

Cite this article: Vibha P, Jyothsna J, Dhakshayani J, Mishra S, Patidar H. Application of machine learning tools for eco-strategising Fusarium wilt management of tomato caused by *Fusarium oxysporum* f. sp. *lycopersici*. Plant Science Today. 2026;13(sp2):01–15.

<https://doi.org/10.14719/pst.10010>

Supplementary Table 1. Machine learning-driven prediction of combined treatment effects on per cent disease control

A	B	C	PDC - A	PDC – B	PDC -C	Total disease control	Predicted PDC
A1	B4	C9	22.58	38.65	75.49	136.72	111.7977393
A2	B4	C9	17.91	38.65	75.49	132.05	110.8646256
A3	B4	C9	13.68	38.65	75.49	127.82	108.9376433
A4	B4	C9	11.24	38.65	75.49	125.38	107.69052
A5	B4	C9	9.66	38.65	75.49	123.8	106.2181137
A6	B4	C9	5.84	38.65	75.49	119.98	104.0010157
A7	B4	C9	3.94	38.65	75.49	118.08	103.4366031
A1	B4	C5	22.58	38.65	53.4	114.63	102.6910872
A1	B4	C1	22.58	38.65	53.73	114.96	102.5283891
A2	B4	C5	17.91	38.65	53.4	109.96	101.986999
A8	B4	C9	0	38.65	75.49	114.14	101.5928291
A1	B4	C2	22.58	38.65	50.03	111.26	101.5802651
A2	B4	C1	17.91	38.65	53.73	110.29	101.3902513
A2	B4	C2	17.91	38.65	50.03	106.59	100.0993542
A1	B4	C8	22.58	38.65	46.09	107.32	99.33449803
A2	B4	C8	17.91	38.65	46.09	102.65	98.52994479
A3	B4	C5	13.68	38.65	53.4	105.73	98.52874097
A1	B4	C4	22.58	38.65	44.47	105.7	98.43821403
A1	B2	C9	22.58	15.59	75.49	113.66	98.23077177
A3	B4	C1	13.68	38.65	53.73	106.06	98.09351707
A2	B2	C9	17.91	15.59	75.49	108.99	97.96832072
A3	B4	C2	13.68	38.65	50.03	102.36	97.19986937
A2	B4	C4	17.91	38.65	44.47	101.03	97.14598546
A4	B4	C1	11.24	38.65	53.73	103.62	96.74287333
A4	B4	C5	11.24	38.65	53.4	103.29	96.73979048
A1	B1	C9	22.58	9.39	75.49	107.46	96.01842718
A1	B4	C3	22.58	38.65	38.45	99.68	95.75025632
A1	B4	C7	22.58	38.65	38.53	99.76	95.67919147
A5	B4	C5	9.66	38.65	53.4	101.71	95.58187735
A5	B4	C1	9.66	38.65	53.73	102.04	95.53405909
A4	B4	C2	11.24	38.65	50.03	99.92	95.29728091
A2	B1	C9	17.91	9.39	75.49	102.79	95.22447486
A1	B4	C6	22.58	38.65	34.79	96.02	94.9427626
A3	B4	C8	13.68	38.65	46.09	98.42	94.80068538
A2	B4	C3	17.91	38.65	38.45	95.01	94.52142992
A5	B4	C2	9.66	38.65	50.03	98.34	94.41835469

A2	B4	C7	17.91	38.65	38.53	95.09	94.36960708
A3	B4	C4	13.68	38.65	44.47	96.8	94.18874233
A3	B2	C9	13.68	15.59	75.49	104.76	94.15473651
A1	B6	C9	22.58	3.43	75.49	101.5	94.06996508
A1	B5	C9	22.58	2.55	75.49	100.62	93.7015983
A2	B4	C6	17.91	38.65	34.79	91.35	93.68716365
A4	B2	C9	11.24	15.59	75.49	102.32	93.48390599
A4	B4	C8	11.24	38.65	46.09	95.98	93.37153874
A2	B6	C9	17.91	3.43	75.49	96.83	93.19079128
A2	B5	C9	17.91	2.55	75.49	95.95	93.12800791
A6	B4	C1	5.84	38.65	53.73	98.22	92.93283615
A1	B7	C9	22.58	0.86	75.49	98.93	92.76811738
A4	B4	C4	11.24	38.65	44.47	94.36	92.75936251
A1	B8	C9	22.58	0	75.49	98.07	92.74064817
A1	B3	C9	22.58	0.44	75.49	98.51	92.60139973
A6	B4	C5	5.84	38.65	53.4	97.89	92.50151178
A7	B4	C1	3.94	38.65	53.73	96.32	92.40425446
A2	B7	C9	17.91	0.86	75.49	94.26	92.30892161
A5	B2	C9	9.66	15.59	75.49	100.74	92.14202495
A3	B1	C9	13.68	9.39	75.49	98.56	92.08471248
A5	B4	C8	9.66	38.65	46.09	94.4	92.0799142
A2	B8	C9	17.91	0	75.49	93.4	91.75016219
A2	B3	C9	17.91	0.44	75.49	93.84	91.73111343
A7	B4	C5	3.94	38.65	53.4	95.99	91.70124949
A3	B4	C3	13.68	38.65	38.45	90.78	91.63441549
A5	B4	C4	9.66	38.65	44.47	92.78	91.63151668
A6	B4	C2	5.84	38.65	50.03	94.52	91.43990386
A3	B4	C7	13.68	38.65	38.53	90.86	91.38703428
A4	B1	C9	11.24	9.39	75.49	96.12	90.89239194
A7	B4	C2	3.94	38.65	50.03	92.62	90.59633853
A3	B4	C6	13.68	38.65	34.79	87.12	90.33897459
A4	B4	C3	11.24	38.65	38.45	88.34	90.14769569
A3	B5	C9	13.68	2.55	75.49	91.72	90.04212341
A3	B6	C9	13.68	3.43	75.49	92.6	89.86217943
A8	B4	C1	0	38.65	53.73	92.38	89.85766034
A4	B4	C7	11.24	38.65	38.53	88.42	89.85528965
A5	B1	C9	9.66	9.39	75.49	94.54	89.738875
A6	B2	C9	5.84	15.59	75.49	96.92	89.63988045
A8	B4	C5	0	38.65	53.4	92.05	89.54597692
A5	B4	C3	9.66	38.65	38.45	86.76	89.00616095
A3	B7	C9	13.68	0.86	75.49	90.03	88.93883637
A6	B4	C8	5.84	38.65	46.09	90.58	88.90304964
A4	B5	C9	11.24	2.55	75.49	89.28	88.88930264
A4	B6	C9	11.24	3.43	75.49	90.16	88.82008803

