

7

Irrigation Management in Sudan

Technical Report No. 2

Rahad Irrigation Scheme

INTERNATIONAL IRRIGATION MANAGEMENT INSTITUTE

IIMI
631.7.8
G146
IIM

2-878

Contents

Chapter 1	Performance Assessment in the Rahad Irrigation Scheme	1
	M. A. Dingle and M. S. Shafique	
	<hr/>	
	1.1 Introduction	1
	1.2 The Rahad Irrigation Scheme	2
	1.3 Rapid Appraisal of Irrigation Water Distribution	5
Chapter 2	Evaluation of Water Supply at the Main Irrigation System of the Rahad Scheme	7
	Omer M. A. Elawad and Salih H. Hamid	
	<hr/>	
	2.1 Introduction	7
	2.2 Performance Indices	8
	2.3 Analysis of the Water Supply	9
	2.4 Conclusions	11
	2.5 References	12
Chapter 3	Major Canal Performance Evaluation of Rahad Irrigated Scheme	13
	Christopher Gideon, Amir B. Saeed, Hassan I. Mohammed	
	<hr/>	
	3.1 Introduction	13
	3.2 Index System for Evaluation	14
	3.3 Application to System Evaluation	17
	3.4 Conclusions	21
	3.5 References	26
Chapter 4	Water and Yield Distribution Performance of the Rahad Irrigation Scheme	27
	M. S. Shafique	
	<hr/>	
	4.1 Introduction	27
	4.2 Literature Review	31
	4.3 Methodology	37
	4.4 Data Analysis and Discussion	42
	4.5 Conclusions	84
	4.6 Recommendations	86
	4.7 References	88
	Appendix	90

Chapter 5	The Rahad Crop Yields Locational Differences Based on Crop-Cutting Survey Results Along Selected Major Canals 95
	Mukhtar Ibrahim Ahmed
	<hr/>
	5.1 Introduction 95
	5.2 Objectives 95
	5.3 Methodology 96
	5.4 Numerical Results 98
	5.5 Conclusions 98
Chapter 6	Evaluation of the Socioeconomic Performance of the Rahad Irrigated Scheme 101
	M. A. Dingle and M. Ramli
	<hr/>
	6.1 Introduction 101
	6.2 Methodology for Evaluating the Socioeconomic Performance 102
	6.3 The Change in the Resources Use and Productivity 103
	6.4 Crop Yield Indices and the Profitability Indicators 106
	6.5 Interpretation of the Results 112
	6.6 References 113
	Appendix 6.1 The Farm Business Coefficients the Rahad Irrigated Scheme 114
Chapter 7	Evaluation of Financial Performance of Rahad Agricultural Corporation (RAC) 115
	Rudolph I. Samuel and Abdalla Imam
	<hr/>
	7.1 Introduction 115
	7.2 Methodology 116
	7.3 Data Reporting, Analysis and Discussion 117
	7.4 Performance Indices and Evaluation 129
	7.5 Findings and Recommendations 131
	7.6 References 133
	Annex I Tenant's Final Cotton Accounts 1987/88 (L.S. 000S) 134
	Annex II Tenant's Final Cotton Accounts 1988/89 (L.S. 000S) 135
	Annex III Tenant's Final Cotton Accounts 1989/90 (L.S. 000S) 136
	Annex IV Tenant's Final Cotton Accounts 1990/91 (L.S. 000S) 137
	Annex V Tenant's Final Wheat Accounts 1990/91 (L.S. 000S) 138
	Annex VI Gross Returns, Cost of Production and Net Returns (I.S. 000S) 139
	Annex VII Cost of Production 140
	Annex VIII Net Returns 141