Preperation in dry season, 1990 has been carried out as follows:

(1) Cultivation period: January 8 to April 4
(2) Cultivated Area : 2,400 ha
(3) Activities of operatore and tractors are shown in Table 1 to 4

Achievement of work progress in average is computed as follows:

a) Numbers of plot cultivated: 4835 (see Table 1 and 2)
b) Work days = 73 days (see Table 5)
c) Numbers of tractor operated = 48 (see Table 3 and 4)
d) Work progress in average = 3.4 plots/day/tractor

3. Trouble of the Machinery

In accordance with the report from the workshop, main trouble of tractors and rotavators are pointed out as follows:

| Parts of Breakdown | | Frequency (times) |
|---|---|---|
| (A) | Tractor | |
| (1) | P.T.O. shaft | 12 |
| (2) | Hydraulic pump | 13 |
| (3) | T/M bearing support | 18 |
| (4) | Bolt of hydraulic sylinder | 6 |
| (5) | Clutch | 16 |
| (6) | Water pump | 15 |
| (7) | Blake friction plate | 7 |
| (B) | Rotavator | |
| (1) | Bearing of bevel gear shsft | 31 |
| (2) | Clutch | 23 |
| (3) | Joint shaft | 12 |
| (4) | Chain | 7 |
| (5) | Tensioner | 10 |
| (6) | Ended blade shaft | 11 |

4. Reasons of Troble

There are some reasons why the tractors and rotavators have often broken down during operation in the farm in the dry season. The reasons are pointed out as folloes:

(1) Soil condition is much harder than the working limit of hardness in the specifications of the rotavator.

(2) Due to strengthening of the universal joint, it has affected P.T.O shaft, T/M bearing support, hydraulic pump and sylinder, and etc.

(3) Damage of dish bearing at the clutch is caused by water intrusion when the tractor is stuc into water poor and long term operation without grease in the bearing.

(4) During operation of the tractor, the tractor is turned without lifting the rotavator.

5. Countermeasure

(1) Tractor shall be operated after claycy soils in the farm is softened and swelled by scheduled water supply.

(2) It is not allowed that the tractor is not operated over specified speed at (LO-1 or 2) for hard soils or with shallower depth of cultivation.

(3) It is necessary to change caltivation method to combined use of desk plow and sub-soiler or use of carrier type which does not directly give any damage to engine or other parts of the tractor.

(4) Daily maintenance and its management systemare required as soon as possible.

(5) Operators shall slowly and carefully drive the tractor on the rough road in order to prevent impact load to T/M and hydraulic cylinder caused by the shock of rotavtor.

6. Maintenance

(1) Leader of operator shall direct and give instruction of daily maintenance for the machinery to the operators.

(2) Workshop coordinator shall carefully record trouble of the machinery in daily report sheets to grasp present conditions of the machinery and give instruction to wockshop and leader of operators how to maintain or adjust the breakdown.

7. The others

Present condition of tractors is also pointed out as follows:

(1) All the tractors do not equip a set of battery except several tractors then the engine is started by pulling or pushing. The operator could not stop the engine when it is not operated, because of no battery and no ignition key.

(2) There is no tool for daily maintenance in the workshop.

(3) A car washing facility is not set up in the workshop so that tractors are usually washed in a creek or poor. Water therefore intends in T/M and clutch.

(4) Necessary tools for daily maintenance shall be supplied immediately and management of the tools shall also be established.

(5) To leave on the engine of the tractors all day in a hot crimate will damage the engine.

(6) Necessary quantity of battery is required and shall be set up to the tractors.