A3	B8	C9	13.68	0	75.49	89.17	88.73811742
A5	B4	C7	9.66	38.65	38.53	86.84	88.66580687
A3	B3	C9	13.68	0.44	75.49	89.61	88.65543543
A4	B4	C6	11.24	38.65	34.79	84.68	88.621037
A6	B4	C4	5.84	38.65	44.47	88.96	88.51656571
A7	B2	C9	3.94	15.59	75.49	95.02	88.49458951
A4	B7	C9	11.24	0.86	75.49	87.59	88.43703348
A8	B4	C2	0	38.65	50.03	88.68	88.10346489
A7	B4	C8	3.94	38.65	46.09	88.68	88.06755664
A4	B8	C9	11.24	0	75.49	86.73	88.00735251
A5	B4	C6	9.66	38.65	34.79	83.1	87.93535516
A5	B5	C9	9.66	2.55	75.49	87.7	87.87422502
A4	B3	C9	11.24	0.44	75.49	87.17	87.77597928
A5	B6	C9	9.66	3.43	75.49	88.58	87.73249988
A7	B4	C4	3.94	38.65	44.47	87.06	87.62299149
A5	B7	C9	9.66	0.86	75.49	86.01	87.05256627
A6	B1	C9	5.84	9.39	75.49	90.72	87.02672401
A5	B8	C9	9.66	0	75.49	85.15	86.74909317
A8	B2	C9	0	15.59	75.49	91.08	86.66281705
A5	B3	C9	9.66	0.44	75.49	85.59	86.40505866
A7	B1	C9	3.94	9.39	75.49	88.82	86.18549171
A6	B4	C3	5.84	38.65	38.45	82.94	85.65762171
A6	B4	C7	5.84	38.65	38.53	83.02	85.55279812
A8	B4	C8	0	38.65	46.09	84.74	85.35318256
A8	B4	C4	0	38.65	44.47	83.12	85.29919435
A7	B4	C7	3.94	38.65	38.53	81.12	84.98275584
A7	B4	C3	3.94	38.65	38.45	81.04	84.84274453
A6	B5	C9	5.84	2.55	75.49	83.88	84.69605062
A6	B4	C6	5.84	38.65	34.79	79.28	84.34553241
A6	B6	C9	5.84	3.43	75.49	84.76	84.16111451
A7	B4	C6	3.94	38.65	34.79	77.38	83.91056513
A8	B1	C9	0	9.39	75.49	84.88	83.80027343
A7	B5	C9	3.94	2.55	75.49	81.98	83.58894417
A1	B2	C5	22.58	15.59	53.4	91.57	83.46819045
A7	B6	C9	3.94	3.43	75.49	82.86	83.38917681
A6	B7	C9	5.84	0.86	75.49	82.19	83.35024179
A6	B8	C9	5.84	0	75.49	81.33	83.22595113
A6	B3	C9	5.84	0.44	75.49	81.77	83.21038567
A1	B2	C1	22.58	15.59	53.73	91.9	83.20515207
A8	B4	C7	0	38.65	38.53	77.18	82.75081893
A8	B4	C3	0	38.65	38.45	77.1	82.68683681
A7	B7	C9	3.94	0.86	75.49	80.29	82.5722944
A7	B8	C9	3.94	0	75.49	79.43	82.32898008
A7	B3	C9	3.94	0.44	75.49	79.87	82.14203976

