

Supplementary Material for “Comparative analysis of discretization methods in Bayesian networks”

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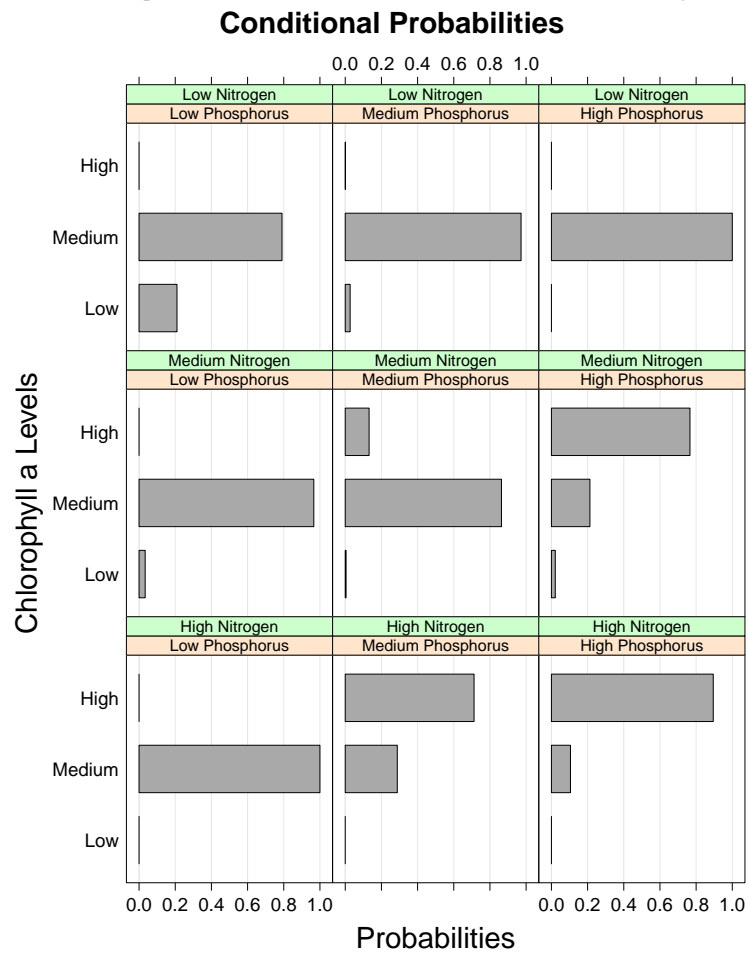
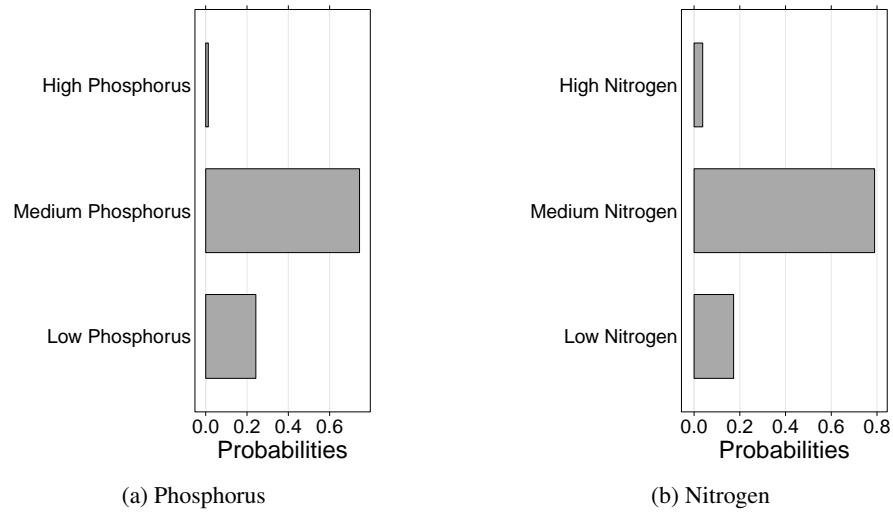
The following figures are supplementary material to the tables and material in the main document. The code and data are available online (Nojavan A. et al., 2015).

