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# EXPERIMENTAL PROCEDURES FOR GRAIN CROPS RESEARCH ON THE BRUMDEC PROJECT

**IICA/JAMAICA**

**Miscellaneous Publication #318**

**ISSN-0534-5391**

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**EXPERIMENTAL PROCEDURES FOR GRAIN CROPS  
RESEARCH ON THE BRUMDEC PROJECT.**

by

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IICA/JAMAICA

January 1982

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BLACK RIVER UPPER MBRASS DEVELOPMENT COMPANY LIMITED

EXPERIMENTAL PROCEDURE

1. EXPERIMENT Relevance of Production Factors
2. CROPS Corn and Sorghum
3. OBJECTIVES

(i) To identify the most critical production factors under the project area conditions of BRUMDFC.

(ii) To determine the effect of with-holding one practice from the complete set of basic production practices.

4. TREATMENTS

In each plot the Basic Production Package (BPP) is applied or the BPP minus one factor.

The BPP consists of: N,P,K application + Minor elements application + improved variety + optimum population density + use of insecticide/Fungicide + use of herbicide.

<u>N<sup>o</sup></u>	<u>IMPUTS</u>
1	BPP (all factors applied)
2	BPP-N (No N applied)
3	BPP-P (No P applied)
4	BPP-K (No K applied)
5	BPP-M.E (No minor elements applied)
6	BPP-I (No insecticide applied)
7	BPP-H (No herbicide applied)
8	BPP-D (Other population density)
9	V-only (No N,P,K,M.E, I or H used)

5. EXPERIMENTAL DESIGN

A randomized complete Block Design having four (4) replications.

6. PLOT SIZE

Six (6) rows, 10m long with 0.80m between rows.

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7. BASIC PRODUCTION PACKAGE

INPUTS	PFAT SOIL	WALJENS &	CASHEW CLAY
K <sub>g</sub> N/Ha	0	100	100
K <sub>g</sub> P <sub>2</sub> O <sub>5</sub> /Ha	60	80	80
K <sub>g</sub> K <sub>2</sub> O/Ha	100	100	100
Mn (Chelate 12%)/Ha	0.60	0.60	0.60
Z <sub>n</sub> (Chelate 14.2%)/Ha	0.50	0.50	0.50
Fe (Chelate 6%)/Ha	0.60	0.60	0.50
Population density (corn)	50,000	37,500	
Population density (Sorghum)	212,000	140,000	
Kg/Ha Furadan (5% a.i)	12.5		
Kg/Ha Sevin (80% a.i)	3.5		
Kg/Ha Cesaprim Combi 30	2.5		

8. CULTURAL PRACTICES8.1 Soil Preparation:

Do not over-work the soil with tillage operations. Plowing and one harrowing should be sufficient if properly done.

8.2 Ridging :

Mark the boundaries of your group of experiments, considering roads and alleys and adding about 10% to the overall length.

8.3 Marking the individual experiments:

The numbering of plots should always go from left to right, starting from the beginning of the extreme left row, place a stake. Considering the row as one side or leg (catheter) or a right angle triangle, a right angle (90°) should be constructed at the corner. A right angle triangle, with sides measuring 3, 4 and 5m long will produce perfect plots. The 3m side is marked along the ridge, 4m side across the rows and the 5m side is the hypotenuse. The direction of the side across the rows will be the base for the experimental plots. Place the stakes at the corners of each block of plots, leaving 1 or 2 blanks or unplanted rows

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between experiments and either 1 or 2m alleys between blocks.

#### 8.4 Fertilizer Application

Carefully weigh each split dose of fertilizer. Put each dose of fertilizer in a different cup and mark the level. For a more even distribution of the fertilizer along the row, in each case, take a levelled measure of the corresponding fertilizer and place half the amount of the fertilizer in the bottom of the furrow going one way and the other half should be placed in the same furrow on the way back. The fertilizer should be slightly covered with soil in the furrow.

#### 8.5 Planting

There are two possible densities for each crop. Thinning operations should be carried out when plant height reaches 10-15 cm. Because of this, it is necessary to plant about 30% more seeds than the desired population.

#### 8.6 Rows Per Plot

Except for special cases, all plots for experiments in step 1 consist of 6 rows.

#### 8.7 Border Rows

In those cases where the experimental plots consist of only 4 rows, a border row should be planted on the sides of each block having the same treatment as the adjacent plot.

#### 8.8 Soil Application of insecticide

Insecticides are applied directly in the hole with the seeds. Apply 500 gm a.i. Aldrin/ha or 600 gm a.i./ha of carbofuran (Furadan) in the holes at planting time. When possible, it is preferable to use seed coated with Furadan.

#### 8.9 Early stage insect control

In experiments other than insecticide trials, insects attacking plant at early stages can be controlled by spraying a solution of insecticide for the control of the insects.

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### 8.10 Weed Control

For conventional tillage experiments, a herbicide is applied immediately after planting.

For hand weed control, clean with a hoe within two weeks of planting and again at 45-60 days. In sites well prepared by tractor and are clean of weeds at planting, one hand weeding at 45-60 days is sufficient.

### 8.11 General Data to be recorded

1. Days to flowering

Record the number of days elapsed from planting to 50% silking.

2. Plant height

An average reading of 10 randomly selected plants in the two central rows, measuring from ground level to the top in centimetres.

3. Plants harvested

The total number of plants at harvest time in the harvested area.

4. Field Weight

The total weight of all the harvested ears, panicle, pods, etc, per plot weighed in tenths of kilograms.

5. Percentage Moisture

Record percent moisture at harvest as a mean value for each plot using a sample.

6. Diseases

Use a scale of 1 (free) to 5 (very diseased) to evaluate diseases.

