | 638 | 465 | 183 | 83,567 |
| 1963-64 | 652 | 383 | 140 | 52,997 |
| 1964-65 | 793 | 703 | 142 | 98,813 |
| 1965-66 | 809 | 479 | 120 | 56,866 |
| 1966-67 | 773 | 478 | 119 | 55,717 |
| 1967-68 | 830 | 646 | 167 | 106,220 |
| 1968-69 | 824 | 562 | 148 | 81,804 |
| 1969-70 | 914 | 664 | 154 | 100,140 |
| 1970-71 | 1016 | 793 | 167 | 130,022 |
| 1971-72 | 928 | 698 | 163 | 111,648 |
| 1972-73 | 913 | 497 | 142 | 69,594 |
| 1973-74 | 1076 | 390 | 195 | 152,394 |
| Socialist Era | | | | |
| 1974-75 | 1056 | 656 | 146 | 93,642 |
| 1975-76 | 997 | 664 | 202 | 132,223 |
| 1976-77 | 1065 | 598 | 155 | 91,060 |
| 1977-78 | 1091 | 606 | 184 | 109,347 |
| 1978-79 | 1249 | 958 | 219 | 206,247 |
| 1979-80 | 1037 | 631 | 175 | 108,204 |
| 1980-81 | 1307 | 713 | 221 | 154,675 |
| 1981-82 | 1370 | 773 | 232 | 176,951 |
| 1982-83 | 1377 | 936 | 212 | 194,966 |
| 1983-84 | 1339 | 770 | 269 | 203,504 |
| 1984-85 | 1501 | 1006 | 251 | 248,833 |
| 1985-86 | 1412 | 1001 | 248 | 244,306 |
| 1986-87 | 1151 | 798 | 249 | 195,702 |
| 1987-88 | 1187 | 628 | 270 | 167,226 |
| State Peace and Development Council | | | | |
| 1988-89 | 1212 | 644 | 225 | 142,552 |
| 1989-90 | 1278 | 925 | 224 | 203,566 |

| | | | | |
|---------|------|------|-----|---------|
| 1990-91 | 1324 | 993 | 217 | 212,344 |
| 1991-92 | 1289 | 803 | 213 | 167,829 |
| 1992-93 | 1367 | 992 | 239 | 233,363 |
| 1993-94 | 1300 | 946 | 236 | 219,800 |
| 1994-95 | 1330 | 1132 | 269 | 299,359 |
| 1995-96 | 1276 | 904 | 336 | 298,803 |
| 1996-97 | 1145 | 1015 | 338 | 338,669 |
| 1997-98 | 1035 | 774 | 382 | 391,398 |
| 1998-99 | 1199 | 705 | 298 | 209,175 |
| 1999-00 | 1357 | 1034 | 286 | 290,845 |

Table S2. Basic characteristics of sesame varieties released in Myanmar.

| No | Variety Name | Release Year | Breeder/ Producer | Origin | Life span (Days) | Seed color | Yield (kg/ha) | Oil yield (%) | Remarks |
|-----|-----------------|--------------|------------------------------|---------|------------------|------------|---------------|---------------|-------------------------------|
| 1. | Sin-Yadana 1* | 1980 | Yezin, DAR ² | Myanmar | 60-70 | white | 245-367.5 | 43–45 | Shorter life span |
| 2. | Sin-Yadana 2* | 1985 | Yezin, DAR ² | Myanmar | 90-95 | Black | 245-367.5 | 50 | Several branches |
| 3. | Sin-Yadana 3 | 1990 | X79-17-7-3-1 | Myanmar | 95-100 | Black | 245-367.5 | 50 | Good quality for export |
| 4. | Sin-Yadana 4 | 1994 | Introduced | China | 80-85 | White | 245-367.5 | 45–46 | Good quality for export |
| 5. | Ju-Ni-Poke | - | Farmer selection | Myanmar | 80-90 | White | 245-367.5 | 55 | Stable yield |
| 6. | Me-Daw-Let-The | - | Farmer selection | Myanmar | 85-90 | Red | 245-367.5 | 54 | Stable yield |
| 7. | Gwa-Taya | - | Farmer selection | Myanmar | 85-95 | Brown | 245-294.0 | 48 | Stable yield |
| 8. | Gwa-Kyaw-Net | - | Farmer selection | Myanmar | 85-90 | Black | 245-367.5 | 46 | Stable yield |
| 9. | Me-Thela | - | Farmer selection | Myanmar | 60-65 | Yellow | 196-245.0 | 53 | Shorter life span |
| 10. | Shark-Kale | - | Farmer selection | Myanmar | 65-75 | Yellow | 196-245.0 | 55 | Shorter life span |
| 11. | Shwe-Ta-Soke | - | Farmer selection | Myanmar | 70-75 | White | 245-367.5 | 53 | Cultivable in any region |
| 12. | Thar-Tun-Phyu | - | Farmer selection | Myanmar | 80-85 | White | 245-294.0 | 50 | Cultivable in any region |
| 13. | Hnan-Ni 25/160* | 1962 | Tatkone Farm | Myanmar | 90-95 | Brown | 245-367.5 | 55 | Phyllody resistance |
| 14. | Yoe-Sein | - | Mahlaing Farm | Myanmar | 80-85 | Brown | 245-367.5 | 55 | Short span, drought tolerance |
| 15. | Boat-Hmway | - | Farmer selection | Myanmar | 70-80 | Brown | 245-367.5 | 55 | |
| 16. | Sub-Phyu | - | Farmer selection | Myanmar | 90-95 | white | 245-367.5 | | |
| 17. | Magway* 2/21 | - | Magway/MAS ¹ | Myanmar | 85-95 | Red | 245-367.5 | | Good yield in any region |
| 18. | Magway 7/9* | 1978 | Magway Farm/MAS ¹ | Myanmar | 85-95 | Red | 245-367.5 | | Good Yield in any region |
| 19. | Ye-The-Kyaw | 1978 | Farmer selection | Myanmar | 70-75 | Red | 245-367.5 | | Shorter life span |
| 20. | Ba-Pan | - | Farmer selection | Myanmar | 85-95 | White | 245-367.5 | | Shorter life span |
| 21. | Kye-Ma-Shoung | - | Farmer selection | Myanmar | 120 | Brown | 245-294.0 | 57 | Winter crop, stable yield, |

| | | | | | | | | | |
|-----|--------------------------|------|----------------------------------|---------|---------|-------|-----------|----|---------------------------|
| | | | | | | | | | vigorous root |
| 22. | Selin-Boat-Taung | - | | Myanmar | 120 | Red | 245-294.0 | 55 | Winter crop, stable yield |
| 23. | Magway-Ni 50/2 | - | | Myanmar | 120 | Red | 245-294.0 | 55 | Winter crop, stable yield |
| 24. | Nyaung-Aing | - | Farmer selection | Myanmar | 110-120 | White | 245-294.0 | 55 | |
| 25. | Sin Yadana-6* | 2003 | DAR ² | | | | | | |
| 26. | Sin yadana-12* | 2011 | Yezin, DAR ² | | | | | | |
| 27. | Sin yadana-14* | 2014 | Yezin, DAR ² | | | | | | |
| 28. | SESAME WHITE (SAFAL 3) * | 2016 | Tropical Biotechnology Co., Ltd. | | | | | | |
| 29. | Magway Black sesame1/13 | | Yezin, DAR ² | | | | | | |

Note: * varieties issued by National Seed Committee, Ministry of Agriculture, Livestock and Irrigation, Myanmar. ¹Myanma Agriculture Service, ² Department of Agricultural Research.