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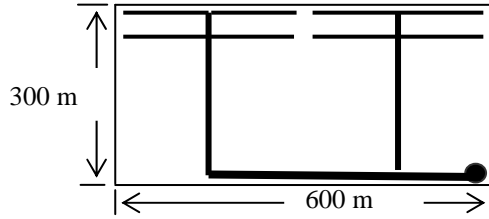
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$$\frac{600}{4} = 150$$

S <sub>s</sub>	9	12	18
N <sub>sp</sub>	16.66	12.5	8.33
L <sub>irr</sub>	148.5	150	144

$$\therefore S_s = 12 \text{ m} \quad N_{sp} = 12.5 \quad (7)$$

$$300$$

S <sub>L</sub>	12	15	18
N <sub>L</sub>	25	20	16.66
L <sub>irr</sub>	300	300	288

$$\therefore S_L = 15 \text{ m} \quad N_L = 20 \quad (7)$$

$$\therefore (N_L)_{total} = 20 \times 4 = 80 \text{ L/acre}$$

مواصفات الري من الجداول:

$$d_{noz} = 4.76 \times 3.18 \text{ mm}$$

$$P_{sp} = 3.17 \text{ Kg/cm}^2$$

$$Q_{sp} = 2.13 \text{ m}^3/\text{hr} \quad (2)$$

$$R_a = \frac{2.13}{12 \times 15} \times 1000 = 11.83 \text{ mm/hr} < I_b (12 \text{ mm/hr}) \quad (2) \quad \text{OK}$$

الاحتياجات المائية

جدول 1: سرعة الرياح  $T_{aw} = 80 \text{ mm/m} \quad (1)$

جدول 2: عمق التربة  $D_{rz} = \frac{80 + 110}{2} = 95 \text{ cm} \quad (1)$

$$\therefore T_{aw} = 80 \times 0.95 = 76 \text{ mm} \quad (1) \quad \therefore D_n = 1.5 \times 76 = 38 \text{ mm} \quad (2)$$

جدول 3: عمق المياه الجوفية  $E_{Tc} = 7.3 \text{ mm/day} \quad (1)$   $II = \frac{38}{7.3} = 5.2 = 5 \text{ day} \quad (2)$

$$\therefore (D_n)_{act} = 5 \times 7.3 = 36.5 \text{ mm} \quad (1)$$

جدول 4: نسبة التبخر  $E_a = 75\% \quad T_{day} = 12 \text{ hr}$

$$D_g = \frac{36.5}{0.75} = 48.66 \text{ mm} \quad (2) \quad T_i = \frac{48.66}{11.83} = 4.11 \text{ hr} \quad (1)$$

$$(No)_{irr \text{ at day}} = \frac{12}{4.11} = 2.9 = 2 \quad (1) \quad (No)_{irr \text{ total}} = 2 \times 5 = 10 \quad (1)$$

$$(N_L)_{irr} = \frac{80}{10} = 8$$

$$Q_{\text{Pump}} = 8 \times 12.5 \times 2.13 = 213 \text{ m}^3/\text{hr} = 59.16 \text{ L/s}$$

( $C_{HW}=150$ )

المحل الفرعي:

$$N_{sp} = 12 \quad \therefore F = 0.367$$

$$L = (12-1) \times 15 + 7.5 = 172.5 \text{ m}$$

$$Q_L = \frac{1.8}{3.6} \times 12 = 6 \text{ L/s}$$

$$H_{sp} = \frac{3 \times 100}{9.81} = 30.58 \text{ m}$$

$$h_L = 0.20 \times 30.58 = 6.116 \text{ m}$$

$$6.116 = 1.1 H_f + \frac{0.5}{100} \times 172.5 \quad \therefore H_f = 4.78 \text{ m}$$

$$4.78 = 1.22 \times 10^{10} \times 172.5 \times \left(\frac{6}{150}\right)^{1.852} \times d^{-4.87} \times 0.367$$

$$\therefore d = 58.4 \text{ mm} = 2.3 \text{ in} \quad \therefore \underline{d_{act} = 2.5 \text{ in}}$$

المحل الرئيسي:

$$Q_M = 4 \times Q_L = 4 \times 6 = 24 \text{ L/s}$$

$$\text{at } v = 2 \text{ m/s}$$

$$\therefore 0.24 = 2 \times \frac{\pi}{4} d^2$$

$$\therefore d = 0.1236 \text{ m} = 123.6 \text{ mm} = 4.8 \text{ in}$$

$$\therefore \underline{d_{act} = 5 \text{ in}}$$

at  $x = 50\%$ .

$$N_t = 6 \quad S_t = 42 \text{ m} \quad L_0 = 18 \text{ m} \quad r_a = 10 \text{ m}$$

$$D_m = 48 \text{ mm} \quad T_{rev} = 72 \text{ hr} \quad E = 25\%$$

$$\therefore E_a = 100 - 25 = 75\%$$

$$D_g = \frac{D_m}{E_a} = \frac{48}{0.75} = 64 \text{ mm}$$

$$R_L = 6 \times 42 = 252 \text{ m}$$

$$L = 252 + 18 = 270 \text{ m}$$

$$R = 270 + 10 = 280 \text{ m}$$

$$A_i = \pi (280)^2 = 246300.86 \text{ m}^2$$

$$Q_s = \frac{0.064 \times 246300.86}{72} = 218.94 \text{ m}^3/\text{hr} = 60.81 \text{ L/s}$$

$$R_{am} = \frac{4}{\pi} \times \frac{7200 \times 60.81}{280 \times 2 \times 10} = 99.55 \text{ mm/hr}$$

$$V = \frac{2\pi R_L}{T_{rev}} = \frac{2\pi \times 252}{72} = 21.99 \text{ m/hr}$$

at  $x = 75\%$ .

$$Q_s = \text{const} = 60.81 \text{ L/s}$$

$$R_{am} = \text{const} = 99.55 \text{ mm/hr}$$

$$D_g = 64 \times \frac{50}{75} = 42.66 \text{ mm}$$

$$V = 21.99 \times \frac{75}{50} = 33 \text{ m/hr}$$

$$T_{rev} = 72 \times \frac{50}{75} = 48 \text{ hr}$$

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NO 4:	Volum	Vi-Vave	Qi(sort)
n	cm3		
1	83	11	57
2	67	5	59
3	63	9	63
4	75	3	65
5	77	5	66
6	57	15	67
7	59	13	69
8	82	10	70
9	81	9	74
10	85	13	75
11	69	3	77
12	66	6	79
13	79	7	81
14	65	7	82
15	74	2	83
16	70	2	85

Ss= 9 m  
 Sl= 12 m  
 Qsp= 1.48 m3/hr  
 T= 50 min  
 T= 0.8333333333 hr  
 dcan= 10 cm

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	1152	120	244	Ra= 13.7037037 mm/hr
Qave	72		61	Dg= 11.41975309 mm
				Dg= 89.64506173 cm3

Cu= 89.58333 %  
 Du= 84.72222 %  
 Ea= 80.31675 %  
 E= 19.68325 %  
 PELQ= 68.04614 %