Table 1. Numbers of Plot Cultivated in Dry Season, 1990

| East Zone Area | Nos. of Plot Cultivated | West Zone Area | Nos. of Plot Cultivaed |
|---|---|---|---|
| TO-E 1 | 43 | To-W 1 | 69 |
| E 2 | 313 | W 2 | 106 |
| E 3 | 186 | W 3 | 261 |
| E 4 | 23 | W 4 | 208 |
| E 5 | 94 | W 5 | 566 |
| E 7 | 375 | W 6 | 157 |
| E 13 | 119 | W 7 | 412 |
| E 14 | 109 | W 8 | 502 |
| E 15 | 98 | W 10 | 17 |
| E 16 | 107 | W 11 | 196 |
| E 17 | 17 | W 12 | 205 |
| E 18 | 71 | W 13 | 336 |
| | | W 14 | 248 |
| Sub Total | 1555 plots | Sub Total | 3280 plots |
| Total | 4835 plots | | |

Source: Operation Section
Period: As of the end of April, 1990

Table 2. Monthly Progress of Cultivation in Dry Season, 1990

| Month | Numbers of Plot For Cropping | For Puddling | Plot in Total | Nos. of Tractor used |
|---|---|---|---|---|
| January | 977 | 0 | 977 | 313 |
| February | 1959 | 8 | 1967 | 578 |
| March | 1699 | 240 | 1939 | 562 |
| April | 200 | 37 | 237 | 74 |
| Total | 4835 | 285 | 5120 | 1527 |

Note: Progress of Cultivation area
5120 plots / 1527 nos = 3.4 plots / tractor

Table 4 OPERATORS ACTIVITIES IN DRY SEASON, 1990

(From Jan to Apr , 1990)

| No | Names | January (plots) | Februaly (plots) | March (plots) | April (plots) | Total |
|---|---|---|---|---|---|---|
| 1 | Martin Ugwuoke | 49 | 76 | 91 | 18 | 234 |
| 2 | Anthony Okolo | 43 | 82 | 91 | 15 | 231 |
| 3 | Cletus Nwazi | 55 | 72 | 90 | 12 | 229 |
| 4 | George Ugueze | 56 | 77 | 75 | 9 | 217 |
| 5 | Micheal Amacchi | 56 | 75 | 78 | 7 | 216 |
| 6 | Boniface Anedo | 48 | 73 | 69 | 6 | 196 |
| 7 | Felix Onyeshi | 45 | 60 | 74 | 13 | 192 |
| 8 | Titus Ekwuclor | 48 | 56 | 73 | 15 | 192 |
| 9 | Dominic Onyeshi | 36 | 83 | 60 | 12 | 191 |
| 10 | Richrd Cbickwena | 40 | 64 | 72 | 15 | 191 |
| 11 | Okafor Ajaenyi | 51 | 61 | 64 | 14 | 190 |
| 12 | Dominic Anedo | 52 | 74 | 49 | 10 | 185 |
| 13 | Hillary Ozioko | 38 | 71 | 62 | 12 | 183 |
| 14 | Mathias Ozioko | 16 | 73 | 78 | 12 | 179 |
| 15 | John Nnaluc | 47 | 82 | 43 | | 172 |
| 16 | John Ik Eze | 48 | 62 | 55 | 4 | 169 |
| 17 | Christian Anedo | 27 | 73 | 65 | 4 | 169 |
| 18 | Titus Amulu | | 61 | 91 | 14 | 166 |
| 19 | Cletus Obiora | 32 | 61 | 64 | 4 | 161 |
| 20 | Anthony Ekere | | 67 | 90 | | 157 |
| 21 | Patrick Chkuwuenicka | 42 | 47 | 58 | 9 | 156 |
| 22 | Ifeanyi Amaegwe | | 74 | 60 | 9 | 143 |
| 23 | Josph Eda | 1 | 65 | 76 | | 142 |
| 24 | Titus Odenigbo | 35 | 80 | 25 | | 140 |
| 25 | Patrick Eze | | 64 | 58 | 15 | 137 |
| 26 | Thomas Okafor | 32 | 63 | 37 | | 132 |
| 27 | Kevin Abba | 48 | 64 | 19 | | 131 |
| 28 | Peter Mbachu | | 50 | 65 | | 115 |
| 29 | Cyril Obi | | 56 | 50 | | 106 |
| 30 | Richard Okolil , | 32 | | 11 | | 51 |
| 31 | Christian Ofuebe | | 1 | 46 | | 47 |
| | Total | 977 | 1967 | 1939 | 237 | 5120 |

