

III 農業機械検査報告書(例)

Appendix III

MINISTRY OF AGRICULTURE FOOD AND  
NATURAL RESOURCES  
AGRICULTURAL ENGINEERING ADMINISTRATION

TEST REPORT OF  
KUBOTA TRACTOR MODEL L245DT

TEST RUN BY:-

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IMPORTANT:-

Only copies of this certificate bearing the official stamp of Engineering Affairs Administration, are considered valid and true.

Khartoum, December, 1977

#### 4. FIELD AND CLIMATIC CONDITIONS

##### 4.1. Field Conditions

- 4.1.1. Site: Soba Research Centre,  
Khartoum Province
- 4.1.2. Date: July - September
- 4.1.3. Working hours: 8 a.m. .... 2 p.m.

4.2. Soil Conditions: Heavy clay soil

4.3. Climatic Conditions: Summer months (Kharif)

4.3.1. Temperature C°

	<u>Mean Max.</u>	<u>Mean Min.</u>
July	38.8	25.5
August	36.4	24.4
September	41.3	29.9

#### 5. PROCEDURES

##### 5.1. Ploughing

##### 5.1.1. Actual Field Capacity

Ploughing was conducted in soil and climatic conditions previously described on an already measured area. The Tractor was set to work with a mounted disc plough, starting at the middle (sometimes at the boundaries of the field). The pattern of ploughing was head land pattern (about 6 meters were left at each side for the Tractor turning). The time to complete ploughing for specific area was recorded using a hand watch.

Readings showing the area ploughed in feddans, time taken in minutes are tabulated in table (1).

### 5.1.2. Fuel Consumptions

Fuel consumption for ploughing was measured by tapping the fuel tank at the start of each run and then retapping the tank at the end of the run using a measuring cylinder. (1000 c.c. Capacity).

Readings showing the amount of fuel consumed in gallons, are ploughed in feddans and time taken in minutes are shown in table (1).

### 5.1.3. Forward Speed

Forward speed for ploughing was measured by recording the time taken by tractor to travel a distance of 280 meters measured by a metre tape during ploughing using the suitable gear shifting.

## 5.2. Rotavation

### 5.2.1. Actual Field Capacity

On the same ploughed area rotavation was conducted using a mounted rotavator. The pattern of rotavation was head lands pattern. Time to complete rotavation specific area was measured using a hand watch.

Readings showing area cultivated in feddans and time taken in minutes are shown in table (2).

### 5.2.2. Fuel Consumption and Forward Speeds

These two parametres were measured in the same way as described for ploughing.

Readings showing the amount of fuel consumed in gallons, time taken in minutes are shown in table (2).

## 6. OBSERVATIONS AND REMARKS

### 6.1. General Observations about the Performance of the Tested Tractor

- 6.1.1. The fuel system was working quite well during the test period.
- 6.1.2. The Hydraulic System was functioning properly with implements mounted on the 3-point linkage. There is no need for external hydraulic installations.
- 6.1.3. The Electrical Equipment was functioning well.
- 6.1.4. Engine temperature was normal during the test period.

### 6.2. Operators Comfort and Safety

- 6.2.1. A cabin hood is recommended which is useful for protection from hot sun rays and dust.
- 6.2.2. The seat is comfortable which enables the driver to work properly.

### 6.3. Spare Parts and Repair

- 6.3.1. Spare parts: during the test period no spare parts were needed apart from oil and fuel filters as recommended by the Operators manual.
- 6.3.2. Repair: None

## 7. CALCULATION

### 7.1. Speed

It is the distance travelled per unit time in a forward direction.

#### 7.1.1. Ploughing

Using a single bottom disc plough

Average distance travelled = 280 m

Average time taken = 186 sec.

$$\text{Speed} = \frac{280 \times 3600}{186 \times 1000} = 5.42 \text{ km/h}$$

### 7.1.2. Rotavation

Using a rotary tiller

Average distance travelled = 280 m

Average time taken = 285 sec.

$$\text{Speed} = \frac{280 \times 3600}{285 \times 1000} = 3.54 \text{ km/h}$$

### 7.2. Actual Field Capacity (CF)

It is the actual rate of coverage by the machine based upon the total field time.

#### 7.2.1. Ploughing

Average area covered = 1.067 fed.

Average time taken = 155 min.

Actual Field Capacity =

$$\text{CF} = \frac{1.067 \times 60}{155} = 0.41 \text{ fed/h}$$

#### 7.2.2. Rotavation

Average area covered = 2.3 fed

Average time taken = 125.5 min.

Actual Field Capacity

$$\text{CF} = \frac{2.30 \times 60}{125.5} = 1.1 \text{ fed/h}$$

### 7.3. Fuel Consumption

#### 7.3.1. Ploughing

Average area covered = 1.067 fed

Average time taken = 155 min.

Average fuel consumed = 2.54 gal.

Fuel Consumed

$$\text{a. per feddan} = \frac{2.54}{1.067} = 2.38 \text{ gal/fed}$$

$$\text{b. per hour} = \frac{2.54 \times 60}{155} = 0.9 \text{ gal/h}$$

### 7.3.2. Rotavation

Average area covered = 2.30 fed

Average time taken = 125.5 min.

Average fuel consumed = 2.14 gal.

#### Fuel Consumed

$$\text{a. per feddan} = \frac{2.14}{2.30} = 0.93 \text{ gal/fed}$$

$$\text{b. per hour} = \frac{2.14 \times 60}{125.5} = 1.02 \text{ gal/h}$$

### 7.4. Efficiency

It is the ratio of actual Field Capacity (CF) to the theoretical Field Capacity (CF) expressed as a percentage.

#### 7.4.1.. Ploughing

Theoretical Field Capacity =

$$\frac{\text{Width of cut (m)} \times \text{Speed km/hr} \times 1000}{4200}$$

$$\text{Where width of cut} = 0.40 \text{ m}$$

$$\text{Speed} = 5.42 \text{ k/h}$$

$$\text{CT} = \frac{0.4 \times 5.42 \times 1000}{4200} = 0.516 \text{ fed/h}$$

$$\text{CF} = 0.4 \text{ fed/h}$$

$$\text{Efficiency} = \frac{0.41}{0.516} = 79.46\%$$

#### 7.4.2. Rotavation

$$\text{Width of cut} = 1.10 \text{ m}$$

$$\text{Speed} = 4.9 \text{ km.h}$$

$$\text{CT} = \frac{1.10 \times 4.9 \times 1000}{4200} = 1.293 \text{ fed/h}$$

$$\text{CF} = 1.1 \text{ fed/h}$$

$$\text{Efficiency} = \frac{1.293}{1.1} = 85\%$$

## 8. CONCLUSIONS

### 8.1. Theoretical Field Capacity

The theoretical Field Capacities were calculated from the data collected and the average theoretical Capacities of different operations performed area:-

8.1.1. Ploughing = 0.516 fed/h

8.1.2. Rotavation = 1.293 fed/h

### 8.2. Actual Field Capacity

8.2.1. Ploughing = 0.41 fed/h

8.2.2. Rotavation = 1.1 fed/h

### 8.3. Efficiency

8.3.1. Ploughing = 79.46%

8.3.2. Rotavation = 85%

### 8.4. Fuel Consumption

#### 8.4.1. Ploughing

a. per feddan = 2.4 gal/fed

b. per hour = 0.9 gal/h

#### 8.4.2. Rotavation

a. per feddan = 0.93 gal/fed

b. per hour = 1.02 gal/h

8.5. The performance of the Tractor on test to Sudan field, climatic and soil conditions were quite satisfactory.

表一 スーダンにおける各単位

Item	Type of Measure	Equivalent
One feddan	Area of Land	4,200 Sq. Meters or 1.0379 Acres
One Sack	Volume	Sorghum: Feterita 91.500 kg
		Mugud 88.730 kg
		White 94.350 kg
		Millet 94.350 kg
One Kantar	Weight	Small Kantar, Cotton 44.928 kg
		Large Kantar, Cotton 141.523 kg
		Sesame 44.928 kg
		Groundnuts 44.928 kg
One Kilogram	Weight	Gum Arabic 44.928 kg
		2.20462 U.S. Pounds
		2.22580 Sudanes Pounds (Rottles)
One M. Ton	Weight	1,000 kilograms
One Bushel		Wheat 27.2156 kg