7. Insects

Record damage using a scale of 1 to 5 as above.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures that the financial statements are reliable and can be audited without any discrepancies.

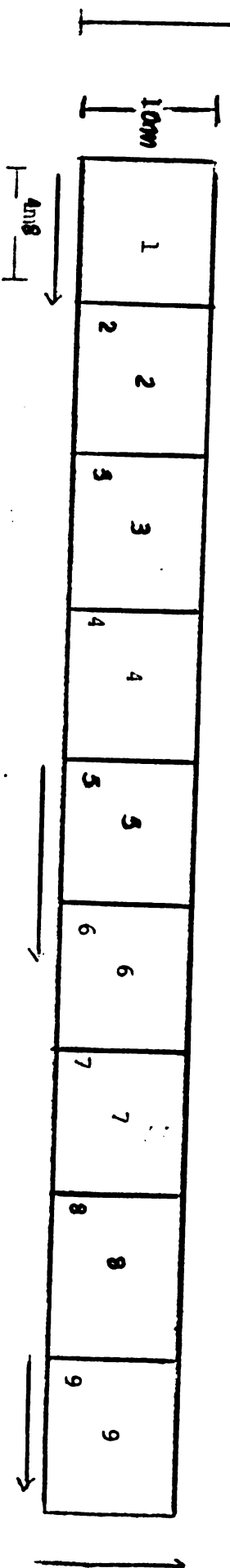
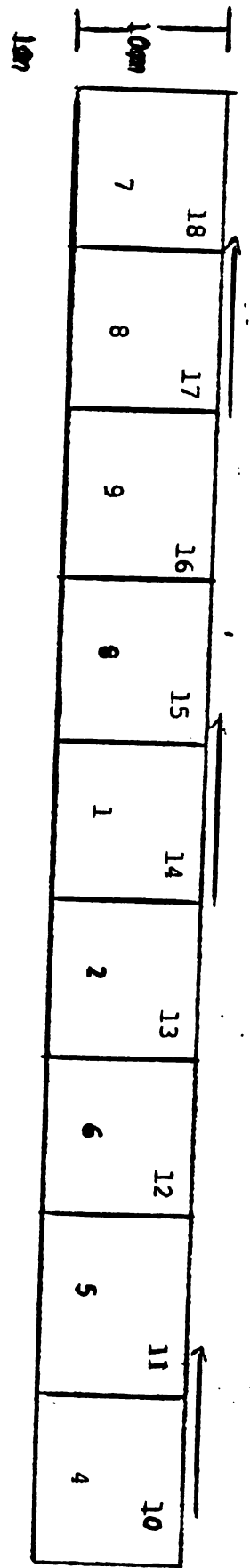
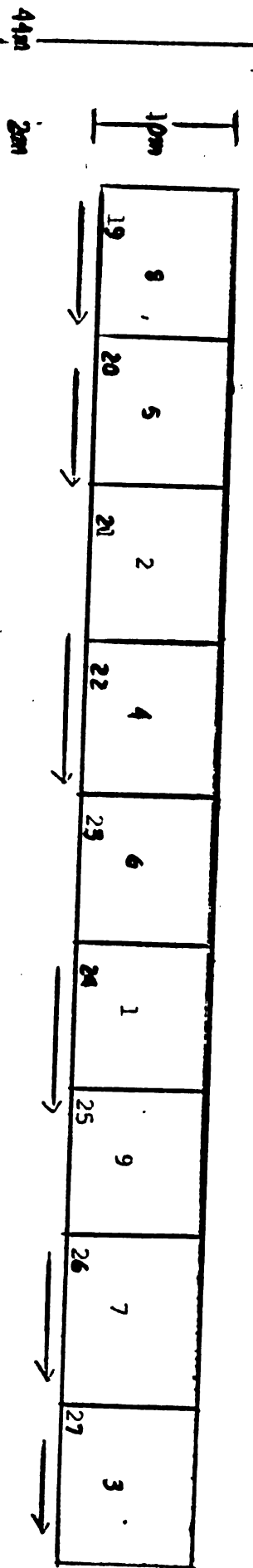
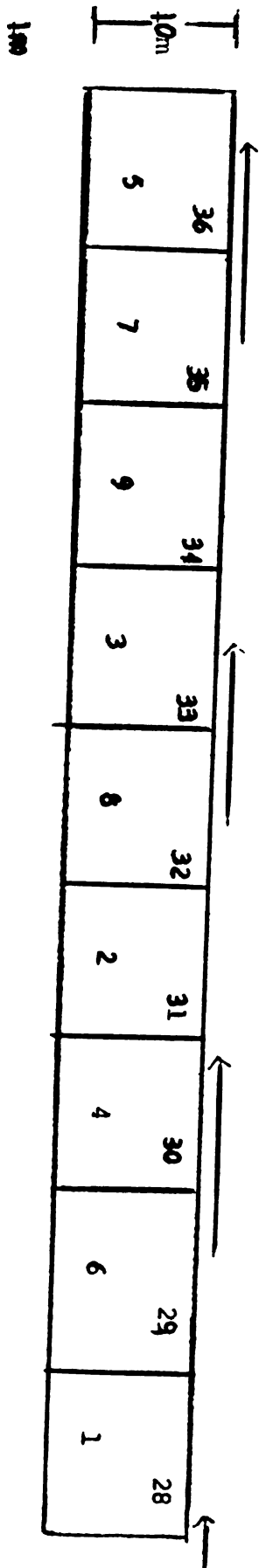
Furthermore, it is crucial to review the accounts regularly to identify any potential errors or irregularities. This proactive approach helps in preventing fraud and ensures that the business remains financially sound. The document also mentions the need for proper segregation of duties to minimize the risk of misappropriation of assets.