A8	B4	C6	0	38.65	34.79	73.44	81.80085123
A1	B2	C2	22.58	15.59	50.03	88.2	81.39991402
A8	B5	C9	0	2.55	75.49	78.04	81.39958857
A8	B6	C9	0	3.43	75.49	78.92	81.23194005
A2	B2	C1	17.91	15.59	53.73	87.23	80.8485874
A2	B2	C5	17.91	15.59	53.4	86.9	80.63652979
A8	B7	C9	0	0.86	75.49	76.35	80.28353765
A1	B1	C1	22.58	9.39	53.73	85.7	80.03802386
A1	B1	C5	22.58	9.39	53.4	85.37	80.00285903
A8	B3	C9	0	0.44	75.49	75.93	79.98293963
A8	B8	C9	0	0	75.49	75.49	79.6995425
A2	B2	C2	17.91	15.59	50.03	83.53	78.98730437
A1	B2	C8	22.58	15.59	46.09	84.26	78.59757972
A1	B1	C2	22.58	9.39	50.03	82	77.94678263
A1	B2	C4	22.58	15.59	44.47	82.64	77.29360012
A3	B2	C1	13.68	15.59	53.73	83	77.26040062
A3	B2	C5	13.68	15.59	53.4	82.67	77.17892247
A2	B1	C1	17.91	9.39	53.73	81.03	76.93512164
A2	B1	C5	17.91	9.39	53.4	80.7	76.61179695
A1	B6	C1	22.58	3.43	53.73	79.74	76.29502371
A1	B6	C5	22.58	3.43	53.4	79.41	76.1460201
A2	B2	C8	17.91	15.59	46.09	79.59	76.11974703
A1	B5	C1	22.58	2.55	53.73	78.86	75.97123288
A1	B5	C5	22.58	2.55	53.4	78.53	75.82945114
A4	B2	C1	11.24	15.59	53.73	80.56	75.45590534
A3	B2	C2	13.68	15.59	50.03	79.3	75.42040116
A1	B7	C1	22.58	0.86	53.73	77.17	75.37371
A4	B2	C5	11.24	15.59	53.4	80.23	75.2861356
A1	B7	C5	22.58	0.86	53.4	76.84	75.23388227
A1	B1	C8	22.58	9.39	46.09	78.06	74.98103571
A1	B3	C1	22.58	0.44	53.73	76.75	74.93689865
A1	B3	C5	22.58	0.44	53.4	76.42	74.89166227
A2	B1	C2	17.91	9.39	50.03	77.33	74.80621916
A1	B8	C1	22.58	0	53.73	76.31	74.79510028
A1	B8	C5	22.58	0	53.4	75.98	74.74490696
A2	B2	C4	17.91	15.59	44.47	77.97	74.5222529
A1	B6	C2	22.58	3.43	50.03	76.04	74.07244166
A5	B2	C5	9.66	15.59	53.4	78.65	73.96979617
A5	B2	C1	9.66	15.59	53.73	78.98	73.85940115
A1	B5	C2	22.58	2.55	50.03	75.16	73.74875838
A1	B2	C7	22.58	15.59	38.53	76.7	73.72855359
A1	B2	C3	22.58	15.59	38.45	76.62	73.7171464
A1	B1	C4	22.58	9.39	44.47	76.44	73.67458038
A3	B1	C1	13.68	9.39	53.73	76.8	73.3157401

A3	B1	C5	13.68	9.39	53.4	76.47	73.15985711
A1	B7	C2	22.58	0.86	50.03	73.47	73.0513841
A4	B2	C2	11.24	15.59	50.03	76.86	73.04273626
A3	B2	C8	13.68	15.59	46.09	75.36	72.89006175
A1	B3	C2	22.58	0.44	50.03	73.05	72.85019934
A1	B8	C2	22.58	0	50.03	72.61	72.64241619
A2	B6	C1	17.91	3.43	53.73	75.07	72.43886166
A2	B5	C1	17.91	2.55	53.73	74.19	72.29996504
A2	B6	C5	17.91	3.43	53.4	74.74	72.1374623
A2	B1	C8	17.91	9.39	46.09	73.39	72.12230056
A1	B2	C6	22.58	15.59	34.79	72.96	72.02260269
A2	B5	C5	17.91	2.55	53.4	73.86	71.8656995
A5	B2	C2	9.66	15.59	50.03	75.28	71.83634474
A4	B1	C1	11.24	9.39	53.73	74.36	71.78479125
A4	B1	C5	11.24	9.39	53.4	74.03	71.58995602
A3	B1	C2	13.68	9.39	50.03	73.1	71.47210766
A3	B2	C4	13.68	15.59	44.47	73.74	71.44880364
A2	B7	C1	17.91	0.86	53.73	72.5	71.37949486
A2	B3	C1	17.91	0.44	53.73	72.08	71.0952852
A2	B7	C5	17.91	0.86	53.4	72.17	71.09408854
A1	B6	C8	22.58	3.43	46.09	72.1	71.07682432
A2	B2	C3	17.91	15.59	38.45	71.95	71.05222269
A6	B2	C5	5.84	15.59	53.4	74.83	71.00567148
A6	B2	C1	5.84	15.59	53.73	75.16	70.8886645
A2	B2	C7	17.91	15.59	38.53	72.03	70.84114906
A2	B3	C5	17.91	0.44	53.4	71.75	70.83896776
A1	B5	C8	22.58	2.55	46.09	71.22	70.82266685
A2	B8	C1	17.91	0	53.73	71.64	70.8069125
A2	B1	C4	17.91	9.39	44.47	71.77	70.62518321
A4	B2	C8	11.24	15.59	46.09	72.92	70.53124695
A2	B8	C5	17.91	0	53.4	71.31	70.46678822
A2	B6	C2	17.91	3.43	50.03	71.37	70.2975812
A1	B7	C8	22.58	0.86	46.09	69.53	70.03107755
A2	B5	C2	17.91	2.55	50.03	70.49	70.00588428
A1	B1	C3	22.58	9.39	38.45	70.42	69.89176437
A1	B1	C7	22.58	9.39	38.53	70.5	69.82218518
A7	B2	C1	3.94	15.59	53.73	73.26	69.62222401
A1	B6	C4	22.58	3.43	44.47	70.48	69.60813278
A1	B8	C8	22.58	0	46.09	68.67	69.59813455
A5	B1	C1	9.66	9.39	53.73	72.78	69.59485347
A1	B3	C8	22.58	0.44	46.09	69.11	69.5829033
A2	B2	C6	17.91	15.59	34.79	68.29	69.3843041
A7	B2	C5	3.94	15.59	53.4	72.93	69.34839567
A5	B1	C5	9.66	9.39	53.4	72.45	69.34409963