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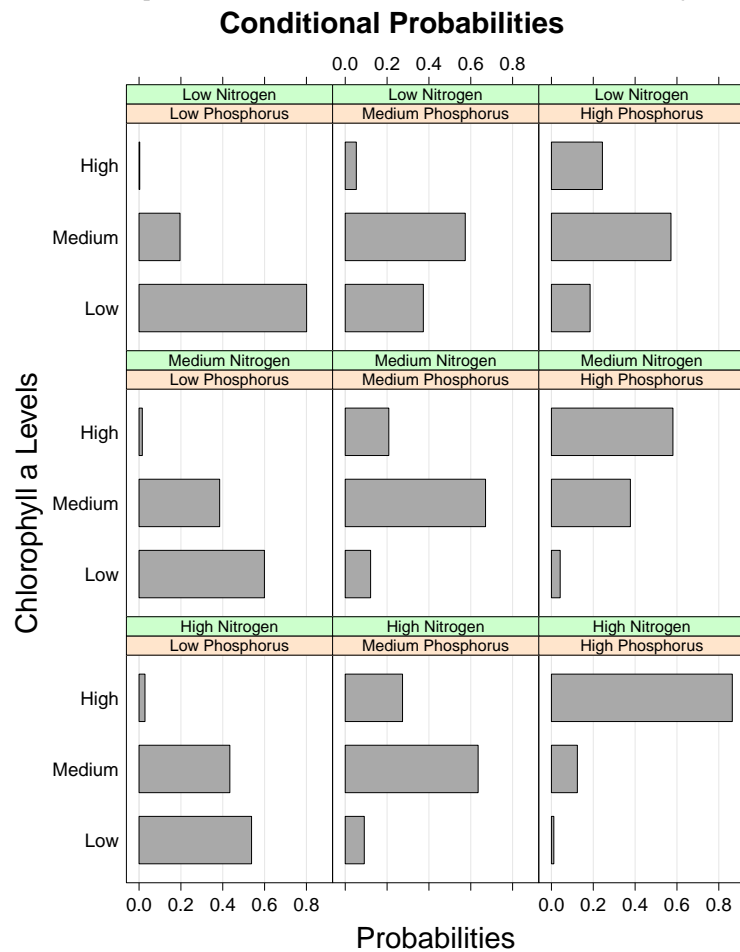
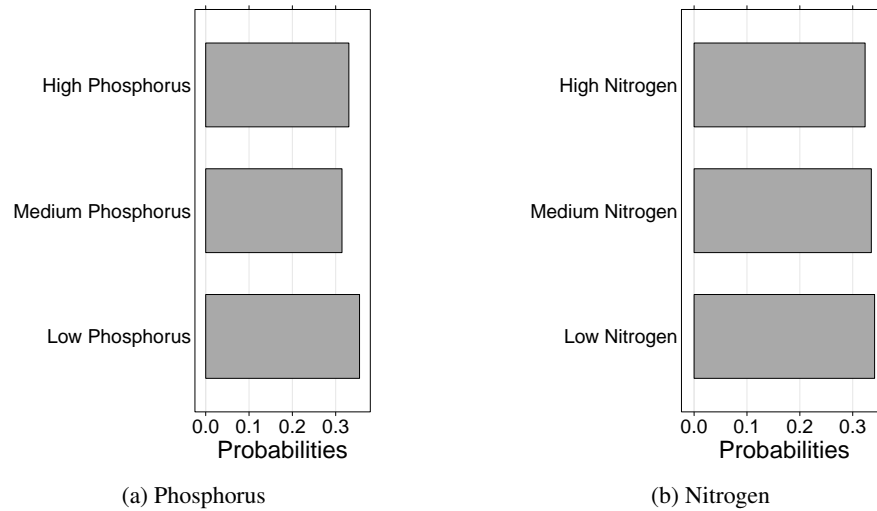
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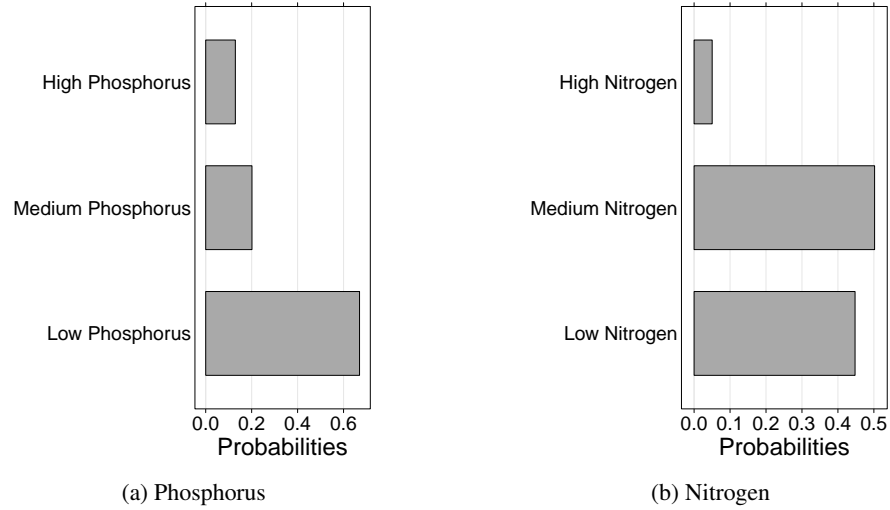
(c) Chlorophyll *a*