In addition, the document highlights the significance of maintaining up-to-date financial statements. These statements provide a clear picture of the company's financial health and are essential for making informed decisions. It is also noted that the records should be kept for a sufficient period to comply with legal requirements and for future reference.

The document concludes by reiterating the importance of transparency and accountability in financial management. It encourages the use of modern accounting software to streamline the process and reduce the risk of human error. Finally, it stresses that a strong financial foundation is key to the long-term success of any business.

Date	Particulars	Debit	Credit
2023-01-01	Balance b/d		1000
2023-01-15	Received from Mr. X	500	
2023-01-20	Paid to Mr. Y	200	
2023-02-01	Received from Mr. Z	300	
2023-02-10	Paid to Mr. A	150	
2023-02-15	Received from Mr. B	400	
2023-02-20	Paid to Mr. C	250	
2023-03-01	Received from Mr. D	600	
2023-03-10	Paid to Mr. E	350	
2023-03-15	Received from Mr. F	550	
2023-03-20	Paid to Mr. G	450	
2023-03-25	Received from Mr. H	700	
2023-03-30	Paid to Mr. I	500	
2023-04-01	Received from Mr. J	800	
2023-04-10	Paid to Mr. K	600	
2023-04-15	Received from Mr. L	900	
2023-04-20	Paid to Mr. M	750	
2023-04-25	Received from Mr. N	1000	
2023-04-30	Balance c/d		1000

FIELD PLAN - RELEVANCE OF PRODUCTION FACTORS





BASIC DATAEXPERIMENTS Relevance of Production Factors.1. CROPS

Corn and Sorghum

2. SIZE PLOT

Nine (9) treatments with four (4) replications.

CROPS	Length of rows (m)	Distance between rows (m)	Rows Per Plot	Plot surface M <sup>2</sup>	Surface per replication	Surface per experiment	Total surface with alleys
Corn	10	0.30	6	48	432	1728	1900
Sorghum	10	0.80	6	48	432	1728	1900

3. FERTILIZER APPLICATION

3.1 - Morass Peat - 152'

CROPS	Sulphate of Ammonia (21%)			Triple Super Phosphate (46%)			Muriate of Potash (60%)		
	Kg/Ha	Kg/Trial	Kg/Plot	Kg/Ha	Kg/Trial	Kg/Plot	Kg/Ha	Kg/Trial	Kg/Plot
Corn	-	-	-	130.2	22.5	0.62	170	29.2	0.81
Sorghum	-	-	-	130.2	22.5	0.62	170	29.2	0.81

\* N as Sulphate of Ammonia = 0

P<sub>2</sub>O<sub>5</sub> as triple Superphosphate = 60 Kg/HaK<sub>2</sub>O as Muriate of Potash = 100 Kg/Ha

Mn EDTA as Manganese Chelate (12%) = 0. Kg 60/Ha (foliar application)

Zn EDTA as Zinc Chelate (14.2%) = .Kg 50/Ha (foliar application)

Fe EDTA as Iron Chelate (6%) = 0. Kg 60/Ha (foliar application)





3.2 - VALLENS CLAY - 9A AND CASHEW CLAY LOAM - 151<sup>2</sup>

CROPS	Sulphate of Ammonia 21%			Triple Superphosphate 46%			Muriate of Potash 60%		
	Kg/Ha	Kg/Trial	Kg/Plot	Kg/plot	Kg/Trial	Kg/Plot	Kg/Ha	Kg/Trial	Kg/Plot
Corn	476	82	2.27	173.6	30.0	0.85	170	29.2	0.81
Sorghum	476	82	2.27	173.6	30.0	0.85	170	29.2	0.81

2)

N. as Sulphate of Ammonia	=	100 Kg/Ha
P <sub>2</sub> O <sub>5</sub> as Triple Superphosphate	=	80 Kg/Ha
K <sub>2</sub> O as Muriate of Potash	=	100 Kg/Ha

4. PLANTING

CROPS	Distance between plants (m)	No. plants per row	No. Seeds per hill	Thinning	Population Density/Ha
Corn	0.50	40	3-4	2	50.000
	0.50	30	2-3	1-2	37.5000
Sorghum	0.06	170	-	1	212.500
	0.10	100	-	1	125.000

5. INSECTICIDE/FUNGICIDE APPLICATION

CROPS	Insect/Fung.	Kg/Ha	Kg/Trial
Corn	Furadan (5% i.a.)	12.5	2.16
	Sevin (80% w.p.)	3.5	0.60
Sorghum	Furadan (5% i.a.)	12.5	2.16
	Sevin (80% w.p.)	3.5	0.60
Cowpea	Diazinon	2.5	0.25
	Malathion	2.5	0.25





6. HERBICIDE APPLICATION

CROPS	HERBICIDE	Kg/Ha	Kg/Trial
Corn	Gesaprim Combi 80	2.5	0.45
Sorghum	Gesaprim Combi 80	2.5	0.45
Cowpea	Probe	1.7	0.70



BLACK RIVER UPPER MORASS DEVELOPMENT COMPANY LIMITED

(BRUMTEC)

EXPERIMENTAL PROCEDURE

EXPERIMENT BASIC FERTILIZER EXPERIMENT

CROPS CORN AND SORGHUM

OBJECTIVES

- (i) To compare the yield response due to three (3) different fertilizer nutrients under the Project area conditions.
- (ii) To identify significant interactions between fertilizer nutrients.

TREATMENTS

NO	PEAT SOIL	WALLEN AND CASHEW CLAY
N <sub>0</sub>	0	0
N <sub>1</sub>	20	50
N <sub>2</sub>	50	100
P <sub>0</sub>	0	0
P <sub>1</sub>	50	50
P <sub>2</sub>	100	100
K <sub>0</sub>	0	0
K <sub>1</sub>	50	50
K <sub>2</sub>	100	100

A standard application of 0.5Kg 60/11a of Manganese Chelate (12%) 0.5Kg 50/Ha of zinc chelate (14.2%) and 0.5Kg 60/Ha of Iron Chelate (6%) will be used (foliar application) to all the plots.