A4	B1	C2	11.24	9.39	50.03	70.66	69.34331369
A5	B2	C8	9.66	15.59	46.09	71.34	69.22139212
A1	B5	C4	22.58	2.55	44.47	69.6	69.15480398
A2	B7	C2	17.91	0.86	50.03	68.8	69.13724187
A4	B2	C4	11.24	15.59	44.47	71.3	69.02094845
A2	B3	C2	17.91	0.44	50.03	68.38	68.91791447
A6	B2	C2	5.84	15.59	50.03	71.46	68.73860871
A3	B6	C1	13.68	3.43	53.73	70.84	68.72608571
A3	B6	C5	13.68	3.43	53.4	70.51	68.69548925
A3	B1	C8	13.68	9.39	46.09	69.16	68.59177939
A2	B8	C2	17.91	0	50.03	67.94	68.52922713
A1	B7	C4	22.58	0.86	44.47	67.91	68.49136815
A1	B1	C6	22.58	9.39	34.79	66.76	68.42448623
A3	B5	C1	13.68	2.55	53.73	69.96	68.26075516
A3	B5	C5	13.68	2.55	53.4	69.63	68.25126232
A3	B2	C7	13.68	15.59	38.53	67.8	68.05837646
A1	B3	C4	22.58	0.44	44.47	67.49	68.03158419
A1	B8	C4	22.58	0	44.47	67.05	67.98467505
A3	B2	C3	13.68	15.59	38.45	67.72	67.92653875
A5	B2	C4	9.66	15.59	44.47	69.72	67.75758188
A3	B7	C1	13.68	0.86	53.73	68.27	67.38239671
A5	B1	C2	9.66	9.39	50.03	69.08	67.35333628
A7	B2	C2	3.94	15.59	50.03	69.56	67.3131287
A3	B7	C5	13.68	0.86	53.4	67.94	67.25363369
A2	B6	C8	17.91	3.43	46.09	67.43	67.24953174
A3	B3	C1	13.68	0.44	53.73	67.85	67.24760781
A3	B8	C1	13.68	0	53.73	67.41	67.15386442
A3	B3	C5	13.68	0.44	53.4	67.52	67.12099515
A2	B5	C8	17.91	2.55	46.09	66.55	67.03285787
A3	B1	C4	13.68	9.39	44.47	67.54	66.98998252
A3	B8	C5	13.68	0	53.4	67.08	66.97454238
A4	B1	C8	11.24	9.39	46.09	66.72	66.96490733
A3	B6	C2	13.68	3.43	50.03	67.14	66.79636993
A2	B1	C3	17.91	9.39	38.45	65.75	66.79398285
A2	B1	C7	17.91	9.39	38.53	65.83	66.63797068
A4	B6	C1	11.24	3.43	53.73	68.4	66.61070022
A8	B2	C1	0	15.59	53.73	69.32	66.52839473
A8	B2	C5	0	15.59	53.4	68.99	66.4953249
A4	B6	C5	11.24	3.43	53.4	68.07	66.45342826
A6	B1	C1	5.84	9.39	53.73	68.96	66.40362588
A3	B2	C6	13.68	15.59	34.79	64.06	66.31841861
A4	B5	C1	11.24	2.55	53.73	67.52	66.30218818
A3	B5	C2	13.68	2.55	50.03	66.26	66.26290546
A6	B1	C5	5.84	9.39	53.4	68.63	66.22400426

A2	B7	C8	17.91	0.86	46.09	64.86	66.05341854
A6	B2	C8	5.84	15.59	46.09	67.52	66.01357509
A4	B5	C5	11.24	2.55	53.4	67.19	65.99501701
A2	B6	C4	17.91	3.43	44.47	65.81	65.82170411
A2	B3	C8	17.91	0.44	46.09	64.44	65.67471201
A1	B6	C3	22.58	3.43	38.45	64.46	65.58855891
A4	B2	C7	11.24	15.59	38.53	65.36	65.54047059
A4	B7	C1	11.24	0.86	53.73	65.83	65.5201555
A4	B1	C4	11.24	9.39	44.47	65.1	65.46134239
A4	B2	C3	11.24	15.59	38.45	65.28	65.44306211
A3	B7	C2	13.68	0.86	50.03	64.57	65.42398959
A1	B6	C7	22.58	3.43	38.53	64.54	65.41786341
A2	B8	C8	17.91	0	46.09	64	65.40344922
A3	B3	C2	13.68	0.44	50.03	64.15	65.32565283
A2	B5	C4	17.91	2.55	44.47	64.93	65.30198914
A7	B1	C1	3.94	9.39	53.73	67.06	65.2702502
A2	B1	C6	17.91	9.39	34.79	62.09	65.26909521
A4	B7	C5	11.24	0.86	53.4	65.5	65.23906317
A3	B8	C2	13.68	0	50.03	63.71	65.1949593
A4	B3	C1	11.24	0.44	53.73	65.41	65.15868802
A1	B5	C3	22.58	2.55	38.45	63.58	65.15045542
A4	B8	C1	11.24	0	53.73	64.97	65.10113169
A1	B5	C7	22.58	2.55	38.53	63.66	65.0890593
A5	B6	C1	9.66	3.43	53.73	66.82	64.93730893
A4	B3	C5	11.24	0.44	53.4	65.08	64.90091347
A7	B1	C5	3.94	9.39	53.4	66.73	64.89689818
A5	B1	C8	9.66	9.39	46.09	65.14	64.77848888
A5	B6	C5	9.66	3.43	53.4	66.49	64.73335051
A6	B2	C4	5.84	15.59	44.47	65.9	64.70708947
A4	B8	C5	11.24	0	53.4	64.64	64.70365416
A5	B5	C1	9.66	2.55	53.73	65.94	64.63619074
A8	B2	C2	0	15.59	50.03	65.62	64.57753872
A2	B7	C4	17.91	0.86	44.47	63.24	64.54841698
A1	B7	C7	22.58	0.86	38.53	61.97	64.43583584
A1	B7	C3	22.58	0.86	38.45	61.89	64.42054713
A6	B1	C2	5.84	9.39	50.03	65.26	64.30747081
A5	B5	C5	9.66	2.55	53.4	65.61	64.297467
A4	B6	C2	11.24	3.43	50.03	64.7	64.27078684
A7	B2	C8	3.94	15.59	46.09	65.62	64.24620948
A2	B3	C4	17.91	0.44	44.47	62.82	64.18527986
A1	B3	C3	22.58	0.44	38.45	61.47	63.95163376
A5	B7	C1	9.66	0.86	53.73	64.25	63.94181811
A5	B2	C7	9.66	15.59	38.53	63.78	63.90807759
A5	B2	C3	9.66	15.59	38.45	63.7	63.8764057