Figure S1: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the equal interval method into three intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

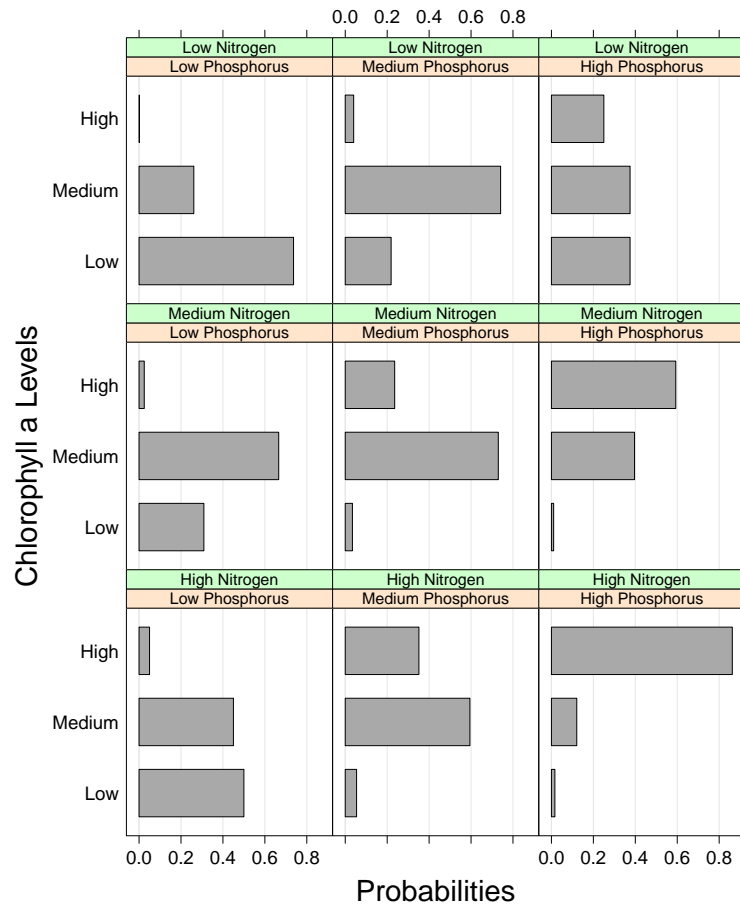


(c) Chlorophyll *a*

Figure S2: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the equal quantile method into three intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

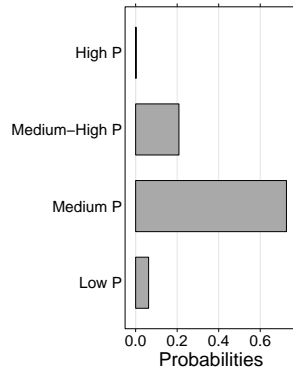


Conditional Probabilities

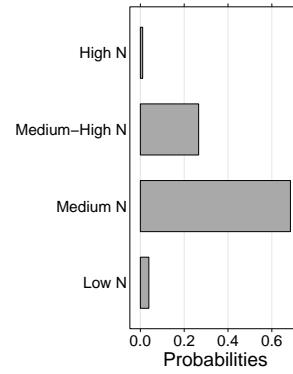


(c) Chlorophyll *a*

Figure S3: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the moment matching method into three intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