EXPERIMENTAL DESIGN

A 3x3x3 factorial arranged in blocks of nine (9) treatments with two (2) replications.

PLOT SIZE

Six (6) rows, 5m long with 0.80m between rows.

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COMBINATION OF FERTILIZERS

The different combinations of fertilizers are the following:

01-000	(N <sub>0</sub> P <sub>0</sub> K <sub>0</sub> )
02-001	(N <sub>0</sub> P <sub>0</sub> K <sub>1</sub> )
03-002	(N <sub>0</sub> P <sub>0</sub> K <sub>2</sub> )
04-010	(N <sub>0</sub> P <sub>1</sub> K <sub>0</sub> )
05-011	(N <sub>0</sub> P <sub>1</sub> K <sub>1</sub> )
06-012	(N <sub>0</sub> P <sub>1</sub> K <sub>2</sub> )
07-020	(N <sub>0</sub> P <sub>2</sub> K <sub>0</sub> )
08-021	(N <sub>0</sub> P <sub>2</sub> K <sub>1</sub> )
09-022	(N <sub>0</sub> P <sub>2</sub> K <sub>2</sub> )
10-100	(N <sub>1</sub> P <sub>0</sub> K <sub>0</sub> )
11-101	(N <sub>1</sub> P <sub>0</sub> K <sub>1</sub> )
12-102	(N <sub>1</sub> P <sub>0</sub> K <sub>2</sub> )
13-110	(N <sub>1</sub> P <sub>1</sub> K <sub>0</sub> )
14-111	(N <sub>1</sub> P <sub>1</sub> K <sub>1</sub> )
15-112	(N <sub>1</sub> P <sub>1</sub> K <sub>2</sub> )
16-120	(N <sub>1</sub> P <sub>2</sub> K <sub>0</sub> )
17-121	(N <sub>1</sub> P <sub>2</sub> K <sub>1</sub> )
18-122	(N <sub>1</sub> P <sub>2</sub> K <sub>2</sub> )
19-200	(N <sub>2</sub> P <sub>0</sub> K <sub>0</sub> )
20-201	(N <sub>2</sub> P <sub>0</sub> K <sub>1</sub> )
21-202	(N <sub>2</sub> P <sub>0</sub> K <sub>2</sub> )
22-210	(N <sub>2</sub> P <sub>1</sub> K <sub>0</sub> )
23-211	(N <sub>2</sub> P <sub>1</sub> K <sub>1</sub> )
24-212	(N <sub>2</sub> P <sub>1</sub> K <sub>2</sub> )
25-220	(N <sub>2</sub> P <sub>2</sub> K <sub>0</sub> )
26-221	(N <sub>2</sub> P <sub>2</sub> K <sub>1</sub> )
27-222	(N <sub>2</sub> P <sub>2</sub> K <sub>2</sub> )

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CULTURAL PRACTICES

(See Experimental Procedure for Relevance of Production Factors Experiment).

DATA TO BE RECORDED

All observations are made on the two (2) central rows only:-

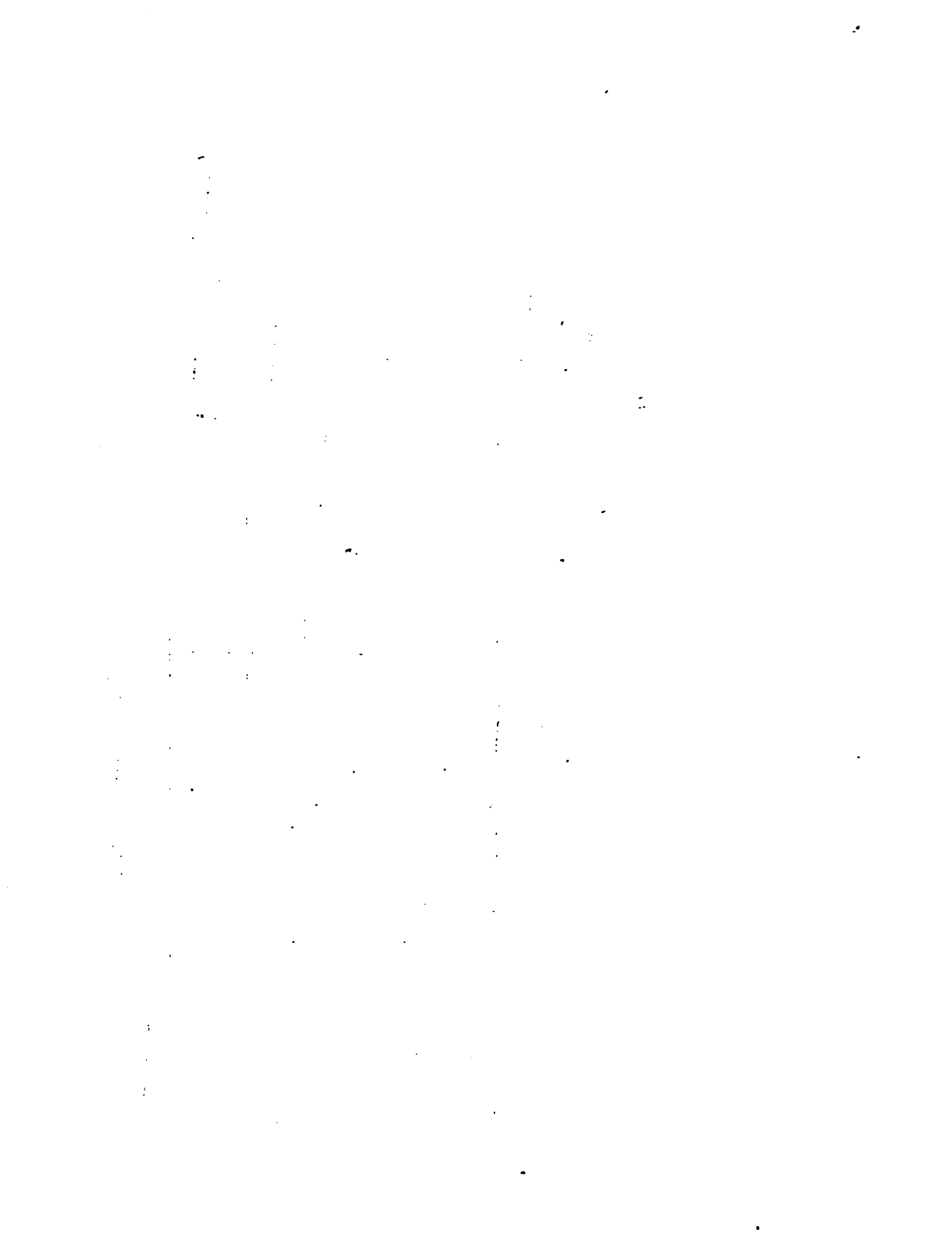
- (i) Days to flowering
- (ii) Plant height
- (iii) Plants harvested
- (iv) Field Weight
- (v) Percentage of moisture
- (vi) Diseases
- (vii) Insect Damage