A2	B8	C4	17.91	0	44.47	62.38	63.87199107
A1	B3	C7	22.58	0.44	38.53	61.55	63.83612739
A4	B2	C6	11.24	15.59	34.79	61.62	63.81346352
A3	B6	C8	13.68	3.43	46.09	63.2	63.80955401
A1	B6	C6	22.58	3.43	34.79	60.8	63.80219173
A5	B3	C1	9.66	0.44	53.73	63.83	63.71180231
A4	B5	C2	11.24	2.55	50.03	63.82	63.69968731
A1	B8	C3	22.58	0	38.45	61.03	63.69262821
A5	B7	C5	9.66	0.86	53.4	63.92	63.62337044
A1	B8	C7	22.58	0	38.53	61.11	63.56771703
A5	B1	C4	9.66	9.39	44.47	63.52	63.45682174
A5	B3	C5	9.66	0.44	53.4	63.5	63.43250058
A5	B8	C1	9.66	0	53.73	63.39	63.32921845
A3	B5	C8	13.68	2.55	46.09	62.32	63.32899132
A1	B5	C6	22.58	2.55	34.79	59.92	63.23995152
A3	B1	C3	13.68	9.39	38.45	61.52	63.06497553
A3	B1	C7	13.68	9.39	38.53	61.6	63.04052965
A4	B7	C2	11.24	0.86	50.03	62.13	62.98260582
A5	B8	C5	9.66	0	53.4	63.06	62.96885052
A7	B2	C4	3.94	15.59	44.47	64	62.93760029
A7	B1	C2	3.94	9.39	50.03	63.36	62.884872
A4	B3	C2	11.24	0.44	50.03	61.71	62.73258494
A5	B6	C2	9.66	3.43	50.03	63.12	62.67717554
A4	B8	C2	11.24	0	50.03	61.27	62.65772182
A1	B7	C6	22.58	0.86	34.79	58.23	62.53394248
A3	B7	C8	13.68	0.86	46.09	60.63	62.48923124
A3	B3	C8	13.68	0.44	46.09	60.21	62.31295745
A3	B6	C4	13.68	3.43	44.47	61.58	62.30700699
A5	B2	C6	9.66	15.59	34.79	60.04	62.1932308
A1	B3	C6	22.58	0.44	34.79	57.81	62.14801504
A5	B5	C2	9.66	2.55	50.03	62.24	62.11850001
A8	B1	C1	0	9.39	53.73	63.12	62.11709236
A3	B8	C8	13.68	0	46.09	59.77	62.10647853
A8	B1	C5	0	9.39	53.4	62.79	61.98563316
A2	B6	C3	17.91	3.43	38.45	59.79	61.88299365
A3	B5	C4	13.68	2.55	44.47	60.7	61.86314878
A1	B8	C6	22.58	0	34.79	57.37	61.83626307
A2	B6	C7	17.91	3.43	38.53	59.87	61.70661685
A8	B2	C8	0	15.59	46.09	61.68	61.67061379
A6	B6	C1	5.84	3.43	53.73	63	61.57169501
A3	B1	C6	13.68	9.39	34.79	57.86	61.54823374
A6	B6	C5	5.84	3.43	53.4	62.67	61.45844334
A6	B1	C8	5.84	9.39	46.09	61.32	61.43456804
A5	B7	C2	9.66	0.86	50.03	60.55	61.35321107