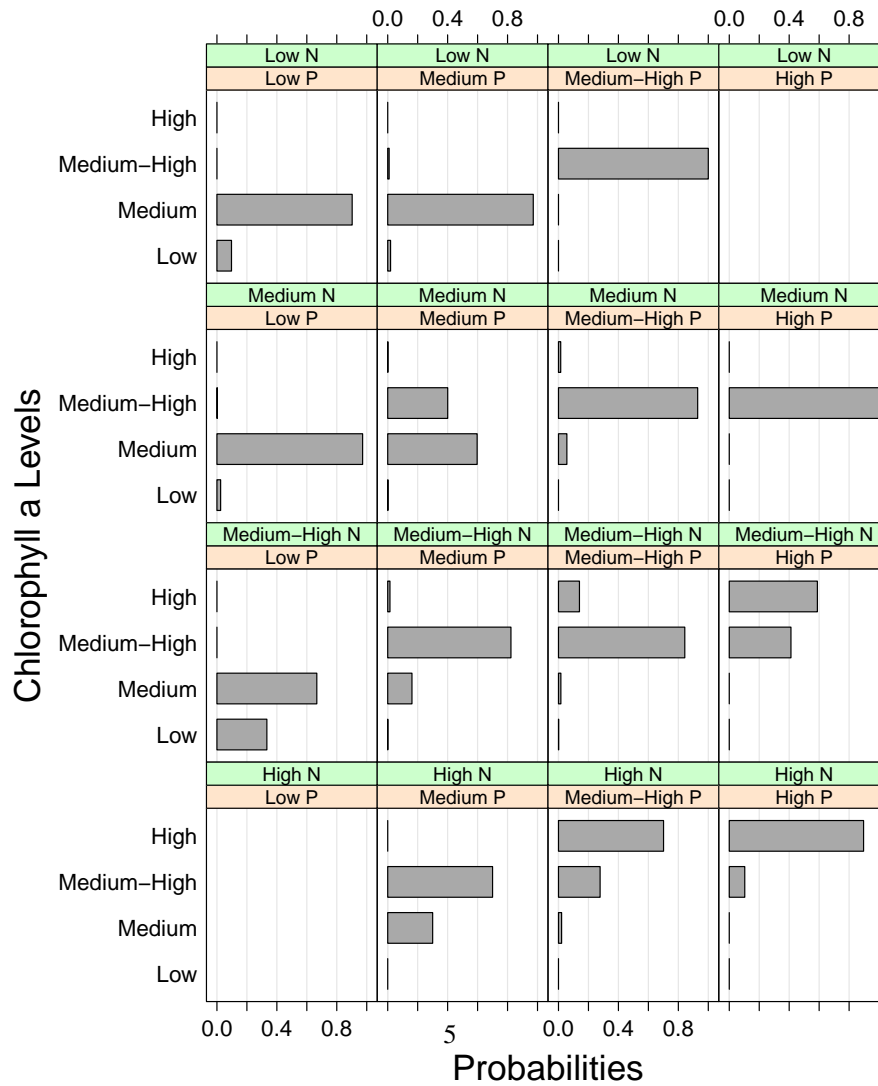


(a) Phosphorus



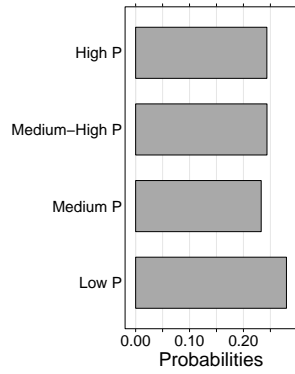
(b) Nitrogen

Conditional Probabilities

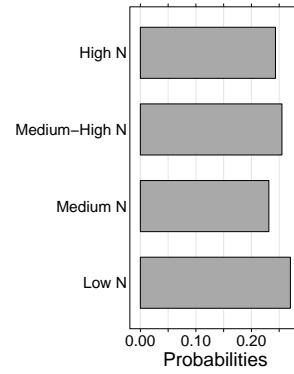


(c) Chlorophyll *a*

Figure S4: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the equal interval method into four intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