FERTILIZER APPLICATION

FERT. UNIT	SUMMARY OF ANOMIA 218			TRIPLE SUPER 468	
	Kg/ha	Kg/Trial	Kg/Plot	Kg/ha	Kg/
20	95.2	12.4	0.25	43.4	5.0
50	238.0	30.9	0.50	108.5	14.0
100	476.0	61.7	1.15	217.0	28.0

4. **PLANTING** (see Relevance of Production Factors Experiment)
5. **INSECTICIDE/FUNGICIDE APPLICATION (IPM)**
6. **HERBICIDE APPLICATION (IPM)**



FIELD PLAN FOR BASIC FERTILIZER EXPERIMENT

201	221	010	111	222	110	000	102	220
36	35	34	33	32	31	30	29	28

001	121	120	212	112	002	020	101	022
45	44	43	42	41	40	39	38	37

011	012	100	210	200	011	021
54	53	52	51	50	49	48
49	48	47	46	45	44	43
42	41	40	39	38	37	36
35	34	33	32	31	30	29
28	27	26	25	24	23	22
21	20	19	18	17	16	15
10	09	08	07	06	05	04
03	02	01	00	99	98	97

220	202	022	001	210	012	212	200	101
19	20	21	22	23	24	25	26	27

110	010	102	111	100	011	122	211	021
10	11	12	13	14	15	16	17	18

001	002	003	020	112	201	222	010	000
1	2	3	4	5	6	7	8	9

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1m

43.2m

1m

43.2m

131.6m



## AGRICULTURE IN JAMAICA

### Collection of papers of the Office of IICA in Jamaica

1977 - 1978

- No. I - 1 Fritz Andrew Sibbles, "Basic Agricultural Information on Jamaica Internal Document of Work", January 1977
- No. I - 2 Yvonne Lake, "Agricultural Planning in Jamaica", June 1977
- No. I - 3 Aston S. Wood, Ph. D., "Agricultural Education in Jamaica", September - October 1977
- No. I - 4 Uli Locher, "The Marketing of Agricultural Produce in Jamaica", November 1977
- No. I - 5 G. Barker, A. Wahab, L. A. Bell, "Agricultural Research in Jamaica", November 1977
- No. I - 6 Irving Johnson, Marie Strachan, Joseph Johnson, "Land Settlement in Jamaica", December 1977
- No. I - 7 Government of Jamaica, "Agricultural Government Policy Papers", February 1978
- No. I - 8 Jose Emilio Araujo, "The Communal Enterprise", February 1980
- No. I - 9 IICA and MOAJ, "Hillside Farming Technology - Intensive Short Course", Vols, I and II, March 1978
- No. I - 10 Jose Emilio Araujo, "The Theory Behind the Community Enterprise - Seminar in Jamaica", March 1978
- No. I - 11 Marie Strachan, "A National Programme for the Development of Hillside Farming in Jamaica", April 1978
- No. I - 12 D. D. Henry, "Brief Overall Diagnosis of Hillside Farming in Jamaica", April 1978
- No. I - 13 Neville Farquharson, "Production and Marketing of Yams in Allsides and Christiana", May 1978





CULTURAL PRACTICES

(See Experimental Procedure for Relevance of Production Factors Experiment).

DATA TO BE RECORDED

All observations are made on the two (2) central rows only:-

- (i) Days to flowering
- (ii) Plant height
- (iii) Plants harvested
- (iv) Field Weight
- (v) Percentage of moisture
- (vi) Diseases
- (vii) Insect Damage

1. The first part of the document is a list of names and addresses.

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20. The twentieth part of the document is a list of names and addresses.

