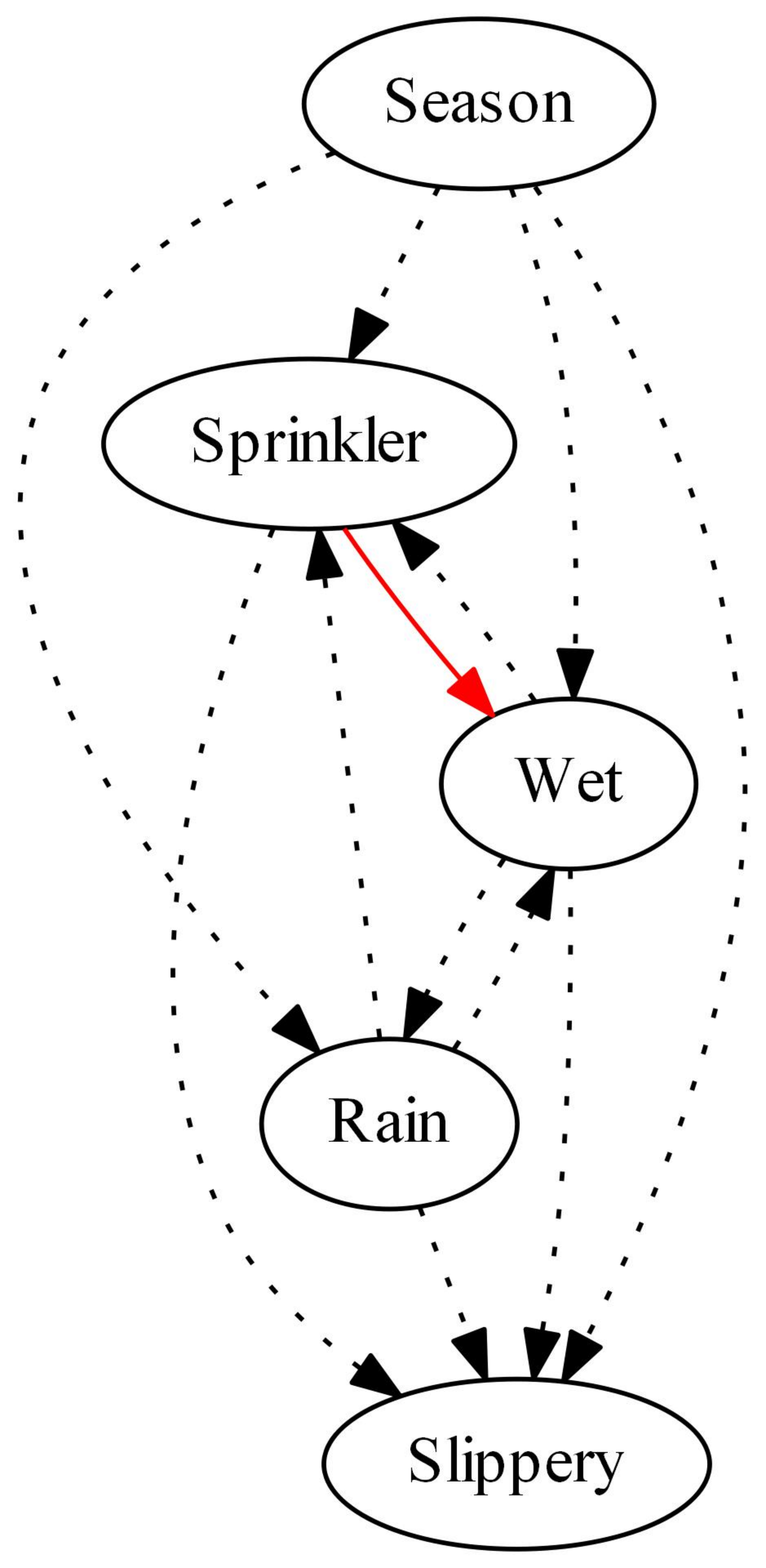
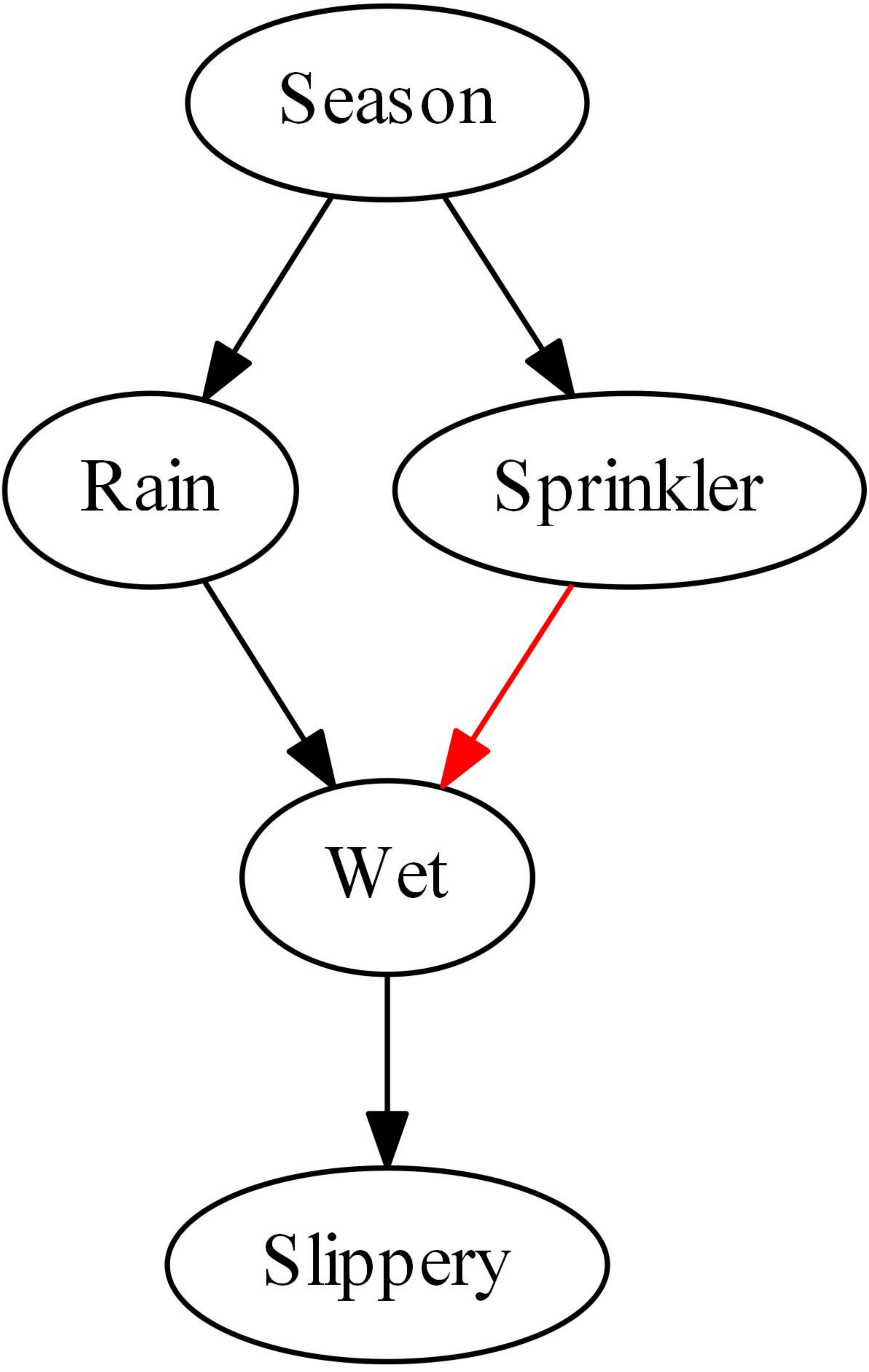
Report Guide