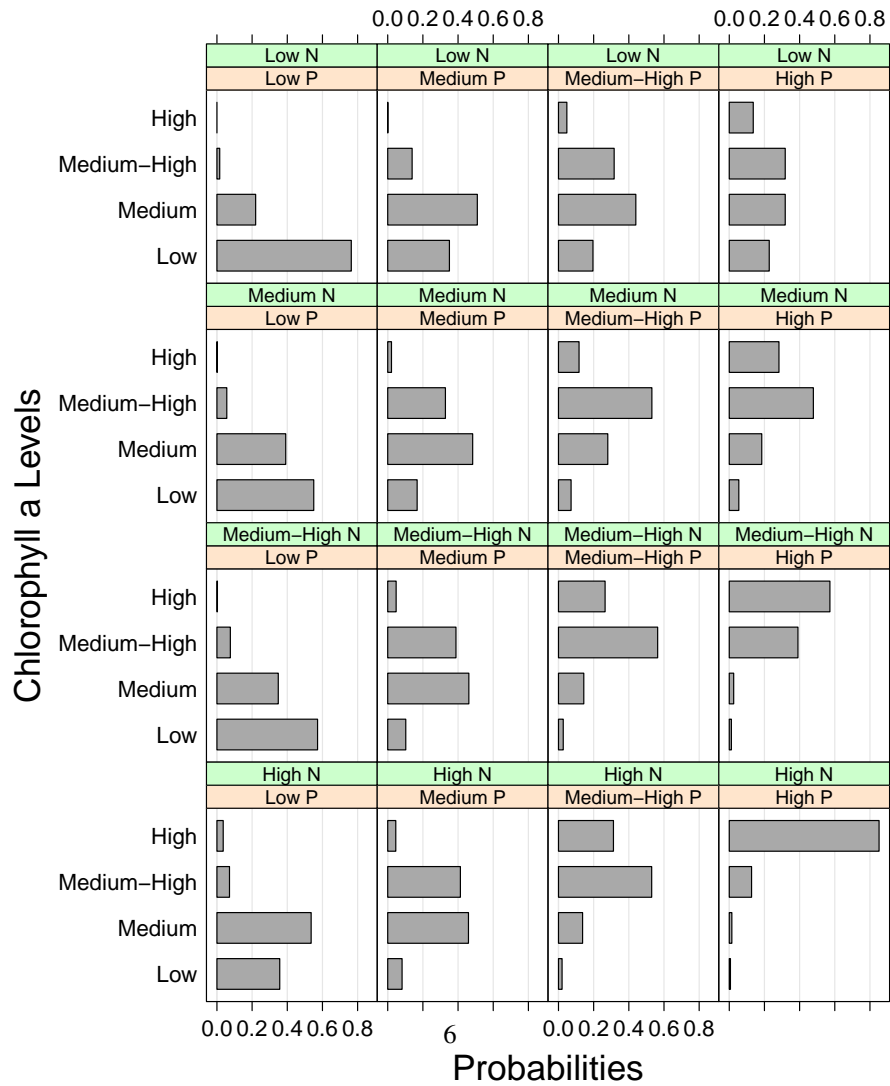


(a) Phosphorus



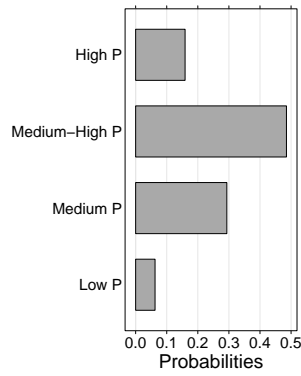
(b) Nitrogen

Conditional Probabilities

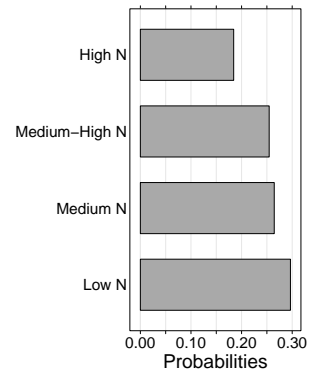


(c) Chlorophyll *a*

Figure S5: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the equal quantile method into four intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