FERTILIZER APPLICATION

FERT. UNIT	SULPHATE OF AMMONIA 21%			TRIPLE SUPERPH 46%	
	Kg/Ha	Kg/Trial	Kg/Plot	Kg/Ha	Kg/Tt
20	95.2	12.4	0.25	43.4	5.6
50	238.0	30.9	0.50	108.5	14.0
100	476.0	61.7	1.15	217.0	28.1

4. **PLANTING** (see Relevance of Production Factors Experiment)
5. **INSECTICIDE/FUNGICIDE APPLICATION (IDEM)**
6. **HERBICIDE APPLICATION (IDEM)**



FIELD PLAN FOR BASIC FERTILIZER EXPERIMENT

201	221	010	111	222	110	000	102	220
36	35	34	33	32	31	30	29	28

001	121	120	212	112	002	020	101	022
45	44	43	42	41	40	39	38	37

011	012	200	210	100	012	202	122	021
54	53	52	51	50	49	48	49	50

220	202	022	001	210	012	212	200	101
19	20	21	22	23	24	25	26	27

110	010	102	111	100	011	122	211	021
10	11	12	13	14	15	16	17	18

021	222	201	112	020	003	120	000	
1	2	3	4	5	6	7	8	9

43.2m

1m

43.2m

1m

43.2m

131.6m



## AGRICULTURE IN JAMAICA

### Collection of papers of the Office of IICA in Jamaica

1977 - 1978

- No. I - 1 Fritz Andrew Sibbles, "Basic Agricultural Information on Jamaica Internal Document of Work", January 1977
- No. I - 2 Yvonne Lake, "Agricultural Planning in Jamaica", June 1977
- No. I - 3 Aston S. Wood, Ph. D., "Agricultural Education in Jamaica", September - October 1977
- No. I - 4 Uli Locher, "The Marketing of Agricultural Produce in Jamaica", November 1977
- No. I - 5 G. Barker, A. Wahab, L. A. Bell, "Agricultural Research in Jamaica", November 1977
- No. I - 6 Irving Johnson, Marie Strachan, Joseph Johnson, "Land Settlement in Jamaica", December 1977
- No. I - 7 Government of Jamaica, "Agricultural Government Policy Papers", February 1978
- No. I - 8 Jose Emilio Araujo, "The Communal Enterprise", February 1980
- No. I - 9 IICA and MOAJ, "Hillside Farming Technology - Intensive Short Course", Vols, I and II, March 1978
- No. I - 10 Jose Emilio Araujo, "The Theory Behind the Community Enterprise - Seminar in Jamaica", March 1978
- No. I - 11 Marie Strachan, "A National Programme for the Development of Hillside Farming in Jamaica", April 1978
- No. I - 12 D. D. Henry, "Brief Overall Diagnosis of Hillside Farming in Jamaica", April 1978
- No. I - 13 Neville Farquharson, "Production and Marketing of Yams in Allsides and Christiana", May 1978





(ii)

- No. I - 14 R. C. E. McDonald, A. H. Wahab, "Fertility Assessment of Newly Terraced Hillside Soils Using the Microplot Technique - the Allsides Case Study", 1978
- No. I - 15 IICA - IDB, "Course in Preparation and Evaluation of Agricultural Projects", Vols. I and II, November 1977
- No. I - 16 Neville Farquaharson, "Production and Marketing of Dasheen in Allsides and Christiana", June 1978

1978 - 1979

- No. II - 1 O. Arboleda-Sepulveda (IICA-CIDIA), "Agricultural Documentation and Information Network in Jamaica", September 1978
- No. II - 2 Victor Quiroga, "National Agricultural Information System", (NAIS-Jamaica) Project Profile, September 1978
- No. II - 3 Joseph Johnson, "A Review on Land Reform in Jamaica for the Period 1972 - 1978", September 1978
- No. II - 4 Neville Farquaharson, "ABC of Vegetable Farming", A Draft High School Textbook, Vols. I, II, III and IV, February 1979
- No. II - 5 Jerry La Gra, "Elements of an Agricultural Marketing Strategy for Jamaica", March 1979
- No. II - 6 D. D. Henry, I. E. Johnson, "Agricultural Extension Service in Jamaica", March 1979

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- No. III - 1 H. R. Stennett, "Watersheds of Jamaica and Considerations for an Ordinal Scale of Their Development", July 1979
- No. III - 2 IICA-MAJ, "Hillside Farming in Jamaica", A Training Seminar, December 1978
- No. III - 3 A. L. Wright, A. H. Wahab, H. Murray, "Performance of Six Varieties of Red Peas (*Phaseolus vulgaris* L.) on a Newly Terraced Ultisol in Jamaica", September 1979
- No. III - 4 IICA Jamaica Staff, "Agro-Socio-Economic Sample Survey of Allsides - Trelawny, Jamaica", September 1979



- No. III - 5 IICA-MOAJ, "An Approach to Agricultural Settlement of Hilly Lands", October 1979
- No. III - 6 IICA-MOAJ, "Tree Crops of Economic Importance to Hillside Farms in Jamaica", October 1979
- No. III - 7 Canute McLean, "Production and Marketing of Peanuts", November 1979

1980

- No. IV - 1 Joseph Johnson, "Production and Marketing of Red Peas in the Hilly Areas of Jamaica", January 1980
- No. IV - 2 Lyn Snuffer, "Rural Women: An Annotated Caribbean Bibliography with special reference to Jamaica", January 1980
- No. IV - 3 Vincent Campbell, Abdul Wahab, Howard Murray, "Response of Peanut (Arachis hypogaea L.) on a Newly Terraced Ultisol in Jamaica", January 1980
- No. IV - 4 P. Aitken, A. Wahab, I. Johnson, A. Sahni, "Agro-Socio-Economic Survey - Pilot Hillside Agricultural Project 'PHILAGRIP' Southern Trelawny," February, 1980
- No. IV - 5 Glenys H. Barker, "Bibliography of Literature relating to Research and Development in the Agricultural Sector of Jamaica 1959 - 1979", March 1980
- No. IV - 6 Milton R. Wedderburn, "Allsides Farmers' Pre-Cooperative A Socio-Economic Assessment", March 1980
- No. IV - 7 Adele J. Wint, "The Role of Women in the Development Process", April 1980
- No. IV - 8 Milton R. Wedderburn, "The Co-operative Input in the Development of the Pilot Hillside Agricultural Project (PHILAGRIP)", April 1980
- No. IV - 9 MOJ/IICA/CARDI, Fruit Trees Seminar - "Research & Development of Fruit Trees", June 1980
- No. IV - 10 Henry Lancelot, "Traditional Systems in Hillside Farming, Upper Trelawny, Jamaica", June 1980

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for ensuring the integrity of the financial statements and for providing a clear audit trail. The text notes that any discrepancies or errors in the records can lead to significant complications during an audit and may result in the disallowance of certain expenses.