Page	Content	Explanation
2	Knowledge graph	Summarizes qualitative domain knowledge by indicating required (red), forbidden (missing) and remaining allowed (dotted) edges.
3	Causal graph	Shows the result of the causal discovery step. Edges indicate direct causal influences. Used for do-calculus.
4	Ignored allowed edges	Indicates edges that are not forbidden by domain knowledge but not deemed necessary by the causal discovery algorithm.
5	Heatmap (overall)	Visualizes all possible overall causal effects (ATE). How does Y change if we change X?
6	Heatmap (direct)	Visualizes all possible direct causal effects (NDE). How does Y change if we change X and keep all other variables fixed?
7	Heatmap (indirect)	Visualizes all possible indirect causal effects (NIE). Defined as the difference between overall and direct effect.
8	Ranking (overall)	Lists the 10 strongest overall causal effects.
9	Ranking (direct)	Lists the 10 strongest direct causal effects.
10	Ranking (indirect)	Lists the 10 strongest indirect causal effects.
11	Full table (overall)	Lists all overall causal effects. Ordering identical to the heatmaps.
12	Full table (direct)	Lists all direct causal effects. Ordering identical to the heatmaps.
13	Full table (indirect)	Lists all indirect causal effects. Ordering identical to the heatmaps.
14	Validations (passed)	Lists all causal effects that match our previous expectations and therefore increase confidence in the causal model.
15	Vaildations (failed)	Lists all causal effects that do not match our previous expectations and therefore decrease confidence in the causal model.