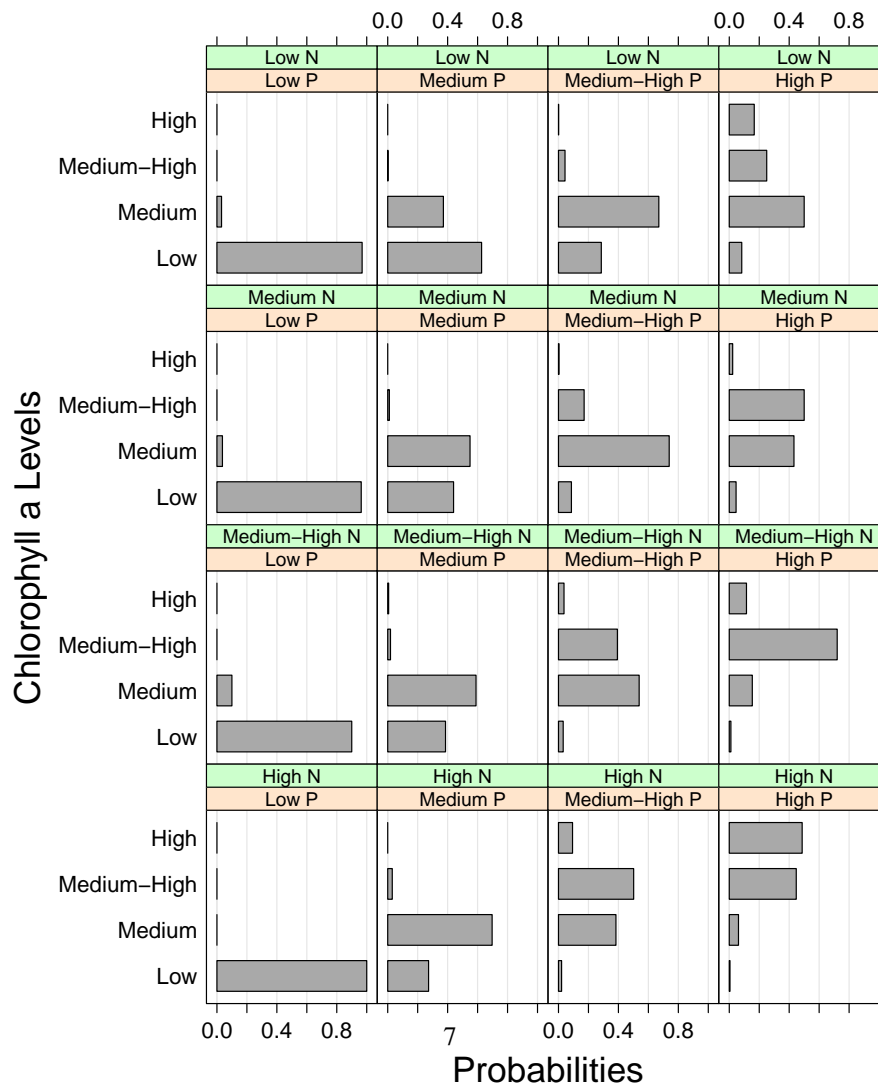


(a) Phosphorus



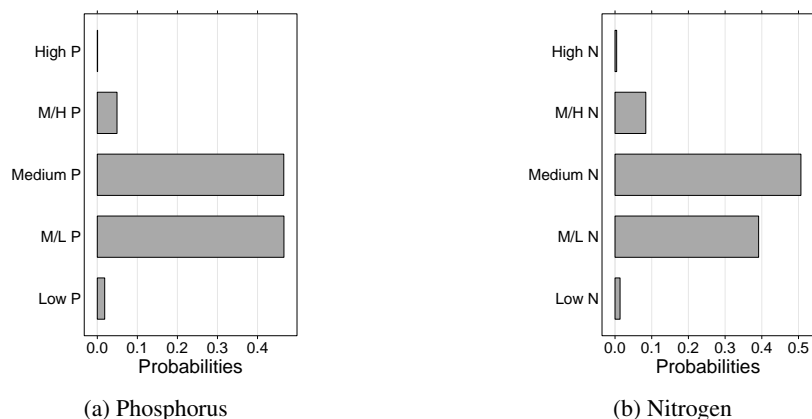
(b) Nitrogen

Conditional Probabilities

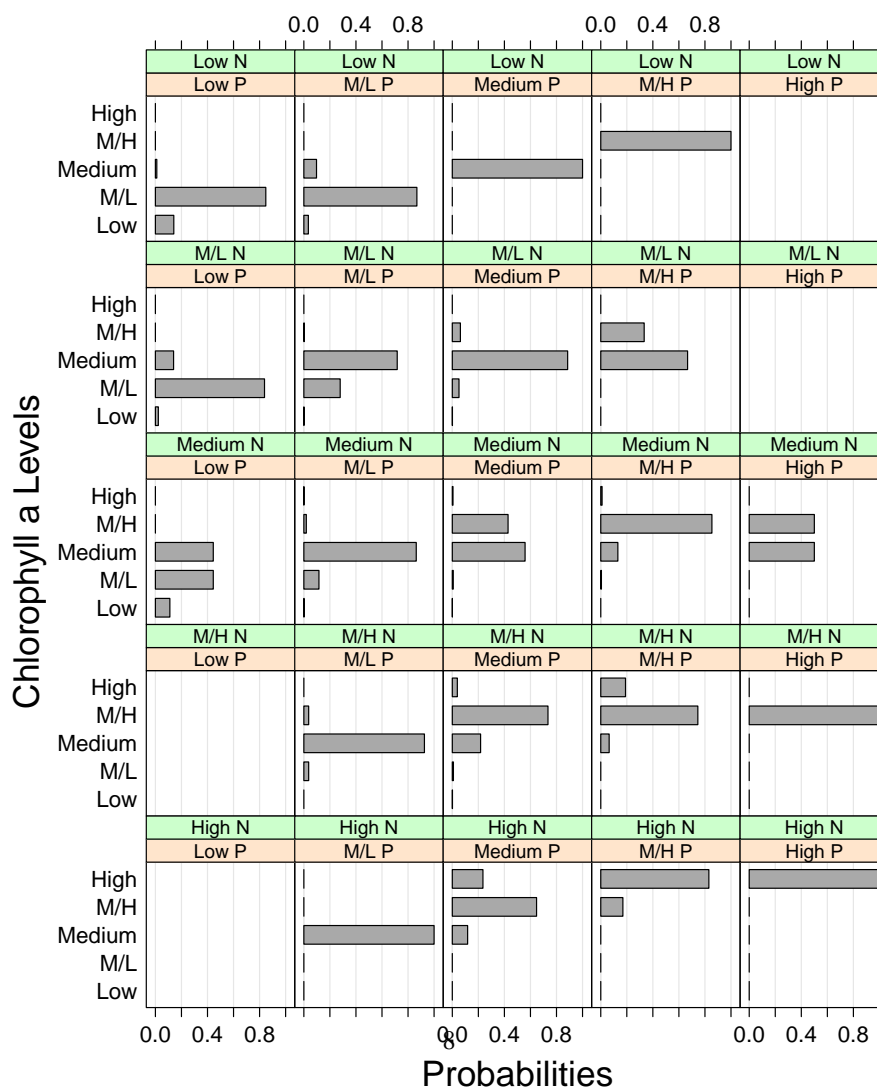


(c) Chlorophyll *a*

Figure S6: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the moment matching method into four intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