Stephen Anekwe : Leader of Group A
Augusthne Ozioko : Leader of Group B
Patrich Mwokwe : Workshop Cordinater
Simon Nworie : Fuel Supplier

Table 5

| Month | January | February | March | April | Total |
|---|---|---|---|---|---|
| Work Days | 20 | 24 | 25 | 4 | 73 |

Table 3 ACTIVITIES OF TRACTORS DRY SEASON, 1990
(From Jan 8 to Apr 6)

| Rank | Troctor NO | Cultivated Area(plots) January | February | March | April | Total | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | 95 | 46 | 78 | 84 | 18 | 226 | |
| 2 | 81 | 55 | 67 | 86 | 12 | 220 | |
| 3 | 86 | 54 | 71 | 74 | 17 | 216 | |
| 4 | 99 | 48 | 73 | 70 | 6 | 197 | |
| 5 | 23 | 35 | 82 | 62 | 14 | 193 | |
| 6 | 134 | 56 | 75 | 54 | 7 | 192 | |
| 7 | 102 | 45 | 60 | 71 | 15 | 191 | |
| 8 | 12 | 37 | 63 | 72 | 16 | 188 | |
| 9 | 96 | 38 | 66 | 73 | 9 | 186 | |
| 10 | 78 | 27 | 75 | 66 | 12 | 180 | |
| 11 | 84 | 52 | 79 | 34 | 11 | 176 | |
| 12 | 85 | 36 | 66 | 59 | 13 | 174 | |
| 13 | 133 | 16 | 74 | 74 | 9 | 173 | |
| 14 | 72 | 41 | 82 | 49 | | 172 | |
| 15 | 83 | 25 | 77 | 63 | 6 | 171 | |
| 16 | 119 | 42 | 82 | 42 | | 166 | |
| 17 | 90 | 1 | 72 | 81 | 4 | 158 | |
| 18 | 76 | 44 | 60 | 41 | | 145 | |
| 19 | 135 | | 47 | 84 | 14 | 145 | |
| 20 | 63 | | 68 | 58 | 12 | 138 | |
| 21 | 113 | 14 | 38 | 78 | 7 | 137 | |
| 22 | 40 | 28 | 16 | 72 | | 116 | |
| 23 | 131 | 16 | 73 | 26 | | 115 | |
| 24 | 89 | | 56 | 41 | 14 | 111 | |
| 25 | 114 | 15 | 29 | 59 | 4 | 107 | |
| 26 | 37 | | 14 | 75 | 15 | 104 | |
| 27 | 55 | | 56 | 44 | | 100 | |
| 28 | 132 | | 65 | 19 | | 84 | |
| 29 | 82 | | 3 | 70 | | 73 | |
| 30 | 14 | 37 | 34 | | | 71 | |
| 31 | 91 | | 9 | 58 | 2 | 69 | |
| 32 | 33 | | 33 | 34 | | 67 | |
| 33 | 22 | 20 | 16 | 30 | | 66 | |
| 34 | 130 | | 26 | 17 | | 43 | |
| 35 | 100 | 39 | 1 | 2 | | 42 | |
| 36 | 52 | | 36 | | | 36 | |
| 37 | 54 | 22 | 10 | | | 32 | |
| 38 | 94 | 30 | | | | 30 | |
| 39 | 49 | | 24 | | | 24 | |
| 40 | 74 | 23 | | | | 23 | |
| 41 | 25 | 6 | | 15 | | 21 | |
| 42 | 17 | 15 | | | | 15 | |
| 43 | 116 | | 8 | | | 8 | |
| 44 | 57 | 5 | 2 | | | 7 | |
| 45 | 20 | 7 | | | | 7 | |
| 46 | 15 | 2 | | | | 2 | |
| 47 | 71 | | | 2 | | 2 | |
| 48 | 53 | | 1 | | | 1 | |
| | TOTAL | 977 | 1967 | 1939 | 237 | 5120 | |