農薬常用記

LD	：〔Lethal dose〕致死量	ppt	：〔Parts per trillion, ビービーティー〕 1兆分の1濃度 $1/10^{12}$
LD <sub>50</sub>	：〔Median lethal dose；中央致死薬量〕同一母集団に属する動物に薬物を投与したり接触させて50%を死に至らしめる薬物量。一般に、その動物の体重1kg当りの薬物量(mg)で表わす。	a.i	：〔Active ingredient〕有効成分
LC	：〔Lethal concentration〕致死濃度	vol.%	：容量パーセント
LC <sub>50</sub>	：〔Median lethal concentration；中央致死濃度、同一母集団に属する動物に薬物を投与したり接触させて50%を死に至らしめる薬物の濃度。	wt%	：重量パーセント
TLm	：〔Median tolerance limit〕 同一母集団に属する動物に薬物を投与したり接触させて50%が耐えうる(生き残る)薬物量。	IU	：〔International unit〕 ホルモンなどの効力を国際的に統一して示すときに用いる単位。物質の構造が不確定であったり、純結晶が得がたい場合(多くのホルモン、ビタミン、ビタミンAなど)、一定の方法で得られた一定量の物質のもつ生物学的活性あるいは免疫学的活性などを基準にして、その量をあらわす。
LT <sub>50</sub>	：〔Median lethal time；中央致死時間〕同一母集団に属する動物に薬物を投与したり接触させて50%を死に至らしめるまでの時間	γ	：〔ガンマ〕質量の単位 $1\gamma=100$ 万分の $1g=1\mu g=10^{-6}g$
KT <sub>50</sub>	：〔Median knockdown time；中央ノックダウン時間〕昆虫に薬物を処理し50%が飛せしう又は歩行不可能になるまでの時間	μ	：〔Micron, ミクロン〕長さの単位 $1\mu=1000$ 分の $1mm=10^{-6}m$
L.S.D	：〔Least significant difference〕最少有意差, 統計用語	Mesh	：〔メッシュ〕フルイの目の大きさを示す単位 1インチの間にある網目の数により、その大きさを示し、1メッシュは1インチの間に網目が一つあることを示す。
NEL	：〔No effect level〕無作用量	pH	：〔ペーハー又はヒーエッチ〕水素イオン濃度を表わす単位溶液中の水素イオン $H^+$ の濃度を水素イオン濃度といい、 $1l$ 中の水素のグラムイオン数の逆数の常用対数をとってpHの記号で示す。水素イオン濃度は溶液の酸性の強さを表わし、pHが7より小さい溶液は酸性、7より大きい溶液はアルカリ性である。
ChE	：〔Cholinesterase〕コリンエステラーゼ	m.p.	：〔Melting point〕融点
MAC	：〔Maximum allowable concentration〕 最大許容濃度人間が一生にわたり摂取しても、なんら障害を起さないと考えられる水、空気、食品中における薬物の最高濃度。	b.p.	：〔Boiling point〕沸点
ADI	：〔Acceptable daily intake；1日当り摂取容量〕人間が一生にわたりある物質を摂取しても、現在の毒物学知見からみてなんら障害のあらわれない1日当りの最大量。mg/kg/日で表わす。	c/s	：〔Cases〕ケース, 箱
FAO	：〔Food & Agricultural Organization of the United Nations〕国際食糧農業機構	pkt	：〔Packet〕小袋, 小包
FDA	：〔Food and Drug Administration〕 米国食品薬品管理局	Wt	：〔Weight〕重さ
EPA	：〔Environmental Protection Agency〕 米国環境保護庁	Net	：正味重量
WHO	：〔World Health Organization〕 世界保健機構	GLC	：〔Gas liquid chromatography (ガスクロマトグラフィー)〕農薬の微量分析機器で0.01ppm程度まで検出できる。
ppm	：〔Parts per million, ビービーエム〕 百万分率(濃度の単位) $1ppm=100$ 万分の1濃度 $=1mg/kg=1\gamma/g$ 一般にmg/kgとmg/lを同一とみて、この値をppmで表わすことが多い。	TLC	：〔Thin layer chromatography (薄層クロマトグラフィー)〕農薬の分析機器
ppb	：〔Parts per billion, ビービービー〕 10億分の1濃度 $1/10^9$	UV	：〔Ultraviolet spectrophotometry 紫外線吸光光度法〕農薬の分析機器
		IR	：〔Infrared spectrophotometry 赤外線吸光光度法〕農薬の分析機器
		J.H	：〔Juvenile hormone〕幼虫のホルモン 昆虫の脱皮に関与するホルモン
		B.T	：〔Bacillus thuringiensis〕生物農薬の一種
		N.P.V	：〔Nuclear-polyhedrosis virus〕核多角体病ウイルス, 生物農薬

D : [Dust] 粉剤

(定義) 農薬原体を鉱物質微粉で希釈し、必要に応じて分解防止剤等を添加し、日本工業標準規格の定める標準網フルイ(以下「標準網フルイ」という。44ミクロンを通過する「微粉」となるように製剤化したものであって、そのまま使用する製剤を総称して「粉剤」という。

(一般的説明) 平均粒径10~30 $\mu$ m程度の粉末で、有効成分は通常2%前後のものが多い。製剤組成の大部分は生理的に不活性な粘土鉱物などであり、製剤としての急性毒性は低い。

DL : [Driftless] 漂流、飛散が少ないの意味

G : [Granule] 粒剤

(定義) 標準網フルイ1680ミクロンを通過し、かつ297ミクロンを通過しない「細粒」となるように製剤化したものであって、そのまま使用する製剤を「粒剤」という。ただし、特殊なものについては粒径が「細粒」より大きく(造粒又は打錠により製剤化した粒状の製剤についても総称して「粒剤」という。

(一般的説明) 0.7~1mm程度の粒状で、有効成分は1~20%で、その粒の組成は生理的に不活性な鉱物質から成る。

MG : [Micro granule] 微粒剤

MGF : [Micro granule fine] 微粒剤F

(定義) 農薬原体を鉱物質で希釈し、「微粒」、「粗粉(標準網フルイ105ミクロンを通過しない粒子)」、「微粒(標準網フルイ297ミクロンを通過し、かつ105ミクロンを通過しない粒子、及び「細粒」のうち、単独又はこれらの組み合わせからなる製剤で、「粉剤」及び「粒剤」のいずれにも該当しないものであり、そのまま使用するものを「粉粒剤」という。

WWp : [Wettable. Wettable powder] 水和剤

(定義) 水和性を有し、水に懸濁させて用いる製剤を「水和剤」という。

(一般的説明) 平均粒径数 $\mu$ mの微粉末で有効成分は50~80%のものが多い、散布するときは水で数百~数千倍に希釈して用いる。

E.Ec : [Emulsifiable Concentrate] 乳剤

(定義) 農薬原体に乳化剤等を加えた液体の製剤であって、水に乳濁させて用いるものを「乳剤」という。

(一般的説明) 有効成分は20~50%のものが多い、その他の組成として、10%前後の界面活性

剤と溶剤が含まれる。溶剤はキシロールが最も多く用いられ、他にアルコール類、ケトン類、各種石油製品なども用いられている。散布するときは水で数百~数千倍に希釈して用いる。

L : [Liquid] 液剤

(定義) 水溶性液体の製剤であってそのまま又は水に希釈、溶解して用いるものを「液剤」という。

(一般的説明) 有効成分は20~50%のものが多い、溶剤はほとんど水である。散布するときは水で数百~数千倍に希釈して用いる。

Ws : [Water soluble] 水溶性

水溶性の粉状、粒状等固体の製剤であって、主として水に溶解して用いるものを「水溶性」という。

油剤 : [Oil]

水に不溶の液体製剤であって、そのまま又は有機溶媒に希釈して用いるものを「油剤」という。

エアゾル : [Aerosol]

蓄圧充てん物であり、内容物が容器よりバルブを通じて霧状に噴出する農薬を総称して「エアゾル」という。

くん蒸剤 : [Fumigants]

当該農薬の有効成分又は有効成分に由来する活性物質を密閉又はそれに相当する条件下で気化させて、殺虫・殺菌等に用いる製剤を「くん蒸剤」という。

塗布剤 : [Painting]

当該農薬を主として農作物等の一部に塗布し、又はこれに類似する方法で使用する製剤を総称して「塗布剤」という。

ペースト剤 : [Paste]

糊状の製剤であって、他の剤型に該当しないものを「ペースト剤」という。

F : [Flowable] 懸濁液

FD : [Flow-dust] 極微粒子少量散布方法

ULV : [Ultra Low Volume] 超微量(散布)

JAPR : [The Japan Association for Advancement of Phyto regulators]

日本植物調節剤研究協会

JPPA : [Japan Plant Protection Association]