A5	B3	C2	9.66	0.44	50.03	60.13	61.34294906
A4	B6	C8	11.24	3.43	46.09	60.76	61.2790375
A2	B5	C3	17.91	2.55	38.45	58.91	61.25969633
A2	B5	C7	17.91	2.55	38.53	58.99	61.24610299
A6	B5	C1	5.84	2.55	53.73	62.12	61.19760402
A4	B1	C7	11.24	9.39	38.53	59.16	61.11537125
A5	B8	C2	9.66	0	50.03	59.69	61.00449243
A6	B5	C5	5.84	2.55	53.4	61.79	60.97200084
A3	B3	C4	13.68	0.44	44.47	58.59	60.92859067
A4	B1	C3	11.24	9.39	38.45	59.08	60.92502111
A3	B7	C4	13.68	0.86	44.47	59.01	60.82851912
A6	B2	C3	5.84	15.59	38.45	59.88	60.70431998
A6	B2	C7	5.84	15.59	38.53	59.96	60.69347704
A4	B5	C8	11.24	2.55	46.09	59.88	60.66581088
A8	B2	C4	0	15.59	44.47	60.06	60.54193355
A3	B8	C4	13.68	0	44.47	58.15	60.45146666
A6	B7	C1	5.84	0.86	53.73	60.43	60.29717515
A2	B7	C7	17.91	0.86	38.53	57.3	60.24108173
A7	B6	C1	3.94	3.43	53.73	61.1	60.14560217
A8	B1	C2	0	9.39	50.03	59.42	60.10580857
A2	B7	C3	17.91	0.86	38.45	57.22	60.09523132
A7	B1	C8	3.94	9.39	46.09	59.42	60.08353743
A4	B7	C8	11.24	0.86	46.09	58.19	60.06292468
A4	B6	C4	11.24	3.43	44.47	59.14	60.0578143
A2	B6	C6	17.91	3.43	34.79	56.13	60.05578012
A6	B3	C1	5.84	0.44	53.73	60.01	60.0449364
A7	B6	C5	3.94	3.43	53.4	60.77	60.04432093
A6	B1	C4	5.84	9.39	44.47	59.7	60.04070672
A6	B7	C5	5.84	0.86	53.4	60.1	60.0207092
A2	B3	C3	17.91	0.44	38.45	56.8	59.89031401
A2	B3	C7	17.91	0.44	38.53	56.88	59.87638033
A6	B8	C1	5.84	0	53.73	59.57	59.86084562
A7	B5	C1	3.94	2.55	53.73	60.22	59.79145926
A6	B3	C5	5.84	0.44	53.4	59.68	59.77792986
A2	B8	C3	17.91	0	38.45	56.36	59.72012773
A5	B6	C8	9.66	3.43	46.09	59.18	59.71377359
A2	B8	C7	17.91	0	38.53	56.44	59.65982558
A4	B8	C8	11.24	0	46.09	57.33	59.65070371
A4	B3	C8	11.24	0.44	46.09	57.77	59.5764277
A7	B5	C5	3.94	2.55	53.4	59.89	59.57080037
A5	B1	C7	9.66	9.39	38.53	57.58	59.54513196
A6	B8	C5	5.84	0	53.4	59.24	59.51128097
A2	B5	C6	17.91	2.55	34.79	55.25	59.48640026
A4	B1	C6	11.24	9.39	34.79	55.42	59.45834336

A4	B5	C4	11.24	2.55	44.47	58.26	59.4233853
A5	B1	C3	9.66	9.39	38.45	57.5	59.16420375
A6	B6	C2	5.84	3.43	50.03	59.3	59.11024201
A5	B5	C8	9.66	2.55	46.09	58.3	59.04348977
A7	B7	C1	3.94	0.86	53.73	58.53	58.98461277
A6	B2	C6	5.84	15.59	34.79	56.22	58.9814524
A7	B2	C3	3.94	15.59	38.45	57.98	58.9487477
A7	B2	C7	3.94	15.59	38.53	58.06	58.94216551
A6	B5	C2	5.84	2.55	50.03	58.42	58.79111555
A7	B7	C5	3.94	0.86	53.4	58.2	58.70863115
A7	B1	C4	3.94	9.39	44.47	57.8	58.5783605
A5	B7	C8	9.66	0.86	46.09	56.61	58.50979266
A7	B3	C1	3.94	0.44	53.73	58.11	58.42912836
A5	B6	C4	9.66	3.43	44.47	57.56	58.42635001
A4	B7	C4	11.24	0.86	44.47	56.57	58.38223349
A5	B3	C8	9.66	0.44	46.09	56.19	58.35993432
A2	B7	C6	17.91	0.86	34.79	53.56	58.33945343
A7	B3	C5	3.94	0.44	53.4	57.78	58.22298367
A4	B3	C4	11.24	0.44	44.47	56.15	58.20751917
A7	B8	C1	3.94	0	53.73	57.67	58.17269626
A5	B8	C8	9.66	0	46.09	55.75	58.14321188
A4	B8	C4	11.24	0	44.47	55.71	58.09204556
A2	B3	C6	17.91	0.44	34.79	53.14	58.006503
A7	B8	C5	3.94	0	53.4	57.34	58.0005506
A5	B1	C6	9.66	9.39	34.79	53.84	57.89984175
A3	B6	C7	13.68	3.43	38.53	55.64	57.87164058
A3	B6	C3	13.68	3.43	38.45	55.56	57.81983113
A2	B8	C6	17.91	0	34.79	52.7	57.80632423
A6	B7	C2	5.84	0.86	50.03	56.73	57.79461425
A6	B3	C2	5.84	0.44	50.03	56.31	57.75718992
A5	B5	C4	9.66	2.55	44.47	56.68	57.74943921
A7	B6	C2	3.94	3.43	50.03	57.4	57.61786109
A6	B8	C2	5.84	0	50.03	55.87	57.53241714
A7	B2	C6	3.94	15.59	34.79	54.32	57.5243553
A3	B5	C7	13.68	2.55	38.53	54.76	57.45086673
A8	B1	C8	0	9.39	46.09	55.48	57.43684829
A8	B6	C1	0	3.43	53.73	57.16	57.35185987
A7	B5	C2	3.94	2.55	50.03	56.52	57.2845432
A3	B5	C3	13.68	2.55	38.45	54.68	57.21755703
A8	B6	C5	0	3.43	53.4	56.83	57.15074176
A5	B3	C4	9.66	0.44	44.47	54.57	57.07656539
A8	B2	C3	0	15.59	38.45	54.04	56.97400791
A5	B7	C4	9.66	0.86	44.47	54.99	56.95184972
A8	B2	C7	0	15.59	38.53	54.12	56.87190774