## OPERATION HOUR OF TRACTOS FOR 1990 DRY SEASON RICE CROPPING

(From Jan. 8 to Apr. 6 )

| No. of Tractor | Hourly Record | | Opereti-On hour (hrs.) | Nos. of Plots Operated |
|---|---|---|---|---|
| | As of Jan. 8 | As of Apr. 6 | | |
| 1 | 834 | 834 | F | |
| 2 | 1076 | 1076 | 0 | |
| 3 | 1327 | 1327 | F | |
| 4 | 1329 | 1329 | F | |
| 5 | 1037 | 1037 | F | |
| 6 | 1473 | 1543 | 70 | |
| 7 | 1311 | 1668 | 357 | |
| 8 | 970 | 970 | F | |
| 9 | 1244 | 1244 | F | |
| 10 | 1296 | 1296 | F | |
| 11 | 1297 | 1297 | F | |
| 12 | 1239 | 1639 | 400 | 188 |
| 13 | 1069 | 1069 | F | |
| 14 | 915 | 915 | not work | 67 |
| 15 | 1072 | 1078 | 6 | 2 |
| 16 | 1193 | 1193 | F | |
| 17 | 1124 | 1174 | 50 | 15 |
| 18 | 953 | 953 | F | |
| 19 | 1145 | 1145 | 0 | |
| 20 | 872 | 872 | not work | 7 |
| 21 | 748 | 748 | F | |
| 22 | 1110 | 1303 | 193 | 56 |
| 23 | 1199 | 1622 | 423 | 193 |
| 24 | 833 | 833 | 0 | |
| 25 | 825 | 910 | 90 | 21 |
| 26 | 869 | 869 | F | |
| 27 | 942 | 942 | 0 | |
| 28 | 1210 | 1210 | F | |
| 29 | 956 | 991 | 35 | |
| 30 | 1144 | 1144 | F | |
| 31 | 909 | 909 | F | |
| 32 | 1513 | 1597 | 84 | |
| 33 | 1308 | 1467 | 159 | 67 |
| 34 | 783 | 783 | 0 | |
| Total | | | | 626 |

| No. of Tractor | Hourly Record | | Opereti-on Hour (hrs.) | Nos. of Plots Operated |
|---|---|---|---|---|
| | As of Jan. 8 | As of Apr. 6 | | |
| 35 | 757 | 757 | F | |
| 36 | 882 | 882 | F | |
| 37 | 761 | 761 | not work | 104 |
| 38 | 986 | 990 | 4 | |
| 39 | 924 | 924 | F | |
| 40 | 401 | 650 | 249 | 116 |
| 41 | 917 | 917 | F | |
| 42 | 711 | 711 | F | |
| 43 | 613 | 613 | F | |
| 44 | 1059 | 1092 | 33 | |
| 45 | 1219 | 1219 | F | |
| 46 | 669 | 756 | 87 | |
| 47 | 1020 | 1020 | 0 | |
| 48 | - | - | F | |
| 49 | 687 | 755 | 68 | 24 |
| 50 | 360 | 360 | 0 | |
| 51 | 876 | 876 | 0 | |
| 52 | 1351 | 1433 | 82 | 36 |
| 53 | 739 | 748 | 9 | 1 |
| 54 | 786 | 845 | 59 | 32 |
| 55 | 628 | 890 | 262 | 100 |
| 56 | 827 | 827 | F | |
| 57 | 932 | 954 | 22 | 7 |
| 58 | 975 | 975 | F | |
| 59 | 419 | 419 | F | |
| 60 | 1361 | 1372 | 11 | 3 |
| 61 | 494 | 496 | 2 | |
| 62 | 668 | 674 | 6 | |
| 63 | 1116 | 1483 | 367 | 138 |
| 64 | 965 | 965 | F | |
| 65 | 726 | 726 | F | |
| 66 | 909 | 909 | F | |
| 67 | 376 | 376 | F | |
| 68 | 614 | 621 | 7 | |
| Total | | | | 561 |