日本植物防疫協会

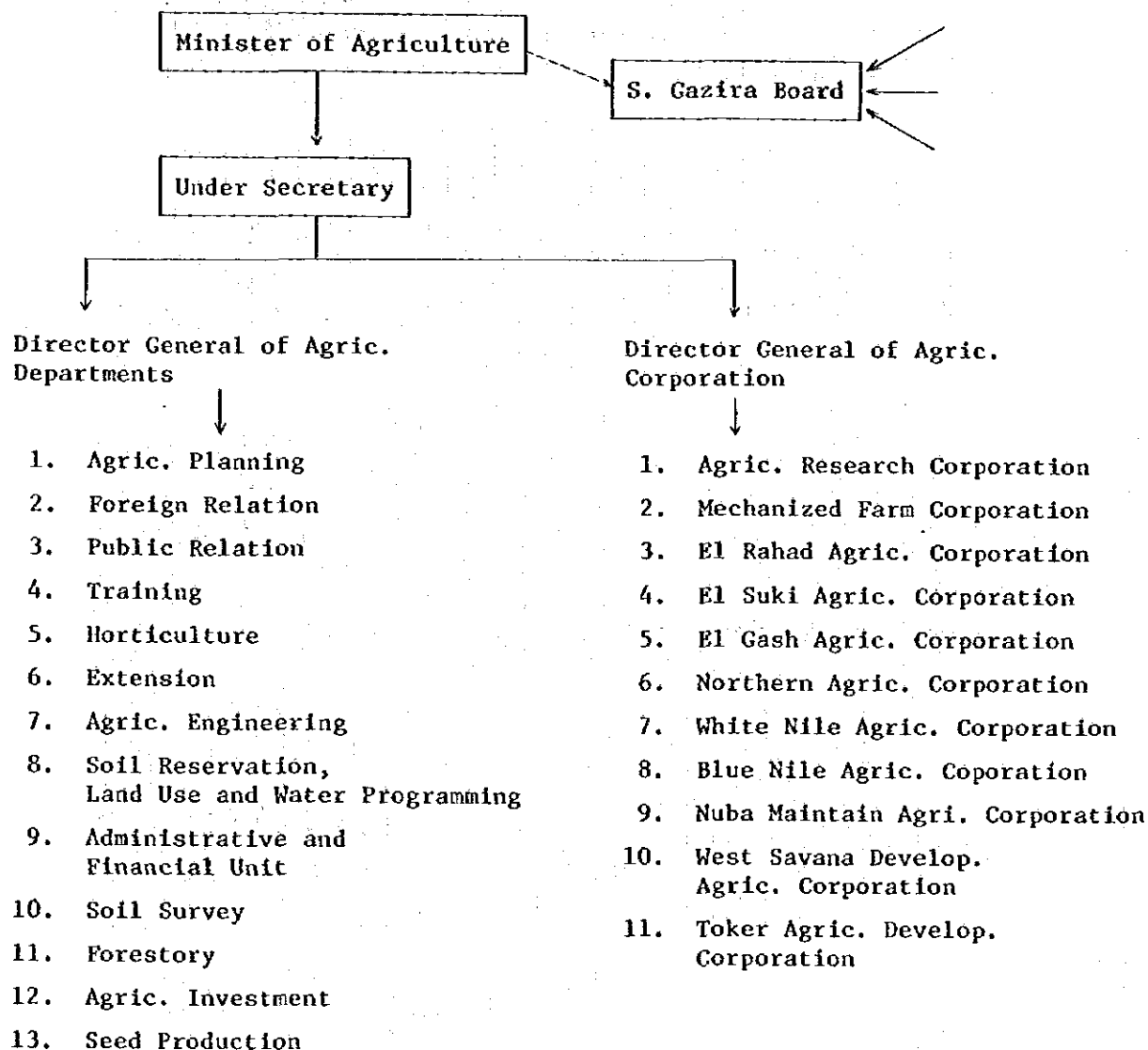
P.C.O : [Pest control operator] 防除業者

ISO : [International Organization for Standardization]

国際標準化機構

V 農業機械検査報告書(例)

(Ministry of Agriculture and Natural Resources)



殺菌剤

- 1 無機銅剤.....
- 1. ボルドー液.....
- 2. 銅水剤.....
- 3. 銅粉剤.....
- 4. 銅混合剤.....
- 2 有機銅剤.....
- 1. 有機銅水和剤.....
- 2. 有機銅液剤.....
- 3. 有機銅粉剤.....
- 4. 有機銅混合剤.....
- 5. ノニルフェノールスルホン酸銅剤.....
- 6. DBEDC剤.....
- 3 無機硫黄剤.....
- 1. 石灰硫黄混合剤.....
- 2. 水和硫黄剤.....
- 3. 硫黄粉剤.....
- 4. 硫黄くん煙剤.....
- 4 有機硫黄剤.....
- 1. シホブ剤.....
- 2. マンネブ剤.....
- 3. マンネブ剤.....
- 4. マンネブ剤.....
- 5. ポリカバメート水和剤.....
- 6. 有機マンネブ剤.....
- 7. プロヒビブ水和剤.....
- 8. テウラム剤.....

- 9. テラジアン水和剤.....
- 5 有機硫黄剤.....
- 1. P C P 剤.....
- 2. P P N 剤.....
- 3. フサライド剤.....
- 6 有機りん剤.....
- 1. E D P 剤.....
- 2. I B P 剤.....
- 7 有機ひ素剤.....
- 1. 有機ひ素液剤.....
- 2. 有機ひ素混合剤.....
- 3. 有機ひ素粉剤.....
- 8 有機錳剤.....
- 1. 有機錳水和剤.....
- 2. 有機錳液剤.....
- 9 プロパナゾール剤.....
- 10 イソプロチオラン剤.....
- 1. イソプロチオラン剤.....
- 2. イソプロチオラン剤.....
- 3. イソプロチオラン剤.....
- 4. イソプロチオラン剤.....
- 11 トリシクラーゾール剤.....
- 1. トリシクラーゾール水和剤.....
- 2. トリシクラーゾール粉剤.....
- 3. トリシクラーゾール液剤.....
- 12 ダイホルダン剤.....
- 1. ダイホルダン水和剤.....

- 25 トリアジン剤.....
- 1. トリアジン水和剤.....
- 2. トリアジン粉剤.....
- 3. トリアジンくん煙剤.....
- 26 ジメチリモール剤.....
- 27 ビンクロゾリン剤.....
- 28 イプロジオン剤.....
- 1. イプロジオン水和剤.....
- 2. イプロジオンくん煙剤.....
- 29 プロシミドソ剤.....
- 1. プロシミドソ水和剤.....
- 2. プロシミドソ粉剤.....
- 3. プロシミドソくん煙剤.....
- 30 トリホリン剤.....
- 31 レシチン剤.....
- 32 アルキル酸剤.....
- 33 次亜塩素酸ナトリウム剤.....
- 34 ベンチアゾール剤.....
- 35 農薬用抗生物質剤.....
- 1. ストレプトマイシン剤.....
- 2. プラスターマイシン剤.....
- 3. カスガマイシン剤.....
- 4. ポリオキシン剤.....
- 5. パリダマイシン剤.....
- 6. ノボビオリン水溶性剤.....
- 36 土壌殺菌剤.....
- 1. クロルピクリンくん煙剤.....
- 2. 臭化メチルくん煙剤.....
- 3. 臭化メチル・クロルピクリンくん煙剤.....
- 4. カンバム剤.....
- 5. PCNB剤.....
- 6. ヒドロキシイソキサゾール剤.....

- 7. マクロゾール剤.....
- 1 天然殺菌剤.....
- 1. 炭疽菌剤.....
- 2. アリス剤.....
- 3. エコチン剤.....
- 4. マンシ油剤.....
- 2 有機りん剤.....
- 1. CYAP 剤.....
- 2. M P P 剤.....
- 3. マスルフェンホス剤.....
- 4. M E P 剤.....
- 5. E C P 剤.....
- 6. ビリホスチル剤.....
- 7. ダイアジン剤.....
- 8. イソキサチオン剤.....
- 9. ビリダフェンチオン剤.....
- 10. クロルピリホス剤.....
- 11. クロルピリホス剤.....
- 12. E S P 剤.....
- 13. ペイドケネン剤.....
- 14. マラソン剤.....
- 15. P A P 剤.....
- 16. ジメトエート剤.....
- 17. ホルモチオン剤.....
- 18. マカルバム剤.....
- 19. テオマトン剤.....
- 20. エチルチオマトン剤.....
- 21. インチオエート剤.....
- 22. ホチキン剤.....
- 23. P M P 剤.....
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- 31. C Y P 剤.....
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2. MCP系.....  
3. MCPB系.....  
4. MCP系.....  
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6. トリクロピル系.....  
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2. DNEPA系.....  
3. PCP系.....  
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11. アミトリス系.....  
12. 水酸化トリクロロヘキシル  
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6. 臭素系除草剤.....  
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6. リニロン系.....  
7. DCMU系.....  
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2. 水相燻蒸剤.....  
3. イソプロパチオラン系.....

1. 発見・活着促進剤.....  
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# VI TIATCで使用する農薬一覧(英文)

## THE MAIN AGROCHEMICAL USED IN TIATC

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E - 5	Malathion	2
E - 6	Papthion (PAP)	2,3
E - 7	Diazinon	3,4
E - 8	Beziphon (dimethoate-fenvalerate)	4
E - 9	Supracide (DNTP)	4
E - 10	Kelthane (dicofol)	4
E - 11	Adion (permethrin)	4
E - 12	Akar (chlorobenzilate)	5
WP - 1	Ortran (acephate)	5
WP - 2	Lannate (methomyl)	5,6
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WP - 4	Osadan (fenbutatin oxide)	6
G - 1	Nekiriton (DEP)	6,7
G - 2	Ekatín TD (disulfoton)	7
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Note : E (Code No.) means Emulsifiable concentrate.  
 WP (Code No.) means Wettable Powder.  
 G (Code No.) means Granular.  
 D (Code No.) means Dust Formulation.