A8	B5	C1	0	2.55	53.73	56.28	56.7349329
A5	B8	C4	9.66	0	44.47	54.13	56.64879292
A8	B5	C5	0	2.55	53.4	55.95	56.44792792
A7	B7	C2	3.94	0.86	50.03	54.83	56.37741759
A3	B7	C7	13.68	0.86	38.53	53.07	56.35986593
A3	B3	C7	13.68	0.44	38.53	52.65	56.22602408
A3	B7	C3	13.68	0.86	38.45	52.99	56.0654011
A7	B3	C2	3.94	0.44	50.03	54.41	56.02537914
A3	B8	C7	13.68	0	38.53	52.21	55.99624907
A8	B1	C4	0	9.39	44.47	53.86	55.9885897
A3	B3	C3	13.68	0.44	38.45	52.57	55.98435103
A6	B6	C8	5.84	3.43	46.09	55.36	55.97007454
A3	B6	C6	13.68	3.43	34.79	51.9	55.96124695
A8	B7	C1	0	0.86	53.73	54.59	55.88585731
A3	B8	C3	13.68	0	38.45	52.13	55.88188837
A8	B3	C1	0	0.44	53.73	54.17	55.77251564
A7	B8	C2	3.94	0	50.03	53.97	55.76946499
A8	B2	C6	0	15.59	34.79	50.38	55.7005955
A6	B1	C7	5.84	9.39	38.53	53.76	55.66406365
A8	B7	C5	0	0.86	53.4	54.26	55.63964626
A8	B3	C5	0	0.44	53.4	53.84	55.59984068
A6	B5	C8	5.84	2.55	46.09	54.48	55.5099259
A8	B8	C1	0	0	53.73	53.73	55.33213036
A3	B5	C6	13.68	2.55	34.79	51.02	55.24394215
A6	B1	C3	5.84	9.39	38.45	53.68	55.19336733
A8	B8	C5	0	0	53.4	53.4	55.10232341
A6	B6	C4	5.84	3.43	44.47	53.74	54.86136053
A8	B6	C2	0	3.43	50.03	53.46	54.85150795
A4	B6	C7	11.24	3.43	38.53	53.2	54.82977788
A4	B6	C3	11.24	3.43	38.45	53.12	54.78231861
A7	B6	C8	3.94	3.43	46.09	53.46	54.66512007
A6	B3	C8	5.84	0.44	46.09	52.37	54.65575942
A8	B5	C2	0	2.55	50.03	52.58	54.50049871
A7	B1	C7	3.94	9.39	38.53	51.86	54.46797137
A6	B7	C8	5.84	0.86	46.09	52.79	54.27329641
A4	B5	C7	11.24	2.55	38.53	52.32	54.2359995
A6	B8	C8	5.84	0	46.09	51.93	54.19405853
A6	B5	C4	5.84	2.55	44.47	52.86	54.17223136
A7	B5	C8	3.94	2.55	46.09	52.58	54.16393556
A3	B3	C6	13.68	0.44	34.79	48.91	54.12006675
A3	B7	C6	13.68	0.86	34.79	49.33	54.00031074
A7	B1	C3	3.94	9.39	38.45	51.78	53.93422547
A3	B8	C6	13.68	0	34.79	48.47	53.86445377
A6	B1	C6	5.84	9.39	34.79	50.02	53.85712151

A4	B5	C3	11.24	2.55	38.45	52.24	53.8502176
A8	B3	C2	0	0.44	50.03	50.47	53.62935449
A8	B7	C2	0	0.86	50.03	50.89	53.59079163
A7	B6	C4	3.94	3.43	44.47	51.84	53.49593925
A5	B6	C7	9.66	3.43	38.53	51.62	53.42686448
A6	B3	C4	5.84	0.44	44.47	50.75	53.36867487
A4	B7	C7	11.24	0.86	38.53	50.63	53.30563125
A5	B6	C3	9.66	3.43	38.45	51.54	53.18305167
A8	B8	C2	0	0	50.03	50.03	53.0728454
A7	B3	C8	3.94	0.44	46.09	50.47	53.05076676
A6	B7	C4	5.84	0.86	44.47	51.17	53.02698125
A7	B7	C8	3.94	0.86	46.09	50.89	53.00829134
A4	B3	C7	11.24	0.44	38.53	50.21	52.94914382
A7	B8	C8	3.94	0	46.09	50.03	52.91705276
A4	B7	C3	11.24	0.86	38.45	50.55	52.90902899
A6	B8	C4	5.84	0	44.47	50.31	52.86449892
A4	B6	C6	11.24	3.43	34.79	49.46	52.85822617
A4	B8	C7	11.24	0	38.53	49.77	52.85502057
A5	B5	C7	9.66	2.55	38.53	50.74	52.75364871
A7	B1	C6	3.94	9.39	34.79	48.12	52.70949347
A7	B5	C4	3.94	2.55	44.47	50.96	52.54641922
A4	B8	C3	11.24	0	38.45	49.69	52.51436639
A4	B3	C3	11.24	0.44	38.45	50.13	52.44536506
A5	B5	C3	9.66	2.55	38.45	50.66	52.33070116
A4	B5	C6	11.24	2.55	34.79	48.58	52.04331864
A8	B6	C8	0	3.43	46.09	49.52	51.9966937
A8	B1	C7	0	9.39	38.53	47.92	51.93828569
A5	B7	C7	9.66	0.86	38.53	49.05	51.88207486
A5	B3	C7	9.66	0.44	38.53	48.63	51.84030472
A8	B1	C3	0	9.39	38.45	47.84	51.78005957
A7	B7	C4	3.94	0.86	44.47	49.27	51.68281302
A7	B3	C4	3.94	0.44	44.47	48.85	51.65124466
A8	B5	C8	0	2.55	46.09	48.64	51.45732398
A5	B8	C7	9.66	0	38.53	48.19	51.45557959
A5	B7	C3	9.66	0.86	38.45	48.97	51.38627076
A5	B3	C3	9.66	0.44	38.45	48.55	51.37935786
A7	B8	C4	3.94	0	44.47	48.41	51.32629484
A5	B6	C6	9.66	3.43	34.79	47.88	51.25722916
A5	B8	C3	9.66	0	38.45	48.11	51.19424535
A4	B7	C6	11.24	0.86	34.79	46.89	51.13861864
A4	B3	C6	11.24	0.44	34.79	46.47	50.90025254
A8	B6	C4	0	3.43	44.47	47.9	50.8177721
A4	B8	C6	11.24	0	34.79	46.03	50.69336356
A8	B3	C8	0	0.44	46.09	46.53	50.62759815