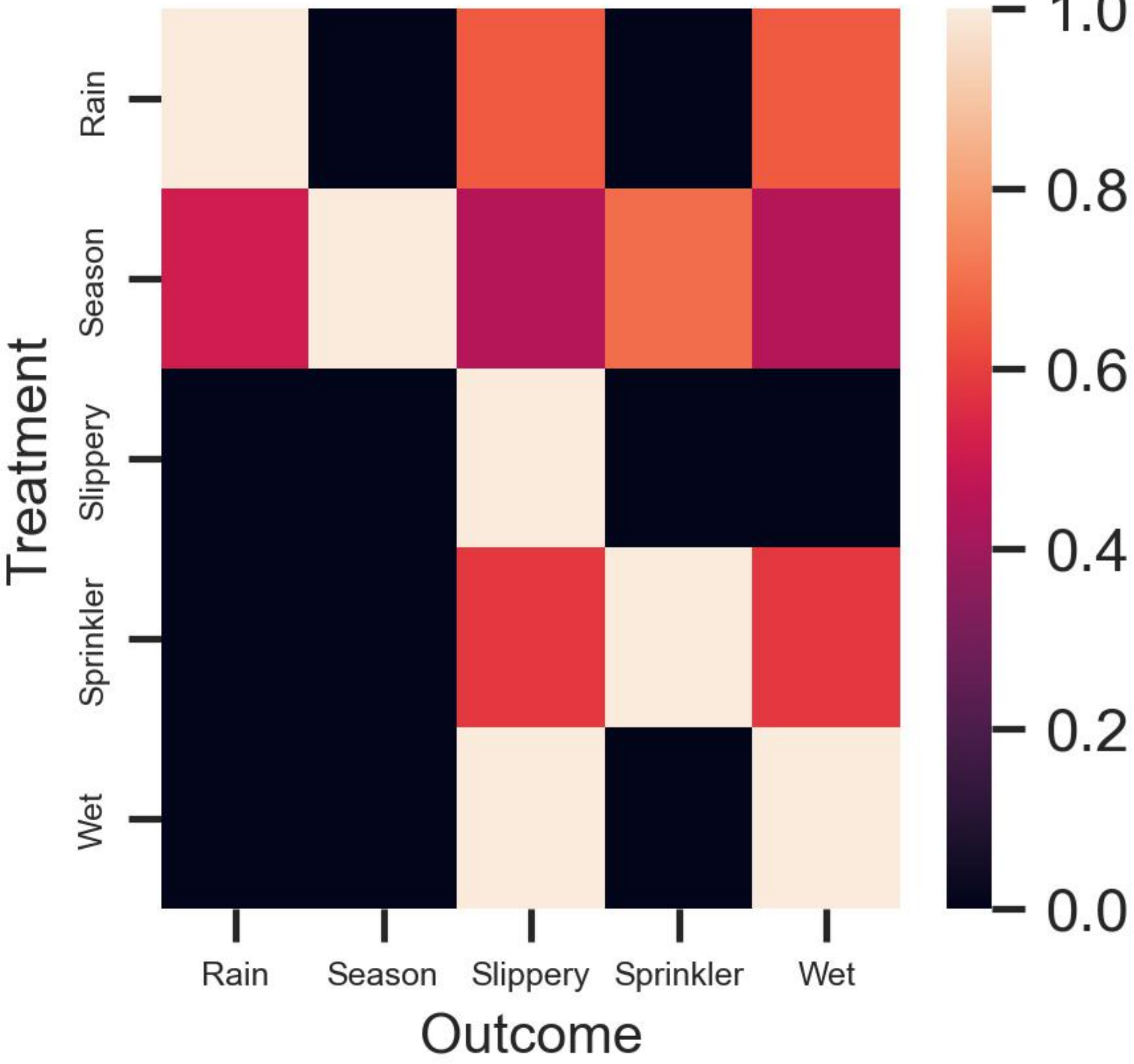

Season
Sprinkler
Wet
Rain
Slippery


Season
Rain