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Appendix II	A chart of dilution of chemicals	24

1. Spreaders and Stickers

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
E - 1	Shin granin	Crop chemical, is not essentially stickered (ex. Cabbage, Rice etc.)	-	3,000 - 3,500 times	Add as chemical is applied	-
		Crop chemical, is essentially stickered (ex. C. cabbage, Potato, Cucumber etc.)	-	3,000 - 10,000 times		
E - 2	Atrox EI * applicable chemi- cals Insecticides such as organophospho- rus, carbamate, kelthane etc and Fungicides such as copper fungicides, organic sulfur, antibiotic prepe- ration etc.	Cabbage  C. cabbage Cucumber	-	30 - 50 ml/10l spray Liquid  10 - 30 ml/10l spray Liquid	Add as chemical is applied	-

2. Insecticides and Acaricides

E - 3	Des 75 (DDVP)	Eggplant	Aphids	1,000 times	previous day	-
		Cucumber	Mites		3 days	
		Tomato	Aphids	1,000 times	previous day	-
		Cabbage	Aphids		14 days	
		Cauliflower	Common cabbage worm	1,000 times	7 days	5 times
		Radish	Diamondback		3 days	
		Turnip	Common cucumber	1,000 times	3 days	-
		C. cabbage	Onion thrips		3 days	
		Onion		500 - 1,000 times	8 times	
E - 4	Dipterex (DEP)	Cucumber	Aphids	1,000 times	7 days	6 times
		Radish	Cucumber leaf beetle (adult)		3 days	
		Turnip	Diamondback		7 days	
		C. cabbage	Common cabbage worm		3 days	
		Cabbage	Striped flea beetle (adult)		3 days	
		Cauliflower	Aphids	500 - 1,000 times	8 times	
		Eggplant	Lady beetle	1,000 times	8 times	
			Cucumber	900 - 1,000 times		
			Aphids			



Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrations or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping		
E - 4	Dipterex (DEP)	Melon	Cucumber leaf beetle (adult)	800 - 1,000 times	7 days	6 times		
		Watermelon	Aphids	500 - 1,000 times				
		Squash	Strawberry bud nematode	500 times	30 days	3 times		
		Oriental melon	Aphids	500 - 1,000 times				
		Strawberry	Lady beetle	1,000 times	14 days	6 times		
		Potato	Cucumber	500 - 1,000 times				
			Aphids	2,000 - 3,000 times				
		E - 5	Malathion	Tomato	Spider mites	2,000 - 3,000 times	previous day	-
				Eggplant	Aphids			
				Sweet pepper	Cucumber leaf beetle	1,000 times		
Cucumber	Aphids			2,000 - 3,000 times				
Watermelon	Trips							
Melon	Cabbage sawfly			1,000 times				
Oriental pickling melon	Common cabbageworm			2,000 - 3,000 times				
Squash	Aphids							
Cabbage	Spider mites			1,000 times				
C. cabbage	Aphids							
Calliflower	Aphids			2,000 - 3,000 times				
Celery	Leafminer							
Lettuce	Aphids			1,000 times				
Strawberry	Cabbage sawfly							
Radish	Common cabbageworm			2,000 - 3,000 times				
Turnip	Aphids							
Welan onion	Trips	1,000 times						
Onion	Leafminer							
	Aphids	2,000 - 3,000 times						
Edible burdock	Aphids							
Spinach	Spider mites	1,000 times						
Carrot	Aphids							
	Trips	1,000 times						
Plum	Beetles							
	Soybean pod borer	1,000 times						
	Leafminer							
E - 6	Perithion (PAR)	Spinach	Aphids	1,000 - 2,000 times	14 days	4 times		
		Lettuce	Cucumber					
		Parasely	Spodoptera litura	1,000 times				
		Celery						
	Miscuba							

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & diseases effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping		
E - 6	Permethrin (DAP)	Tomato Sweet pepper Eggplant	Aphids	1,000 - 2,000 times	3 days	4 times		
			28-spotted lady beetle	1,000 times				
			Cabbage armyworm Common cutworm Thrips	1,000 - 2,000 times				
		Cucumber Watermelon Oriental pickling melon Oriental melon Melon	Aphids	1,000 - 2,000 times	previous day	-		
			Thrips	1,000 times				
			Thrips	1,000 times				
		Pumpkin	Aphids	1,000 - 2,000 times	7 days	4 times		
			Thrips	1,000 times				
			Aphids	1,000 - 2,000 times				
		Carrot	Cabbage armyworm	1,000 times	14 days	-		
			Common cutworm	1,000 - 2,000 times				
			Aphids	1,000 times				
		Welsh onion Onion	Aphids	1,000 - 2,000 times	7 days	-		
			Thrips	1,000 times				
			Aphids	1,000 - 2,000 times				
		E - 7	Diazinon	Sweet potato	Aphids	1,000 - 2,000 times	7 days	4 times
					28-spotted lady beetle	1,000 times		
Cabbage armyworm Common cutworm	1,000 times							
Cabbage Cauliflower	Common cabbageworm			1,000 times	30 days	4 times		
	Diamondback			1,200 times				
	Aphids			1,000 times				
C. cabbage	Striped flea beetle			1,000 times	14 days	2 times		
	Common cabbageworm			1,000 times				
	Diamondback			1,200 times				
Celery Spinach	Striped flea beetle			1,200 times	21 days	-		
	Aphids			1,000 times				
	Aphids			1,000 times				
Eggplant (open-field) (green-house)	Large 28-spotted lady beetle			1,000 - 2,000 times	3 days	3 times		
	Spider mites			1,000 times				
	Aphids			1,000 times				
Tomato Sweet pepper	Large 28-spotted lady beetle			1,000 - 2,000 times	7 days	2 times		
	Spider mites			1,000 times				
	Aphids	1,000 - 2,000 times						
Cucumber	Large 28-spotted lady beetle	1,000 times	10 days	-				
	Spider mites	1,000 - 2,000 times						
	Aphids	1,000 times						
Watermelon Oriental pickling melon Squash Oriental melon	Spider mites	1,000 - 2,000 times	3 days	4 times				
	Garden springtail	700 times						
	Aphids	1,000 times						

Classification (Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrations or Dose rate	Pre-harvesting interval or Time of application.	Maximum frequency within one cropping
E - 7	Diazinon	Onion	Aphids	1,000 times	21 days	2 times
		Heleish onion	Onion thrips Stone leaf miner	700 - 1,200 times 1,000 - 2,000 times		
		Potato	Aphids Large 28-spotted lady beetle	1,000 times		
E - 8	Beziphon (Dimethoate- Fenraterate)	Strap bean	Aphids	1,000 - 2,000 times	7 days	3 times
		Cardan pea	Spider mites	1,000 - 2,000 times		
		Cabbage	Common cabbageworm Diamondback Aphids Cabbage armyworm	1,000 - 2,000 times		
E - 9	Supracide (DMT)	C.cabbage		1,000 - 2,000 times	14 days	8 times
		Radish			35 days	
		C.Cabbage Turnip Raddish Tomato Cucumber Eggplant	Aphids Common cabbageworm Greenhouse whitefly	1,000 - 2,000 times 1,000 - 1,500 times	14 days -	
E - 10	Kelthane (dicofoz)	Strawberry	Spider mites	1,500 - 2,000 times	3 days previous day	2 times
		Cucumber			14 days	
		Tomato Sweet pepper Watermelon Melon Oriental melon Squash Oriental pickling melon Garden pea Kidney bean			3 days	
E - 11	Adion (permethrin)	Cucumber	Greenhouse whitefly	2,000 times	previous day	3 times
		Tomato Eggplant Cabbage	Common cabbageworm Diamondback Aphids Cabbage armyworm Cabbage looper		3 days	

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
E - 12	Avar (chlorobenzilate)	Tomato	Spider mites	1,000 times	3 days	2 times
		Sweet pepper			2 days	
		Watermelon			14 days	
		Squash			previous day	
		Oriental pickling melon				
		Oriental melon				
		Melon				
		Cucumber				
		Eggplant				
		Kidney bean				
		Garden pea				
WP - 1	Orctran (Acephate)	Cabbage	Cabbage armyworm Common cutworm Cabbage looper Common cabbageworm Diamondback Aphids	1,000 - 1,500 times	7 days	
		C. cabbage	Cabbage armyworm Common cutworm Cabbage sawfly	1,000 - 2,000 times		
		Radish	Cabbage armyworm Cabbage webworm Cabbage sawfly	1,000 - 1,500 times	14 days	3 times
			Common cabbageworm Diamondback Aphids	1,000 - 2,000 times		
		Tomato	Aphids			
		Eggplant	Aphids Thrips			
		Potato	Common cutworm Large 28-spotted lady beetle Cabbage armyworm Potato tuberworm Aphids	1,000 times	7 days	5 times
		Sugarbeet	Cabbage armyworm Beet leafminer	1,000 - 1,500 times		
				1,000 times	45 days	3 times
		WP - 2	Lannate (fenitrothion)	Cabbage	Aphids Cabbage looper Diamondback Cabbage armyworm Common cutworm	
C. cabbage	Common cabbageworm Diamondback Cabbage armyworm Aphids			1,000 - 2,000 times	14 days	2 times