A8	B7	C8	0	0.86	46.09	46.95	50.52655287
A5	B5	C6	9.66	2.55	34.79	47	50.4293891
A8	B1	C6	0	9.39	34.79	44.18	50.32720774
A8	B8	C8	0	0	46.09	46.09	50.29282313
A8	B5	C4	0	2.55	44.47	47.02	50.13885573
A6	B6	C7	5.84	3.43	38.53	47.8	50.09854189
A6	B6	C3	5.84	3.43	38.45	47.72	49.85388186
A5	B3	C6	9.66	0.44	34.79	44.89	49.61101719
A5	B7	C6	9.66	0.86	34.79	45.31	49.57904503
A8	B3	C4	0	0.44	44.47	44.91	49.40458732
A8	B7	C4	0	0.86	44.47	45.33	49.14449811
A6	B5	C7	5.84	2.55	38.53	46.92	49.14038001
A5	B8	C6	9.66	0	34.79	44.45	49.13736655
A8	B8	C4	0	0	44.47	44.47	49.03010383
A6	B5	C3	5.84	2.55	38.45	46.84	48.84030768
A7	B6	C3	3.94	3.43	38.45	45.82	48.27980694
A7	B6	C7	3.94	3.43	38.53	45.9	48.25144838
A6	B6	C6	5.84	3.43	34.79	44.06	48.19510582
A6	B7	C7	5.84	0.86	38.53	45.23	48.09442151
A6	B3	C7	5.84	0.44	38.53	44.81	47.81659616
A7	B5	C7	3.94	2.55	38.53	45.02	47.75734539
A6	B7	C3	5.84	0.86	38.45	45.15	47.6950949
A6	B3	C3	5.84	0.44	38.45	44.73	47.56107074
A6	B8	C7	5.84	0	38.53	44.37	47.49857173
A6	B8	C3	5.84	0	38.45	44.29	47.36118187
A7	B5	C3	3.94	2.55	38.45	44.94	47.31561588
A6	B5	C6	5.84	2.55	34.79	43.18	47.23868537
A7	B7	C7	3.94	0.86	38.53	43.33	46.44085815
A7	B3	C7	3.94	0.44	38.53	42.91	46.37433831
A7	B6	C6	3.94	3.43	34.79	42.16	46.35385072
A7	B8	C7	3.94	0	38.53	42.47	46.34742819
A7	B7	C3	3.94	0.86	38.45	43.25	46.33331821
A6	B7	C6	5.84	0.86	34.79	41.49	46.2079282
A6	B3	C6	5.84	0.44	34.79	41.07	46.13401355
A7	B8	C3	3.94	0	38.45	42.39	46.12215469
A7	B3	C3	3.94	0.44	38.45	42.83	46.02227536
A6	B8	C6	5.84	0	34.79	40.63	45.85209759
A8	B6	C3	0	3.43	38.45	41.88	45.71644656
A8	B6	C7	0	3.43	38.53	41.96	45.68202178
A7	B5	C6	3.94	2.55	34.79	41.28	45.59350306
A8	B5	C7	0	2.55	38.53	41.08	45.32779076
A8	B5	C3	0	2.55	38.45	41	45.14091393
A7	B7	C6	3.94	0.86	34.79	39.59	44.57261581
A7	B3	C6	3.94	0.44	34.79	39.17	44.54515369

A7	B8	C6	3.94	0	34.79	38.73	44.35550102
A8	B6	C6	0	3.43	34.79	38.22	44.34560515
A8	B3	C7	0	0.44	38.53	38.97	44.07945042
A8	B3	C3	0	0.44	38.45	38.89	43.95727157
A8	B7	C7	0	0.86	38.53	39.39	43.95332833
A8	B8	C7	0	0	38.53	38.53	43.91950543
A8	B8	C3	0	0	38.45	38.45	43.85096091
A8	B7	C3	0	0.86	38.45	39.31	43.7743749
A8	B5	C6	0	2.55	34.79	37.34	43.68350552
A8	B3	C6	0	0.44	34.79	35.23	42.53063721
A8	B7	C6	0	0.86	34.79	35.65	42.42120476
A8	B8	C6	0	0	34.79	34.79	42.16689675