Sprinkler
Wet
Slippery

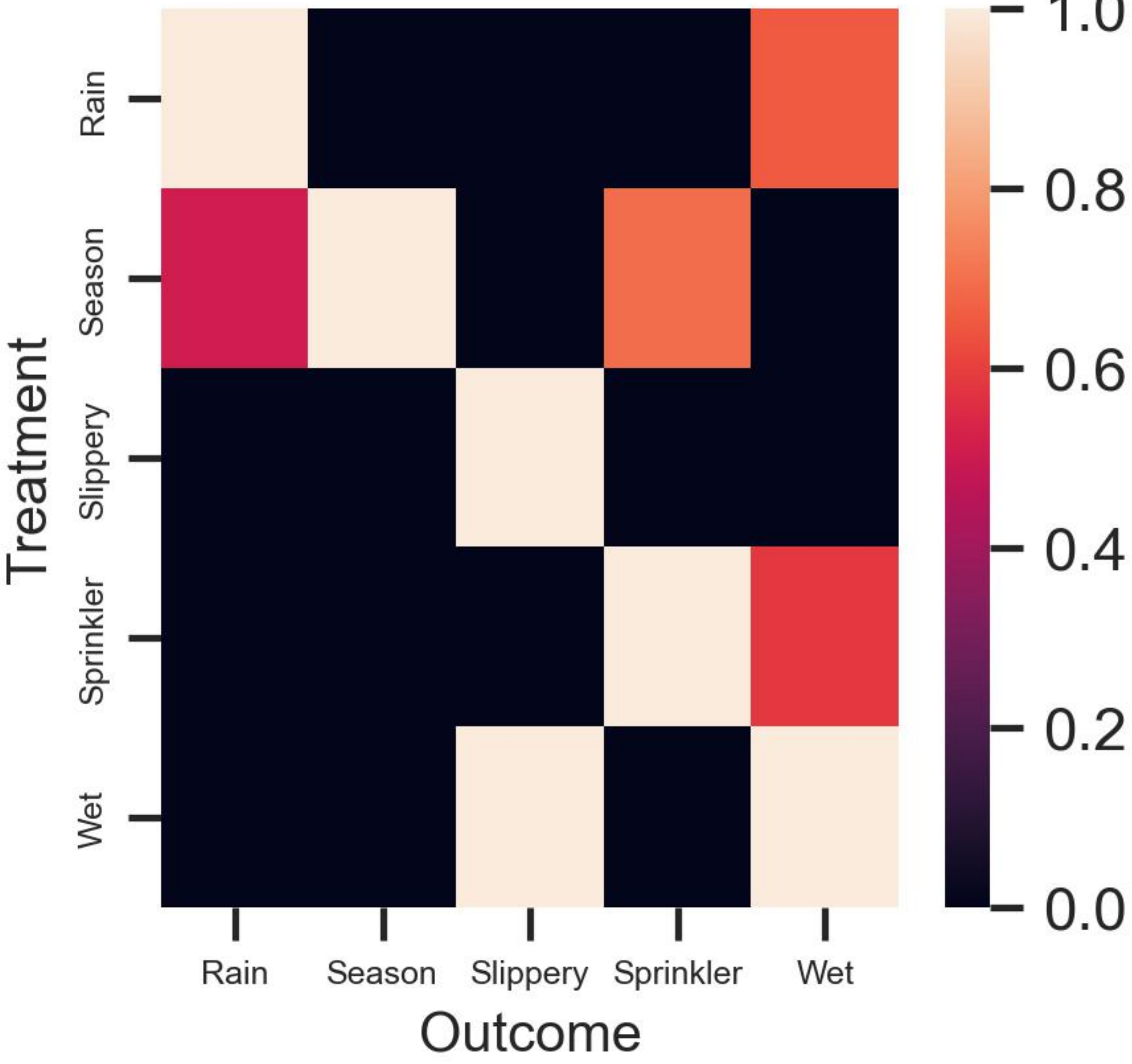
Ignored allowed edges:

Source	Destination
Rain	Sprinkler
Season	Slippery
Wet	Sprinkler
Sprinkler	Slippery
Wet	Rain
Rain	Slippery
Season	Wet

Overall Effects



Direct Effects



Indirect Effects

Treatment

Rain
Season
Slippery
Sprinkler
Wet

Rain
Season
Slippery
Sprinkler
Wet

Outcome

0.6
0.5
0.4
0.3
0.2
0.1
0.0

10 Largest Overall Effects:

Treatment	Outcome	Estimated_effect
Wet	Slippery	1.00
Season	Sprinkler	0.69
Rain	Slippery	0.65
Rain	Wet	0.65
Sprinkler	Slippery	0.58
Sprinkler	Wet	0.58
Season	Rain	0.51
Season	Slippery	0.44
Season	Wet	0.44
Slippery	Rain	0.00

10 Largest Direct Effects:

Treatment	Outcome	Estimated_effect
Wet	Slippery	1.00
Season	Sprinkler	0.69
Rain	Wet	0.65
Sprinkler	Wet	0.58
Season	Rain	0.51
Slippery	Rain	0.00
Slippery	Wet	0.00
Slippery	Season	0.00
Slippery	Sprinkler	0.00
Rain	Slippery	0.00

10 Largest Indirect Effects:

Treatment	Outcome	Estimated_effect
Rain	Slippery	0.65
Sprinkler	Slippery	0.58
Season	Slippery	0.32
Season	Wet	0.32
Slippery	Rain	0.00
Slippery	Wet	0.00
Slippery	Season	0.00
Slippery	Sprinkler	0.00
Rain	Wet	0.00
Rain	Season	0.00

Overall Effects

	Rain	Season	Slippery	Sprinkler	Wet
Rain	1.00	0.00	0.65	0.00	0.65
Season	0.51	1.00	0.44	0.69	0.44
Slippery	0.00	0.00	1.00	0.00	0.00
Sprinkler	0.00	0.00	0.58	1.00	0.58
Wet	0.00	0.00	1.00	0.00	1.00

Direct Effects

	Rain	Season	Slippery	Sprinkler	Wet
Rain	1.00	0.00	0.00	0.00	0.65
Season	0.51	1.00	0.00	0.69	0.00
Slippery	0.00	0.00	1.00	0.00	0.00
Sprinkler	0.00	0.00	0.00	1.00	0.58
Wet	0.00	0.00	1.00	0.00	1.00

Indirect Effects

	Rain	Season	Slippery	Sprinkler	Wet
Rain	0.00	0.00	0.65	0.00	0.00
Season	0.00	0.00	0.32	0.00	0.32
Slippery	0.00	0.00	0.00	0.00	0.00
Sprinkler	0.00	0.00	0.58	0.00	0.00
Wet	0.00	0.00	0.00	0.00	0.00

Passed validations (2/4):

Effect Type	Treatment	Outcome	Estimated	Expected
overall	Wet	Slippery	1.00	greater than 0
overall	Sprinkler	Wet	0.58	greater than 0

Failed validations (2/4):

Effect Type	Treatment	Outcome	Estimated	Expected
direct	Sprinkler	Rain	0.00	less than 0
indirect	Slippery	Season	0.00	between 0.2 and 0.4