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting Interval or Time of application	Maximum frequency within one cropping
WP - 2	Lannate (methomyl)	Sweet potato (Open-field)	Oriental tobacco budworm	1,000 - 2,000 times	14 days	4 times
		Soybean	Common cutworm			
			Soybean pod borer			
			Lutebean pod borer			
			Plant bugs			
		Radish	Common cabbageworm			
			Diamondback			
			Aphids			
			Cabbage webworm			
		Onion	Onion thrips			
		Sweet potato	Common cutworm			
		Sugar beet	Sweetpotato leaf worm			
WP - 3	Rakusap (Fenvalerate- Malathion)	Potato	Cabbage armyworm	1,000 times	7 days	5 times
		Strawberry	Cabbage armyworm			
			Flea beetle			
			Potato tuberworm			
			Strawberry bud nematode			
			Root lesion nematodes			
			Beetles			
		Cabbage	Common cabbageworm			
			Diamondback			
			Aphids			
		C. cabbage	Cabbage armyworm			
			Cabbage looper			
	Common cabbageworm					
	Diamondback					
	Aphids					
Eggplant	Cabbage armyworm					
	Greenhouse whitefly					
Radish	Aphids					
	Common cabbageworm					
	Diamondback					
	Aphids					
	Cabbage armyworm					
WP - 4	Ocedin (feroxatin oxide)	Chrysanthemum Rose Carnation	Spider mites	1,000 times	-	-
C - 1	Nekriton (DEP)	Cabbage	Cutworms	1 - 3 kg/10a	14 days	6 times
		Cauliflower	Black cutworm (larva)			
		Radish	Common cutworm (larva)		21 days	2 times
		Turnip	Common cutworm (larva)		30 days	

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping		
G - 1	Nedivron (DBP)	Onion	Cutworms Black cutworm (Larva) Common cutworm (Larva)	1 - 3 kg/10a	45 days	6 times		
		Potato						
		Sweet potato						
		Faro						
		G - 2	Ekarin TD	Cabbage	Aphids	3 - 6 kg/10a		
				C. cabbage	Striped flea beetle	1 - 2 g/transplanting/3 hill) 3 - 6 kg/10a (direct planting)		
				Radish	Aphids			
				welsh onion	Striped flea beetle	3 - 4 kg/10a	Seedling or transplanting time	
					Bulb mite	3 kg/10a		
				Onion	Stone leek leafminer			
					Onion maggot			
					Seedcorn maggot			
	Bulb mite			4 kg/10a	Seedling or transplanting time	1 time		
	Aphids							
	Bulb mite							
G - 3	Diazinon	Rakkvo	Aphids	2 - 4 kg/10a				
		Seggplant	Spider mites Large 28-spotted lady beetle (Larva)					
		Tomato	Aphids	3 - 6 kg/10a	Transplanting time			
			Leafminer					
		Cucumber	Aphids	2.5 - 5 kg/10a				
			Thrips					
		Watermelon	Aphids	3 - 6 kg/10a (10 - 20 g/1 hill)				
			Spider mites					
		Mitsuba	Leafhoppers	5 kg/10a	90 days	3 times		
		East Indian lotus (Lotus root)	Aphids	2 - 4 kg/10a				
			Rice root worm	4 kg/10a	planting time			
		Potato	Aphids	4 kg/10a				
			Solanum beetle					
		Soybean	Aphids	3 - 6 kg/10a	60 days			
		Adzuki bean	Spider mites					
		Broad bean	Aphids	4 kg/10a (0.5 - 1 g/hill)				
		Snap bean						
		Garden pea	Leaf miner	3 - 5 kg/10a				
		Spinach for seeds	Aphids	3 kg/10a				
		Onion for seeds	Thrips	2 - 5 g/hill (seedling) 0.2 - 0.5 g/flower cluster (flowering time)				
G - 3	Diazinon	Sweet potato	Beetles African mole cricket	4 - 6 kg/10a	30 days	3 times		
			Cutworms		pre-planting			
		Potato	African mole cricket					
			Cutworms					

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
G - 3	Diazinon	Cabbage	Beetles	4 - 6 kg/10a	30 days	2 times (soil incorporation)
		Cauliflower	African mole cricket			
		Lettuce	Cubovms			
			African mole cricket			
		C. cabbage	Cubovms			
			Beetles			
		Tomato	Beetles			
			African mole cricket			
		Sweet pepper	Diamoriback			
			Common cabbageworm			
		Watermelon	Striped flea beetle			
			Beetles			
		Squash	African mole cricket			
			Cubovms			
		Melon	Beetles			
African mole cricket						
Oriental melon	Cubovms					
	Beetles					
Cucumber	African mole cricket					
	Cubovms					
Eggplant	Beetles					
	African mole cricket					
open field greenhouse	Cubovms					
	Beetles					
Radish	African mole cricket					
	Cubovms					
Pulses	Beetles					
	African mole cricket					
Welsh onion	Cubovms					
	Beetles					
Onion	Seedcorn meggot					
	Onion meggot					
G - 4	Di-Syston (diazulfoton)	Cabbage	Aphids	3 - 5 kg/10a	sowing or planting	1 time (soil incorporation)
		C. cabbage	Aphids			
		Radish	Striped flea beetle			
			Aphids			
		Welsh onion	Striped flea beetle			
			Bulb mite			
		Onion	Stone leaf leathner			
			Onion meggot			
		Raskvo	Seedcorn meggot			
			Bulb mite			

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping	
G - 4	Dt-Synton (disulfoton)	Eggplant	Aphids Spider mites Large 28-spotted lady beetle	2 - 4 kg/10a	transplanting	1 time	
		Tomato	Aphids Leaf miner	3 - 6 kg/10a			
		Cucumber	Aphids Thrips	2.5 - 5 kg/10a			
		Watermelon	Aphids Spider mites	3 - 6 kg/10a (10 - 20 g/hill)	90 days	3 times	
		Mitsuba	Leafhopper (Grass)	5 kg/10a			
		Potato	Aphids Solanum beetle	4 kg/10a			
		East Indian lotus	Aphids Rice root worm	2 - 4 kg/10a 4 kg/10a	planting	1 time	
		Soybean	Aphids Spider mites	3 - 6 kg/10a			
		Azuki bean	Aphids	4 kg/10a	60 days		
		Broad bean	Wireworm	(0.5 - 1 g/hill)			
		Kidney bean	Aphids	6 - 9 kg/10a			
		Sugar cane	Aphids	3 kg/10a	planting		
		Spinach for seed production	Thrips	2 - 5 g/hill (bolting)			
		Onion for seed production		0.2 - 0.5 g/hill (after flowering)			



3. Fungicides and Bacteriocides

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
WP - 7	Maneb Dithen M (maneb)	Cucumber	Anthracoese	400 - 650 times	previous day	3 times
		Watermelon	Downy mildew		30 days	
		Melon	Gummy stem blight		14 days	
		Oriental melon	Early blight		30 days	
		Squash	Late blight		45 days	
		Tomato	Leaf spot		21 days	
			Anthracnose		7 days	
			Alternaria leaf spot		14 days	
			Downy mildew		21 days	
			Late blight		7 days	
			Alternaria leaf spot		14 days	
			Downy mildew		30 days	
			Alternaria leaf spot		30 days	
			Rust		30 days	
			Early blight		30 days	
	Black spot	30 days				
	Rust	30 days				
	Anthracnose	30 days				
	Rust	30 days				
	Zonate leaf spot	30 days				
	Rust	30 days				
	Anthracnose	30 days				
WP - 8	Dithane or Dithar (zineb)	Watermelon	Downy mildew	400 - 650 times	30 days	3 times
		Melon	Gummy stem blight.		45 days	
		Oriental melon	Anthracoese		30 days	
		Squash	Downy mildew		45 days	
		Cabbage	Downy mildew		30 days	
			Leaf spot		45 days	
			Alternaria leaf spot		7 days	
			Alternaria leaf spot		21 days	
			Late blight		14 days	
			Downy mildew		14 days	
			Alternaria leaf spot		14 days	
			Rust		14 days	
			Downy mildew		14 days	
			Alternaria leaf spot		14 days	
			Rust		14 days	
	Late blight	14 days				
	Gray leaf spot	14 days				
	Early leaf spot	14 days				
	Anthracnose	14 days				
	Downy mildew	14 days				
	Gummy stem blight	14 days				
	Cucumber	Anthracnose	14 days			
	Downy mildew	14 days				
	Gummy stem blight	14 days				
		previous day	3 times			

Classification ( Code No. )	Names of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping			
WP - 8	Dithane or Dipher (zineb)	Potato	Late blight Early blight Rust	400 - 650 times	14 days	4 times			
		Kidney bean	Anthraco-nose		21 days				
		Adzuki bean	Rust		30 days	3 times			
		Broad bean	Anthraco-nose						
		Garden pea	Rust						
			Zonate leaf spot						
WP - 9	Ziman-Dithane (mancozeb)	Watermelon	Anthraco-nose	400 - 650 times	30 days	3 times			
		Melon	Downy mildew						
		Oriental melon	Phytophthora rot						
		Squash	Gummy stem blight						
		C.Cabbage	Downy mildew						
			Leaf spot						
		Walsh onion	Alternaria leaf spot						
			Downy mildew						
		Onion	Rust						
			Alternaria leaf spot						
		Tomato	Rust				Alternaria leaf spot	7 days	5 times
			Alternaria leaf spot						
			Gray mold neck rot						
			Botrytis spp						
			Late blight						
			Leaf mold						
		Eggplant (Open field) Cucumber	Anthraco-nose				400 - 650 times	previous day	3 times
			Downy mildew						
			Phytophthora melonia						
			Scab						
Gummy stem blight									
Late blight									
Early blight									
Anthraco-nose									
Rust									
Zonate leaf spot									
Potato	Kidney bean	Broad bean	Rust	30 days	3 times				
						Sugar beet	Cercospora leaf spot	45 days	4 times
							Late blight	14 days	7 times
						WP - 10	Green Dithane M (maneb) manganese ethylene- bisdithiocarbamate	Potato	Late blight Early blight
400 - 600 times (200 - 300 l/pack)									