2. The second part of the document addresses the issue of proper documentation. It states that all receipts, invoices, and other supporting documents must be properly filed and organized. This not only facilitates the audit process but also helps in identifying any potential areas of concern or non-compliance. The document stresses that the burden of proof is on the taxpayer to demonstrate that the expenses claimed are legitimate and allowable.

3. The third part of the document discusses the importance of timely reporting. It notes that any changes in the financial situation or any new information that may affect the tax liability should be reported to the appropriate authorities in a timely manner. Failure to do so can result in penalties and interest charges, which can significantly increase the overall tax burden.

4. The fourth part of the document provides guidance on the use of professional advisors. It suggests that taxpayers should consult with a qualified accountant or tax professional to ensure that they are fully compliant with all applicable tax laws and regulations. This is particularly important for complex transactions or for taxpayers who are unsure of the correct reporting requirements.

5. The fifth part of the document discusses the importance of staying up-to-date on changes in tax law. It notes that the tax code is constantly evolving, and taxpayers must be aware of any new provisions or amendments that may affect their tax liability. This can be achieved by regularly reviewing tax news and consulting with a professional advisor.

6. The sixth part of the document provides a summary of the key points discussed. It reiterates the importance of accurate record-keeping, proper documentation, timely reporting, and the use of professional advisors. It also emphasizes that taxpayers should always act in good faith and follow the law to the letter.

7. The seventh part of the document provides a list of resources for further information. This includes links to the Internal Revenue Service website, various tax publications, and contact information for local tax professionals. The document encourages taxpayers to take advantage of these resources to ensure that they are fully informed of their tax obligations.

8. The eighth part of the document provides a concluding statement. It expresses the hope that the information provided in the document will be helpful and that taxpayers will be able to navigate the tax system with confidence and ease. It also offers a final reminder to always consult with a professional advisor for personalized advice.

- No. IV - 11 IICA/Jamaica, "Pilot Hillside Agricultural Project", (PHILAGRIP), Project Document. Vols. I, II and III, June 1980
- No. IV - 12 A. Wahab, I. Johnson, P. Aitken, H. Murray and H. Stennett, "Highlights of the Pilot Hillside Agricultural Project at Allsides", July 1980
- No. IV - 13 I. Johnson, A. Wahab, P. Aitken, H. Payne, "Benchmark for a Project Profile for Developing a Peanut Industry in Jamaica", July 1980
- No. IV - 14 P. Aitken, A. Wahab, I. Johnson, "The Allsides Post Peasant", August 1980
- No. IV - 15 Norma Munguia, Percy Aitken, Abdul Wahab, Irving Johnson, "Salt Extraction by Solar Energy", A Mini-project, September 1980
- No. IV - 16 Abdul H. Wahab, Percy Aitken-Soux, Irving E. Johnson and Howard Murray, "The Allsides Project in Jamaica - Developmental Potentials of Hillside Agriculture", September 1980
- No. IV - 17 P. Aitken, A. Wahab, I. Johnson, A. Sahney and N. Munguia, "Rural Women Survey", Vols. I, II and III, October 1980
- No. IV - 18 P. Aitken, I. E. Johnson, A. Wahab, "Assessment of Employment Among Small Hillside Farmers of Jamaica", November 1980
- No. IV - 19 IICA/Jamaica "Pilot Hillside Agricultural Project", (PHILAGRIP), Final Project Document. October 1980.
- No. IV - 20 P. Aitken, A. Wahab, I. E. Johnson, Bo-Myeong Woo, "IICA Evaluation of the First Phase FSB Allsides Project", (Internal Document of Work), November 1980
- No. IV - 21 MINAC/IICA/CARDI - "Seminar on Multiple Cropping", December 1980
- 1981
- No. V - 1 N. Munguia, P. Aitken, A. Wahab, I. Johnson, "Smoke Curing of Fish (as a household industry in Rural Jamaica)", January 1981



(v)

