

List of Tables

Table No.	Title of the Table	Page No.
2.1	Equation and measured data required for ET _o prediction for various methods	14
2.2	Values for C _n and C _d in Equation for the FAO-PM and ASCE-EWRI standardized PM equations	15
4.1	Region I and Region II selected Branch canal discharge capacities	64
4.2	Rain gauge stations for various blocks in region I and II	66
4.3	Block 1 to 9A1 soil type, hydrologic soil group and soil properties as percent of volume	68
4.4	Block 10 to 9B1R2 soil type, hydrologic soil group and soil properties as percent of volume	69
4.5	Distribution of potential area for groundwater in region I and II and area under different ranges of depth of water table in Sq. Km.	70
4.6	Cropped area in base year 2003 in hectares under block 1 to block 9A1 in region I	72
4.7	Cropped area in base year 2003 in hectares under block 10 to block 13B in region I and block 6A3R2 to 9B1R2 in region II	73
4.8	Crop parameters of following crops rice, wheat, sorghum, pearl millet, maize, pigeon pea and chick pea	74
4.9	Parameters of fallow and following crops sugarcane, cabbage, cotton, groundnut, castor, tobacco and alfalfa	75
4.10	Water requirement and losses of water in rice fields	76
4.11	Recommended scheduling of six irrigations for wheat according to critical stages; else there would be reduction in yield (WALMI, n.d.)	77
4.12	Critical growth period for water demand in jowar	78
4.13	Critical growth period for water demand in maize	79
5.1	Irrigation scheduling strategies for rice crop	89
5.2	Water balance, yield, and efficiencies of rice crop in sandy clay (HSG – C) soil in block 1 (grown in 1.33 percent of CCA 9868 ha)	91
5.3	Average net groundwater withdrawals (years 2004-2009) for strategies S I to S VI, for rice crop period	97
5.4	Irrigation scheduling strategies for wheat crop	100

5.5	Water balance, yield, and efficiencies of wheat crop in sandy clay (HSG – C) soil in block 1 (grown in 1.27 percent of CCA 9868 ha)	102
5.6	Average net groundwater withdrawals (years 2004-2009) for wheat crop period, under irrigation strategies S I to S VI	107
5.7	Irrigation scheduling strategies for jowar crop	110
5.8	Water balance, yield, and efficiencies of jowar crop in sandy clay (HSG – C) soil in block 1 (grown in 0.70% of CCA 9868 ha)	111
5.9	Average net groundwater withdrawals (years 2004-2009) for strategies S I to S IV, for jowar crop period	116
5.10	Irrigation scheduling strategies for bajra crop	119
5.11	Water balance, yield, and efficiencies of bajra crop in sandy clay loam (HSG – C) soil in block 4A (grown in 1.28% of CCA 6831 ha)	120
5.12	Average net groundwater withdrawals (years 2004-2009) for strategies I to VI, for bajra crop period	125
5.13	Irrigation scheduling strategies for maize crop	128
5.14	Water balance, yield, and efficiencies of maize crop in sandy clay (HSG – C) soil in block 1 (grown in 6.53% of CCA 9868 ha)	130
5.15	Average net groundwater withdrawals (years 2004-2009) for strategies S I to S VI, for maize crop period	135
5.16	Irrigation scheduling strategies for tuver crop	139
5.17	Water balance, yield, and efficiencies of tuver crop in sandy clay loam (HSG – C) soil in block 4A (grown in 8.12% of CCA 6831 ha)	140
5.18	Average net groundwater withdrawals (years 2004-2009) for tuver crop period, under irrigation strategies S I to S VI	146
5.19	Irrigation scheduling strategies for chana crop	148
5.20	Water balance, yield, and efficiencies of chana crop in sandy clay (HSG – C) soil in block 1 (grown in 4.54% of CCA 9868 ha)	150
5.21	Average net groundwater withdrawals (years 2004-2009) for chana crop period, under strategies S I to S VI	155
5.22	Irrigation scheduling strategies for sugarcane crop	158
5.23	Water balance, yield, and efficiencies of sugarcane crop in sandy clay loam (HSG – C) soil in block 4A (grown in 1.83% of CCA 6831 ha)	160
5.24	Average net groundwater withdrawals (years 2004-2009) for sugarcane crop period, under irrigation strategies S I to S VI	165

5.25	Irrigation scheduling strategies for cabbage crop	168
5.26	Water balance, yield, and efficiencies of cabbage crop in sandy clay (HSG – C) soil in block 1 (grown in 4.48% of CCA 9868 ha)	169
5.27	Average net groundwater withdrawals (years 2004-2009) for cabbage, under irrigation strategies S I to S VI	175
5.28	Irrigation scheduling strategies for cotton crop	178
5.29	Water balance, yield, and efficiencies of cotton crop in sandy clay (HSG – C) soil in block 1 (grown in 66.75% of CCA 9868 ha)	179
5.30	Average net groundwater withdrawals (years 2004-2009) for cotton crop period, under irrigation strategies S I to S VI	185
5.31	Irrigation scheduling strategies for groundnut crop	188
5.32	Water balance, yield, and efficiencies of groundnut crop in sandy clay (HSG – C) soil in block 1 (grown in 2.59% of CCA 9868 ha)	189
5.33	Average net groundwater withdrawals (years 2004-2009) for groundnut crop period, under irrigation strategies S I to S VI	195
5.34	Irrigation scheduling strategies for castor crop	198
5.35	Water balance, yield, and efficiencies of castor crop in sandy clay (HSG – C) soil in block 1 (grown in 2.74% of CCA 9868 ha)	200
5.36	Average net groundwater withdrawals (years 2004-2009) for castor crop period, under irrigation strategies S I to S VI	205
5.37	Irrigation scheduling strategies for tobacco crop	208
5.38	Water balance, yield, and efficiencies of tobacco crop in sandy clay loam (HSG – C) soil in block 9A1 (grown in 0.34% of CCA 8546 ha)	209
5.39	Average net groundwater withdrawals (years 2004-2009) for tobacco crop period, under irrigation strategies S I to S VI	214
5.40	Irrigation scheduling strategies for alfalfa crop	217
5.41	Water balance, yield, and efficiencies of alfalfa crop in sandy clay loam (HSG – C) soil in block 1 (grown in 9.06% of CCA 9868 ha)	218
5.42	Randomized Block Design ANOVA Table, for all fourteen crops	223
5.43	Mean Yields of crops under Irrigation Strategies in descending order in Kg/hectare, for the study period year 2004-2010	224
5.44	Monthly canal water demand (Cubic Meter) crop wise, for block 9 A1, under irrigation strategy S VI	226

5.45	Crop wise monthly ground water demand (Cubic Meter), for years 2004 to 2006 for block 9A1(Area 8546 ha.), under irrigation strategy S VI	227
5.46	Crop wise monthly ground water demand (Cubic Meter), for years 2007 to 2009 for block 9A1 (Area 8546 ha.), under irrigation strategy S VI	228
5.47	Monthly canal water demand in (Cubic Meter) for irrigation strategies S I to S VI for block 9A1 (Area in 8546 ha.), during study period 2004-2010	229