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping			
WP - 11	Daconil TPN (chlorothalonil)	Cucumber	Downy mildew Anthracnose Scab Powdery mildew Grey mold	600 - 800 times	at greenhouse 3 days at open field 2 days	4 times 7 times			
		Watermelon	Anthracnose Downy mildew Gummy stem blight		3 days	5 times			
		Melon	Downy mildew Gummy stem blight Powdery mildew			14 days	3 times at greenhouse 2 times at open field		
		Oriental melon	Downy mildew Gummy stem blight			at greenhouse 3 days at open field 2 days	4 times 4 times at greenhouse 4 times at open field		
		Squash	Downy mildew Powdery mildew				4 times 7 times 5 times		
		Tomato	Late blight Leaf mold Early blight			7 days	7 times		
		Sweet pepper	Phytophthora blight			14 days	3 times		
		Eggplant	Black rot Grey mold						
		Potato	Late blight						
		Onion	Downy mildew Gray mold neck rot Alternaria leaf spot Grey mold (Botrytis spp.) Alternaria leaf spot						
		C.cabbage	Leaf spot Downy mildew						
		Cabbage	Downy mildew Alternaria leaf spot						
		Lettuce	Alternaria leaf spot Bottom rot						
		Celery	Early blight						
		Asparagus	Stem blight Early blight						
		Chinese yam	Cyathosporium discolor Anthracnose						
		WP - 12	Bifolatan (captanfol) tetrahydrophthalimide		Garlic	Stem blight	600 times	7 days	6 times
					Ginger	Rhizoctania solani	500 times	14 days	7 times
					Peanut	Leaf spot	600 - 800 times		4 times
					Sugar beat	Cercospora leaf spot Leaf blight	500 - 800 times 500 times	30 days	3 times
Tomato	Leaf mold Early blight Late blight			800 - 1,000 times	previous day	-			

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
WP - 12	Difolatan (captanfol) tetrahydrophthalimide	Watermelon	Downy mildew	800 - 1,000 times	previous day	-
		Cucumber	Anthracoese			
		Melon	Gummy stem blight			
		Squash	Scab			
		Oriental melon				
		Oriental pickling melon				
		Cucumber	Phytophthora melonis (rot)	1,500 times (3 l/m <sup>2</sup> )	pre or after seeding, after true leaf	6 times
		Potato	Late blight	800 - 1,000 times	7 days	5 times
		Strawberry	Gray mold (Botrytis cinerea)	700 - 1,000 times	previous day	4 times
		Cabbage	Anthracoese	800 times	14 days	6 times
			Leaf spot	800 times		
		Radish	Anthracoese	800 times	30 days	-
		Turnip	Leaf spot	800 - 1,500 times	7 days	
		Onion	Gray mold (Botrytis spp)	600 - 800 times	-	
		Asparagus	Stem blight	500 - 800 times		
WP - 13	Orthocide (captan)	C. cabbage	Alternaria leaf spot	600 - 1,200 times	7 days	-
		Tomato	Leaf spot			
		Cucumber	Late blight	400 - 800 times	previous day	-
			Anthracoese	600 times		
		Melon	Downy mildew			
		Oriental melon	Anthracoese	400 - 800 times	14 days	5 times
		Watermelon				
		Oriental pickling melon	Downy mildew	600 times		
		Squash				
		Onion	Gray mold (Botrytis spp)		7 days	-
		Celery	Late blight		21 days	3 times
		Strawberry	Gray mold (botrytis spp)	800 times	30 days	2 times
		Kidney bean	Anthracoese	600 - 1,200 times	45 days	1 time
		Tomato				
		Cucumber		(1) 0.2 - 0.4 % of seed weight (dusting)	(1) for seed	-
Sweet pepper		(2) 800 times watering (2 l/m <sup>2</sup> )	(2) after germination 2 or 3 main leaf stage	5 times		
Eggplant	Dumping-off					
Melon						
Oriental melon						
Watermelon						
Oriental pickling melon						
Squash						
Lotus root	Rhizome rot	3 - 5 Kg/10a	before planting	1 time		
Ginger	Root rot	500 - 800 times	90 days			
		2 % of rhizome weight				
		500 - 800 times				
		100 - 300 times		3 times		

\* for soil borne diseases

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping	
WP - 14	Kocide copper hydroxide	Cucumber	Bacterial spot Downy mildew	1,000 times (10 g/10 l water)	avoid applying in the later half of growing period or under the high temperature.		
		Tomato Potato	Late blight	500 - 500 times (17 - 20 g/10 l water)			
WP - 15	Topsin M (ethiohamantemethyl)	Cucumber	Anthraxnose Sclerotinia rot Scab Gummy stem blight Gray mold Powdery mildew	1,500 - 2,000 times (6.7 - 5 g/10 l )	previous day		
		Tomato	Leaf blight				
		Eggplant	Stem rot Gray mold Black rot Stem rot				
		Watermelon	Black rot				
		Melon	Stem rot				
		Sweet pepper	Anthraxnose Gummy stem blight Powdery mildew				
		C.cabbage	Sclerotinia rot				
		Lettuce	Leaf spot Stem blight Gray mold	1,500 times (6.7 g/10 l ) 1,500 - 2,000 times (6.7 - 5 g/10 l )	7 days	2 times	
		Celery	Early blight	1,500 times (6.7 g/10 l )			
		Strawberry	Powdery mildew	1,000 times (10 g/10 l )	before cool storage	whole plant soaking for 5 min. root soaking for 1 hr.	3 times
		Onion	Fusarium wilt	500 - 500 times (33.3 - 20 g/10 l )	at provisional transplanting		
		Potato	Gray mold neck rot	500 - 1,000 times (20 - 10 g/10 l )	at provisional trans- planting and during main- ing seedling		watering 3 l/m <sup>2</sup>
		Sweet potato	Stem rot	1,000 - 1,500 times (10 - 6.7 g/10 l )	previous day		
		Kidney bean	Black rot	200 - 500 times (50 - 20 g/10 l )	7 days	5 times	soaking of seed root seedling stem for 20- 30 min.
		Garden pea	Stem rot Angular leaf spot Mycosphaerella blight Leaf and pot spot	700 - 1,000 times (14.3 - 10 g/10 l ) 1,500 - 2,000 times (6.7 - 5 g/10 l )	pre-seeding	1 time soaking of seed root for 20 - 30 min.	4 times

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping	
WP - 15	Topein M (thiophanate-methyl)	Peanut	Leaf spot Brown leaf spot Gray mold Scab Stem rot	1,500 - 2,000 times (6.7 - 5 g/10 l)	7 days	4 times	
		Soybean	Stem rot	1,500 times (6.7 g/10 l)	14 days		
		Adzuki bean	Purple speck of seed	700 - 1,000 times (14.3 - 10 g/10 l)			
		Soybean	Purple speck of seed	1,000 - 1,500 times (10 - 6.7 g/10 l)	pre-seeding		
		Chinese yam	Cylindrosporium discolorous Anthracnose	0.5 % of seed weight 800 times (12.5 g/10 l)	7 days	5 times	
		Sugar beet	Cercospora leaf spot	2,000 - 3,000 times (6.7 - 5 g/10 l)			
		Potato	Black scurf	0.3 - 0.4 % of seed weight	before seeding	1 time	
		Sweet potato	Black rot	500 - 1,000 times 0.4 % of seed weight			
		Cucumber	Sclerotinia rot Gray mold Anthracnose Scab	2,000 - 3,000 times	previous day	3 times	
		Tomato	Fusarium wilt	1,000 times	between pre-transplanting and 1 month after trans- planting		
WP - 16	Benlate (benzyl)	Eggplant	Leaf mold Gray mold Black rot Gray mold	2,000 - 3,000 times	previous day	5 times	
		Asparagus	Stem blight	2,000 times	after harvesting 7 days	3 times	
		Cabbage	Sclerotinia rot	2,000 - 3,000 times	previous day	5 times	
		Onion	Gray mold neck rot Fusarium basal rot	20 times 500 times	pre-transplanting pre-seeding	6 times	
		Rakkyo	Gummy stem blight	2,000 times	previous day	1 time	
		Watermelon	Anthracnose	2,000 - 3,000 times	previous day	4 times	
		Lettuce	Stem rot Gray mold	500 times	14 days	3 times	
		Strawberry	Fusarium wilt	500 times	before provisional trans- planting	3 times	
		Sugar beet	Cercospora wilt	2,000 - 4,000 times	at provisional trans- planting and during raising seedling		
		Kidney bean	Angular leaf spot	1,000 - 1,500 times	21 days		
		Peanut	Brown leaf spot	2,000 - 3,000 times	7 days	4 times	
		Soybean	Purple speck of seed	1,000 - 2,000 times	14 days		
		Soybean	Purple speck of seed	0.2 - 0.4 % of dry seed weight (seed coating)	before seeding	1 time	
		WP - 17	Benlate - T for seed disinfection				