- No. V - 2 P. Aitken, A. Wahab, I. Johnson, "Under-employment - It's Relation to the Agricultural Sector and Considerations for its Management", January 1981
- No. V - 3 D. D. Henry, J. R. Gayle, "The Culture of Grafted Pimento (as spice crop for Allsides, Jamaica)", January 1981
- No. V - 4 Abdul H. Wahab, Noel Singh, "Agricultural Research in Jamaica", February 1981
- No. V - 5 P. Aitken-Soux, A. H. Wahab, I. E. Johnson, "Country Level Action Plan (CLAP)", May 1981
- No. V - 6 P. Aitken-Soux, A. H. Wahab, I. E. Johnson, "Overview of Agricultural Development in Jamaica", May 1981
- No. V - 7 Samuel Thompson, I. E. Johnson, P. Aitken-Soux, Abdul Wahab, "The Land Development & Utilization Act 1966", July 1981
- No. V - 8 Abdul Wahab, Percy Aitken-Soux, Irving Johnson, Bo-Myeong Woo, Howard Murray, Joseph Dehaney, "The Experiences of Jamaica in the Management of Agricultural Production on Hillsides", July 1981
- No. V - 9 Dave Hutton, Abdul Wahab, Howard Murray, "Yield Response of Yellow Yam (Dioscorea Cayenensis) After Disinfesting Planting Material of Pratylenchus Coffeae", July 1981
- No. V - 10 Elaine Montague-Gordon, Abdul H. Wahab, Joseph Dehaney and Audrey Wright, "Performance of Eleven Varieties of Dry Beans (Phaseolus vulgaris) Over Two Successive Seasons on the Hillsides of Jamaica", August 1981
- No. V - 11 Dave G. Hutton, Abdul H. Wahab, "Position Paper on Root Crops in Jamaica", August 1981
- No. V - 12 Percy Aitken-Soux, Abdul H. Wahab, Irving E. Johnson, "Technical Assistance for the English Speaking Caribbean (Considerations for an IICA Strategy)" (Internal Document of Work), September 1981
- No. V - 13 Bo-Myeong Woo, Abdul H. Wahab, Joseph Dehaney, "Crop Production on Hillsides using non-Bench Terracing Alternative Measures for Soil Conservation (first year's results of the Clive River Soil Conservation studies)", September 1981
- No. V - 14 Abdul H. Wahab, Percy Aitken-Soux, Irving E. Johnson, Bo-Myeong Woo, Howard Murray and Joseph Dehaney, "Agricultural Production on Hillsides - the Allsides Project Case Study", September 1981

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

2. The second section covers the process of reconciling bank statements with the company's internal records. It highlights the need to identify and resolve any discrepancies as soon as they are discovered. Regular reconciliation helps prevent errors from accumulating and ensures the accuracy of the financial statements.

3. The third part of the document addresses the issue of budgeting and cost control. It suggests that departments should be assigned specific budgets and that actual spending should be monitored against these budgets. This helps in identifying areas where costs are exceeding expectations and allows for timely corrective action.

4. The fourth section discusses the importance of timely reporting and analysis. It states that financial data should be reviewed on a regular basis to provide management with up-to-date information. This enables them to make informed decisions and adjust their strategies as needed.

5. The final part of the document concludes by reiterating the importance of a strong internal control system. It encourages the implementation of clear policies and procedures to minimize the risk of fraud and ensure the integrity of the financial reporting process.

Page 1 of 1

Page 2 of 2



- No. V - 15 D. G. Hutton, A. H. Wahab and J. Dehaney, "Investigating Critical Levels of Dry Rotting of Yellow Yam (*Dioscorea Cayenensis*) Planting Material, the Benefits of Disinfesting the Heads of *Pratylenchus Coffeae* and of After-Planting Nematicide Treatments", September 1981
- No. V - 16 D. G. Hutton, A. H. Wahab, H. Murray and J. Dehaney, "Critical Levels of Dry Rotting of Yellow Yam (*Dioscorea Cayenensis*) Planting Material and Yield Responses After Disinfesting Heads of *Pratylenchus Coffeae* and After Post-Plant Nematicide Applications", September 1981
- No. V - 17 E. Ayer and J. Reyes, "Seminar on Mediterranean Fruit Fly", September 30, 1981
- No. V - 18 Bo-Myeong Woo, "Erosion Control Works in Korea", October 1981
- No. V - 19 Irving E. Johnson and Percy Aitken-Soux, "Country Level Action Plan (CLAP) (Third Revision - Internal Document of Work)", October 1981
- No. V - 20 Humberto Pizarro, "Programme of Work to Establish Guidelines for the Effective Administration, Operation and Maintenance of the Irrigation and Drainage District in the BRUMDEC Project" November 1981
- No. V - 21 Humberto Pizarro, "The Operation of the Drainage System in the Black River Upper Morass Project", November 1981
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- No. V - 24 Humberto Pizarro, "Basic Information for Planning Water Management in the BRUMDEC Project", November 1981
- 1982
- No. VI - 1 Vivian Chin, "Rice Research and Production in the BRUMDEC Project State-of-the-Art Review, Identification of Constraints and Interim Recommendations and Budget for Establishing 405 Hectares (1,000 acres) of Rice on the Clay Soils at BRUMDEC", January 1982
- No. VI - 2 Vivian Chin, "Programme of Work for the Short-Term Adaptive Production Oriented Research on Rice in the BRUMDEC Project", January 1982

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure.

5. The fifth part of the document discusses the importance of data governance and the establishment of clear policies and procedures. It stresses that effective data governance is essential for maximizing the value of the organization's data assets.

6. The sixth part of the document explores the role of data in decision-making and strategic planning. It illustrates how data-driven insights can inform key business decisions and drive the organization's long-term success.

7. The seventh part of the document discusses the importance of data literacy and training for all employees. It emphasizes that a data-driven culture requires that all staff members have the necessary skills to effectively use and interpret data.

8. The eighth part of the document concludes by summarizing the key findings and recommendations. It reiterates the importance of a comprehensive data management strategy and the need for continuous improvement and innovation in data practices.

9. The final part of the document provides a list of references and resources for further reading. It includes links to relevant articles, books, and industry reports that provide additional context and information on the topics discussed in the document.

- No. VI - 1 Vivian Chin, "Rice Research and Production in the BRUMDEC Project State-of-the-Art Review, Identification of Constraints and Interim Recommendations and Budget for Establishing 405 Hectares (1,000 Acres) of Rice on the Clay Soils at BRUMDEC", January 1982
- No. VI - 2 Vivian Chin, "Programme of Work for the Short-Term Adaptive Production Oriented Research on Rice in the BRUMDEC Project", January 1982
- No. VI - 3 Claude Grand-Pierre, "Adaptive Research for Grain Production (BRUMDEC) - (A Short Term Programme)", January 1982
- No. VI - 4 Claude Grand-Pierre, "Experimental Procedures for Grain Crops Research on the BRUMDEC Project", January 1982





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