| No. of Tractor | Hourly Record | | Opereti-on Hour (hrs.) | Nos. of Plots Operated |
|---|---|---|---|---|
| | As of Jan. 8 | As of Apr. 6 | | |
| 69 | 531 | 531 | 0 | |
| 70 | 315 | 315 | 0 | |
| 71 | 352 | 428 | 76 | 2 |
| 72 | 1003 | 1346 | 343 | 172 |
| 73 | 583 | 583 | F | |
| 74 | 798 | 858 | 60 | 23 |
| 75 | 935 | - | F | |
| 76 | 205 | 586 | 381 | 145 |
| 77 | 752 | 752 | F | |
| 78 | 371 | 781 | 410 | 180 |
| 79 | 558 | 862 | 304 | |
| 80 | 846 | 846 | F | |
| 81 | 420 | 420 | 0 | 220 |
| 82 | 407 | 599 | 192 | 73 |
| 83 | 646 | 1071 | 425 | 171 |
| 84 | 580 | 1018 | 438 | 175 |
| 85 | 589 | 939 | 350 | 174 |
| 86 | 411 | 876 | 465 | 216 |
| 87 | 148 | 148 | F | |
| 88 | 220 | 233 | 13 | |
| 89 | 413 | 712 | 299 | 111 |
| 90 | 584 | 907 | 323 | 158 |
| 91 | 124 | 343 | 219 | 69 |
| 92 | 461 | 461 | F | |
| 93 | 310 | 310 | F | |
| 94 | 495 | 576 | 81 | 30 |
| 95 | 423 | 920 | 497 | 226 |
| 96 | 293 | 719 | 426 | 186 |
| 97 | 49 | 49 | 0 | |
| 98 | 272 | 272 | F | |
| 99 | 356 | 835 | 479 | 197 |
| 100 | 385 | 534 | 149 | 42 |
| 101 | 1632 | 1670 | 38 | |
| 102 | 270 | 331 | 62 | 192 |
| Total | | | | 2763 |

| No. of Tractor | Hourly Record | | Opereti-on Hour (hrs.) | Nos. of Plots Operated |
|---|---|---|---|---|
| | As of Jan. 8 | As of Apr. 6 | | |
| 103 | - | - | F | |
| 104 | 1218 | 1218 | F | |
| 105 | 366 | 366 | F | |
| 106 | 1258 | 1258 | F | |
| 107 | 1139 | 1139 | F | |
| 108 | 935 | 935 | F | |
| 109 | 498 | 498 | F | |
| 110 | 623 | 623 | F | |
| 111 | 517 | 517 | F | |
| 112 | 1424 | 1543 | 59 | |
| 113 | 1123 | 1480 | 357 | 137 |
| 114 | 1201 | 1490 | 289 | 107 |
| 115 | 680 | 691 | 11 | |
| 116 | 826 | 880 | 54 | 8 |
| 117 | 780 | 780 | F | |
| 118 | 556 | 556 | F | |
| 119 | 1112 | 1498 | 386 | 166 |
| 120 | 1330 | 1330 | F | |
| 121 | 1387 | 1458 | 71 | |
| 122 | 1362 | 1362 | F | |
| 123 | 1084 | 1084 | 0 | |
| 124 | 1356 | 1600 | 244 | |
| 125 | 1427 | - | F | |
| 126 | 442 | 442 | 0 | |
| 127 | 1113 | 1113 | 0 | |
| 128 | 1403 | 1406 | 3 | |
| 129 | 1611 | 1611 | F | |
| 130 | 1609 | 1751 | 142 | 43 |
| 131 | 106 | 354 | 248 | 115 |
| 132 | 132 | 369 | 237 | 84 |
| 133 | 72 | 494 | 422 | 173 |
| 134 | 319 | 756 | 437 | 192 |
| 135 | 10 | 276 | 266 | 145 |
| 136 | 450 | 450 | F | |
| Total | | | | 1170 |