Classification (Code No. )	Name of Chemical	Applicable Crops	Insect & diseases effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping		
WP - 17	Benlate - T for seed disinfection	Cucumber	Fusarium wilt Gummy stem blight Damping-off	20 times (soak for 30 min) 0.4 % of dry seed weight (seed dusting) 200 times (soak for 30 min) 0.4 % of dry seed weight (seed dusting)	before seeding	1 time		
		Tomato	Fusarium wilt	20 times (soak the stem for 1 min) 200 times (soak the stem for 30 min) 200 times (soak seed root for 1 min) 0.4 - 0.5 % of seed potato weight (seed dusting)				
		Watermelon Squash	Black rot	20 times (soak the stem for 1 min) 200 times (soak the stem for 30 min)	before planting	1 time		
		Sweet potato	Black rot	20 times (soak seed root for 1 min) (seed dusting)				
		Taro	Black rot	20 times (soak for 10 min) 200 times (soak for 24 hr)	previous day	6 times		
		Sugar cane	Smut	1,000 - 2,000 times				
		WP - 18	Sumilex (procymidone)	Rakkyo	Fusarium basal rot	1,000 - 2,000 times	7 days	5 times
				Cucumber	Sclerotinia rot	1,000 - 2,000 times	14 days	3 times
				Eggplant	Gray mold		3 days	
				Sweet pepper	Gray mold neck rot	1,000 times	previous day	5 times
Lettuce	Gray mold			3 days				
Celery	Stem rot			2,000 times	3 days	3 times		
Tomato	Gray mold							
Onion	Gray mold			1,000 - 2,000 times	21 days	4 times		
Strawberry	Gray mold (Botrytis cinerea)							
WP - 19	Karathane WD 25 Tabacco			Kidney bean	Stem rot	1,000 times 1,000 times	avoid application at more than 35 °C	5 times
		Soybean	Gray mold					
WP - 20	Polyoxin AL	Adzuki bean	Stem rot	1,000 - 1,500 times	previous day	5 times		
		Potato	Gray mold					
		Rose	Powdery mildew	1,000 times (10g/10 l) 1,000 - 1,200 times (10 - 8.3 g)	-	avoid application at more than 35 °C	5 times	
		Tabacco	Powdery mildew	500 times				
		Cucumber	Scab Sclerotinia rot Gray mold Powdery mildew	1,000 times	previous day	5 times		
		Melon	Leaf mold	500 times				
		Tomato	Early blight Gray mold	500 times	1,000 times 500 times	5 times		
		Strawberry	Powdery mildew Gray mold (Botrytis cinerea)	1,000 times 500 times				

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
WP - 20	Polyoxin AL	Welsh onion	Alternaria leaf spot	1,000 times	30 days	3 times
		Carrot	Leaf blight	500 times		5 times
WP - 21	Merck-Dalon K (dithiuron)	Cucumber	Bacterial spot	500 times	previous day	5 times
			Downy mildew			
			Powdery mildew			
		Tomato	Anthracnose	500 times	14 days	4 times
			Scab			
			Phytophthora rot			
		Squash	Leaf mold	500 times	30 days	3 times
			Late blight			
			Early blight			
		C. cabbage	Downy mildew	500 times	14 days	4 times
			Powdery mildew			
			Anthracnose			
		WP - 22	Bayleton (triadimefon)	Watermelon	Phytophthora rot	1,000 - 1,500 times
Bacterial soft rot						
Squash	Alternaria leaf spot			500 times	14 days	4 times
	Leaf spot					
Eggplant	Bacterial soft rot			500 - 1,000 times	30 days	-
	Gray mold neck rot					
	Late blight					
Konnyaku	Potato	Soft rot	500 - 1,000 times	500 times		
	Konnyaku					
WP - 23	Bordeaux 2 (copper sulfate basic)	Watermelon	Powdery mildew	2,000 times	previous day	4 times
			Squash			
		Melon	Rust	2,000 - 3,000 times	14 days	3 times
			Sweet pepper			
		C. cabbage	Downy mildew	400 - 600 times	after 6 - 10 leaf age	-
			Bacterial spot			
		Lettuce	Bacterial soft rot	500 times	-	-
			Bacterial soft rot			
		Carrot	Bacterial spot	500 - 800 times	-	-
			Bacterial soft rot			
		Konnyaku	Leaf blight	400 - 600 times	-	-
			Late blight			
		Konnyaku	Early blight	400 - 600 times	-	-
Late blight						
Konnyaku	Late blight	400 times	-	-		
	Leaf blight					
Konnyaku	Soft rot	500 - 800 times	-	-		
	Soft rot					



Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
E - 15	Sanyol (DBEBC)	Cucumber	Powdery mildew Downy mildew	500 times (20 cc/10 l water)		
		Strawberry		500 - 1,000 times (20 - 10 cc/10 l)		
		Eggplant	Powdery mildew	700 times (15 cc/10 l)		
		Garden pea		500 times (20 cc/10 l)		
E - 16	Yonepon (copper oxydihydroxyl sulfonate)	Cucumber	Powdery mildew Downy mildew Bacterial spot	500 times	previous day	4 times
		Melon	Powdery mildew Downy mildew			
		Korivyaku	Soft rot Leaf blight			
C - 9	Thiuram 80 (thiram)	Carrot Sugar beet Pluses	Damping-off	2 - 5 g/l kg of seed wt.	pre-sowing	1 time
D - 1	Pensoil (etrifiazole)	Korivyaku	Root rot	10 - 20 kg/10a	pre-planting or earthing up	2 times
D - 2	Validacin (validamycin A)	Cinger	Rhizoctonia solani	3 - 4 kg/10a	14 days	4 times (dusting)
		Potato		0.3% of seed potato wt./10a	pre-planting	1 time (dust coating)
		Radish		10 - 20 kg/10a	14 days	4 times (plant foot application)

4. Insecticides - Fungicides Combination

Classification ( Code ID. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting Interval or Time of application	Maximum frequency within one cropping
WP - 26	Morestan (quromethionate)	Cucumber	Powdery mildew Greenhouse whitefly Powdery mildew Broad mite Greenhouse whitefly	2,000 - 4,000 times 1,500 - 2,000 times 2,000 - 3,000 times 2,000 times 1,500 - 2,000 times	previous day	10 times
		Eggplant				
		Tomato				
		Watermelon				
		Melon				
		Squash				
		Oriental melon				
		Sweet pepper				
		Strawberry				
		Cucumber				
WP - 27	* Fumigation at greenhouse	Sweet pepper	Powdery mildew	2,000 - 3,000 times 2,000 - 4,000 times 20 g/100m <sup>3</sup> (50m x 2m) 50 - 100 g/10a	Previous day 3 days previous day	4 times 10 times smoking mist fumigation
		Cucumber				
		Watermelon	Spider mites Powdery mildew	1,000 - 1,500 times	7 days	5 times

5. Nematocides and Fumigants

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
E - 20	Chloropicrin	Cruciferous veg. Cucumber Melon Courd family Tomato Sweet pepper Eggplant Spinach Lettuce Celery Asparagus Carrot Edible burdock Strawberry Pulses Maize Potato Sweet potato Taro Chinese yam Koroyaku Sugar beet Welsh onion Onion	Damping-off Fusarium wilt Southern blight Root rot Nematodes Wireworms Cutworms	10 - 15 cc/hill	nursery bed preparation or compost incorporation	1 time
E - 21	Sanhure (methyl bromide)	Cucumber Melon Courd family Cruciferous veg. Lettuce Tomato Eggplant Strawberry Potato Sweet potato Taro Chinese yam Koroyaku Pulses	Damping-off Southern blight Black rot Bacterial wilt Fusarium wilt Phytophthora rot Red stolon Nematodes African mole cricket Cutworms Annual weed	200 - 400 g/m <sup>2</sup> (bed soil)	more than 72 hours (fumigation)	
		Koroyaku Cucumber Watermelon	Dry rot Cucumber green mottle mosaic virus Cucumber (Watermelon) mosaic virus	15 - 30 g/m <sup>2</sup> (open field) 5 g/m <sup>2</sup> (for nematodes) 15 - 30 g/m <sup>2</sup> (house)		
				2 - 2.5 cc/hill (20 - 25 l/10a)	field preparation	
				20 - 50 g/m <sup>2</sup> 10 - 20 g/m <sup>2</sup> (water culture)		