※ F : Faults

資料6

## 6．　その他

1981年 7月　現在

### 6-1.　日常生活物価情報

| | | |
|---|---|---|
| 現地通貨 | 銀行レート | 1 us $ ＝ １３７円＝１０N |
| | 公認両替所 | 1 us $ ＝ １３７円＝１４N |

| | | |
|---|---|---|
| 米（タイ米） | 1 kg | １８．５N |
| オレンジ | ５個 | ３ |
| 人参 | 1 kg | １５ |
| 玉葱 | 1 kg | ５ |
| ポテト | 1 kg | ４ |
| タマゴ | ３０ケ | ３０ |
| フィレ（肉） | 1 kg | ３６ |
| ミンチ（肉） | 1 kg | ３０ |
| ポーク（豚） | 1 kg | ４２ |
| チキン（鳥） | 1 kg | ４１ |
| 牛乳 | 1 ℓ | １８ |
| バター | 1箱 | １５．５ |
| 冷凍エビ　Lｻｲｽﾞ | 1箱 | １６５ |
| S．Bカレー | 1個 | ２５ |
| トマト（ｼﾞｭｰｽ缶） | 1缶 | ４ |
| チーズ（スライス） | | ２５ |
| ピーナッツバター | | ３０ |
| 角砂糖 | ５００g | １４．５ |
| ﾈｽｶﾌｪ 赤ﾗﾍﾞﾙ | １００g | ６４．５ |
| ﾐﾈﾗﾙ ｳｵｰﾀｰ | １．５ℓ | ６．５ |
| ホワイトホース | 1本 | １１５ |
| ジョン　黒 | 1本 | ２３５ |
| ジョン　赤 | 1本 | １１７ |
| J＆B（ｳｲｽｷｰ） | 1本 | １２８ |
| コーラ | ２４本 | ２８ |
| ビール | １２本 | ５１ |

| | | |
|---|---|---|
| ワイン | １本 | ２８．５ |
| コーンオイル | １ℓ | ２１．９ |
| ドレッシング | ２５０㎖ | ５４．８ |
| フィルム（カラー） | ２４枚 | ２５．５ |
| 現像 | ２４枚 | ３．５ |
| プリント | ２４枚 | ２８．８ |
| ＬＵＸ石けん | 大 | １０ |
| | 小 | ２．８ |
| ガソリン | １ℓ | ０．７ |
| 軽油 | １ℓ | ０．５ |
| 灯油 | １ℓ | ０．２ |
| オイル　20W-50W | ４ℓ | ６０ |
| タバコ（ペンソン） | １カートン | ８０ |

6-2.　日本語とイボ語

| イボ語 | 英語 | 日本語 |
|---|---|---|
| ア ゴ | | |
| Agu | Hungry | 空腹 |
| アゴンタ | | |
| Agonta | Moskcat | 蚊 |
| エゴ | | |
| Ego | Money | お金 |
| ダルー | | |
| Daru | Thank you | ありがとう |
| オトト　オマ | | |
| Ututu-Oma | Good Morning | おはよう |
| エヒヘ　オマ | | |
| Ehihe-Oma | Good after noon | 今日は |
| エエ　オーデイマ | | |
| Ee　or Odima | Yes | はい |
| ンーバ | | |
| Mba | No | だめ |
| ビア | | |
| Bia | Come | 来る |
| プア | | |
| Pua | Go | 行く |
| カメセイア | | |
| Kacmesia | Good by | さようなら |
| ウンバ | | |
| Mba | No | だめ |
| ケドゥ | | |
| Kedu | How are you | はじめまして |
| ケドゥ　マカ　ワニイ　ギ | | |
| Kedu-make Nwany gi | How abut your wife | 奥さん元気ですか |
| ケドゥ　マカ　オマ　アカギ | | |
| Kedu-make Uma-skagi | How abut you children | 子供さん元気ですか |