6. Herbicides

Classification ( Code NO. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Doses rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
E - 30	Treflanocide (trifluralin)	C. cabbage	annual weed in upland field (except; Asiatic dayflower, Cyperaceae weed, Cruciferae weed and Compositae weed)	200 - 300 cc/10a (eur)	pre or after setting	* soil surface treatment (eur) soil incorporation (inc)  1 time
		Carrot		150 - 300 cc/10a (inc)	pre-sowing	
		Soybean		200 - 300 cc/10a (eur)	after sowing	
		Redish		150 - 300 cc/10a (inc)	pre-sowing	
		Melon		200 - 300 cc/10a (eur)	45 days	
		Eggplant		200 - 300 cc/10a (eur)	pre-sowing	
		Lettuce		200 - 300 cc/10a (eur)	pre or after setting	
		Welsh onion			after setting	
		Edible burdock				
		Sweet potato				
		Taro				
		Korriyaku				
		Peanut				
Onion						
Cabbage						
Rape						
Tomato						
Chili						
Watermelon						
W* - 30	Lorox (linuron)	Kidney bean	annual weed in upland field	100 - 150 g/10a	after sowing	
		Soybean				
		Peanut				
		Maize				
		Carrot				
		Potato				
		Chinese yam				
		Taro				
		Korriyaku				
		Asparagus				
Sweet potato						
Chinese drive						
G - 15	Treflanocide (trifluralin)	Cabbage	annual weed in upland field (except; Asiatic dayflower, Cyperaceae weed, cruciferae weed and Compositae weed)	4 - 6 kg/10a (eur)	pre-setting	1 time
		C. cabbage		3 - 5 kg/10a (inc)		
				4 - 6 kg/10a (eur)		
				3 - 5 kg/10a		
		Watermelon		2 - 4 kg/10a (eur)	after sowing & pre-setting	
		Melon		4 - 5 kg/10a (eur)	pre-setting 45 days	
		Eggplant				
		Tomato		4 - 5 kg/10a (eur)	pre or after setting	
				3 - 4 kg/10a (inc)	pre-setting	

Classification ( Code No. )	Name of Chemical	Applicable Crops	Insect & disease effective	Concentrates or Dose rate	Pre-harvesting interval or Time of application	Maximum frequency within one cropping
G - 15	Thifluralin ( trifluralin )	Onion	annual weed in upland field (except; Asiatic dayflower, Cyperaceous weed, Cruciferous weed and Compositae weed)	4 - 5 kg/10a (sur)	75 days	2 times
		Chinese yam		2 - 4 kg/10a (inc)	pre-planting	
		Taro		4 - 6 kg/10a (sur)	30 days after setting	1 time
		Carrot		(inc)	pre-planting	
		Sweet potato		(sur)	after setting	
		Potato		3 - 5 kg/10a (inc)	after sowing	
				3 - 4 kg/10a (sur)	pre-sowing	
				4 - 5 kg/10a (sur)	after setting	
					between after setting and pre-germination	
				4 - 6 kg/10a (sur)	after sowing	
				3 - 6 kg/10a (sur)		
				2 - 3 kg/10a (inc)	pre-sowing	
	4 - 6 kg/10a (sur)	after setting or plugging	2 times			

Conventional Agrochemicals which are No Longer in Japan

1. parathion (Folidol)	Insecticides
2. DDT	ditto
3. BHC	ditto
4. heptachlor	ditto
5. aldrin	ditto
6. endrin	ditto
7. dieldrin	ditto
8. fluoroacetamide (Fussol)	ditto
9. lead arsenate (Salvator)	ditto
10. phenylmercury acetate (PMA)	Fungicides
11. naphthylacetic acid (NAA)	Plant growth regulator
12. fenoprop (2,4,5 - TP)	ditto

A CHART OF DILUTION OF CHEMICALS

Magnification (times)	Concentration (%)	Amount of chemical mixed			
		per 1 liter (g or cc)	per 2 liter (g or cc)	per 5 liter (g or cc)	per 10 liter (g or cc)
10	10.000	100.000	200.000	500.000	1000.0
20	5.000	50.000	100.000	250.000	500.0
50	2.000	20.000	40.000	100.000	200.0
80	1.250	12.500	25.000	62.500	125.0
100	1.000	10.000	20.000	50.000	100.0
150	0.666	6.666	13.333	33.333	66.6
200	0.500	5.000	10.000	25.000	50.0
250	0.400	4.000	8.000	20.000	40.0
300	0.333	3.333	6.666	16.666	33.3
350	0.286	2.857	5.714	14.285	28.6
400	0.250	2.500	5.000	12.500	25.0
450	0.222	2.222	4.444	11.111	22.2
500	0.200	2.000	4.000	10.000	20.0
550	0.182	1.818	3.636	9.090	18.2
600	0.166	1.666	3.333	8.333	16.6
650	0.154	1.538	3.076	7.692	15.4
700	0.143	1.428	2.857	7.142	14.3
750	0.133	1.333	2.666	6.666	13.3
800	0.125	1.250	2.500	6.250	12.5
850	0.118	1.176	2.352	5.882	11.8
900	0.111	1.111	2.222	5.555	11.1
950	0.105	1.052	2.105	5.263	10.5
1,000	0.100	1.000	2.000	5.000	10.0
1,200	0.083	0.833	1.666	4.166	8.3
1,400	0.071	0.714	1.428	3.571	7.1
1,500	0.067	0.666	1.333	3.333	6.7
1,600	0.063	0.625	1.250	3.125	6.3
2,000	0.050	0.500	1.000	2.500	5.0
2,500	0.040	0.400	0.800	2.000	4.0
3,000	0.033	0.333	0.666	1.666	3.3
4,000	0.025	0.500	0.500	1.250	2.5
5,000	0.020	0.200	0.400	1.000	2.0

## スーダン資料（和文）

1. スーダンの農業と農業研究 1982年 月 農水省，熱帯農業研究センター  
－乾燥地農業調査報告書－ ター
2. 海外農林業開発協力国別（地域別）方針 1981年 3月 国際開発センター  
基礎調査報告書－スーダン編－
3. スーダン白ナイル河沿岸稲作開発 1977年 3月 JICA  
予備調査報告書
4. スーダンの農業 1984年 3月 国際農林業協力協会  
－現状と開発の課題－
5. スーダン事情及び日本・スーダン関係 1984年 8月 在スーダン日本国大使館  
（概況） 1985年10月
6. ハルツーム案内 1984年 5月 在スーダン日本国大使館
7. 月刊アフリカ  
続アフリカへの道(1) スーダン民主共和国 那須国男

### 食糧増産援助関係資料

1. フィリピン共和国  
食糧増産援助計画基本設計調査報告書 昭和60年12月  
国際協力事業団



スーダン資料(英文)

1. Current Agricultural Statistics:

June 1984, Statistics Section, Department of Agri. Economics, Ministry of Agriculture

2. Agricultural Situation & Outlook (Annual Report):

2'. " " " (Monthly Report):

August 1985, Department of Agri. Economics, Planning and Agri. Economics Administration, Ministry of Agriculture and Natural Resource

3. Yearbook of Agricultural Statistics:

April 1984, Statistics Division, Department of Agri. Economics, Ministry of Agriculture and Irrigation

✓ 4. Production Export and Import of Selected Agricultural Commodities in 1980 and 1982:

November 1985, The Marketing Section, Department of Agri. Economics Planning and Agri. Economics Administration, Ministry of Agriculture and Natural Resource

5. The Sudan Gezira Board, Sixteenth Annual Report & Statement of Accounts:

June 1966, The Sudan Gezira Board

6. Agricultural Research Programmes:

February 1981, Agricultural Research Corporation, Ministry of Agri. Food and Natural Resources

7. The Gezira Scheme, Past, Present & Future (1985-86):

The Sudan Gezira Board

8. Sudan Agricultural Sector Survey, Vol. I, II, III:

World Bank

9. Agricultural Services Project:

Staff Appraisal Report, August 1981, World Bank

11. The prospects, Programme and Policies  
for Economic Development - II:
12. Groundnut Production in Irrigated Verticals of the Gezira,  
Achievements and Problems:  
November 1982 H.M. Ishag et al, Agricultural Research  
Corporation
14. Agricultural Situation & Outlook, Monthly Report:  
No. 1 November 23, 1985  
Department of Agriculture Economics,  
Planning & Agricultural Economics
15. Current Agricultural Statistics (Including Data for 1980/81 & 1981/82)  
CAS VOL I, No. 4: Department of Agricultural Economics,  
Ministry of Agriculture
16. Agricultural Situation & Outlook:  
Annual Report 1984-1985  
Ministry of Agriculture and Natural Resources
17. Estimates of Area and Production of the Main Crops in Sudan for Season  
1984/1985, compared with season 1983/1984, Until the end of March, 1985:  
Ministry of Agriculture
18. SUDAN GUIDE 1984-1985: Planning & Management Consultancy, Khartoum
19. Bank of Sudan Twenty Fourth Annual Report 1983
20. The Oxford Map of SUDAN
21. FOOD AND THE SUDAN: Some facts prepared for the United Nations world  
food conference on the world food problem and  
issued by the Ministry of Agriculture, food  
and natural resources.
22. Sudan, Pricing Policies and Structural Balances Volume I  
" II  
" III
23. Test Report of Agricultural Machinery:
  1. Tractor Binder Z005 (Wc5) "WARTA"
  2. Kubota Tractor Model L245DT
  3. Hinomoto Tractor E23

## Ⅷ 参 考 資 料

1. スーダン事情及び日本，スーダン関係（概況）  
昭和60年10月，在スーダン日本国大使館
2. Agricultural Situation & Outlook No. 1 11/23 '85  
Department of Agricultural Economics  
Ministry of Agriculture and Natural Resources
3. 1986年5月10日 朝日新聞「ニュースの顔」
4. 「農薬便覧」社団法人農山漁村文化協会





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