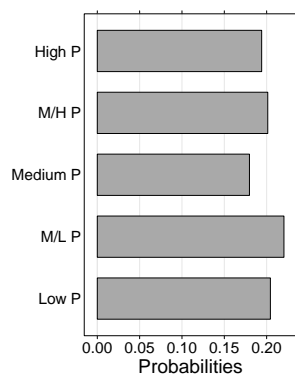


Conditional Probabilities

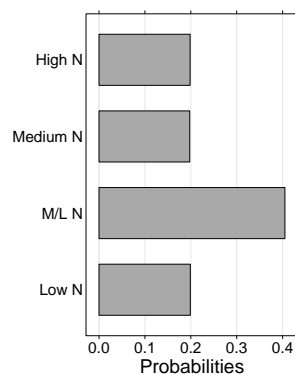


(c) Chlorophyll *a*

Figure S7: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the equal interval method into five intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

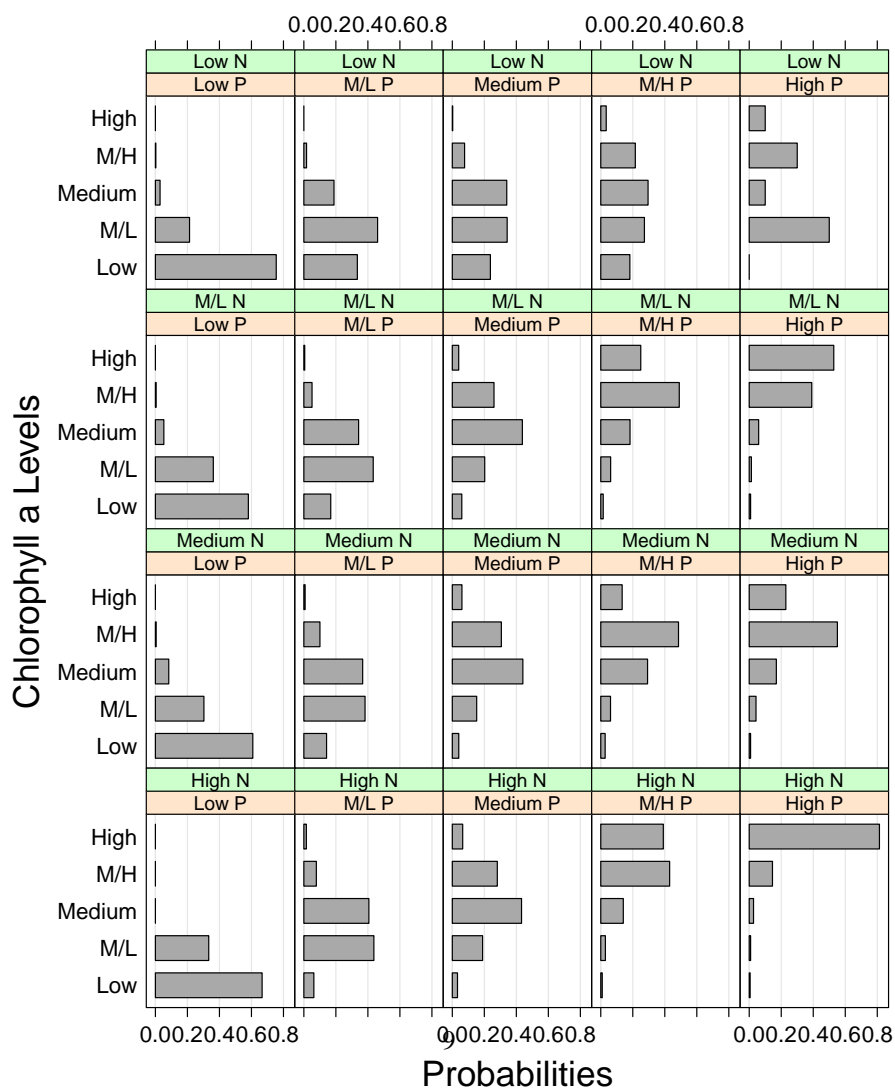


(a) Phosphorus



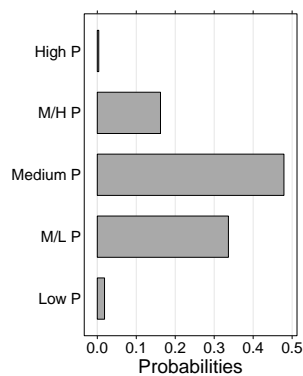
(b) Nitrogen

Conditional Probabilities

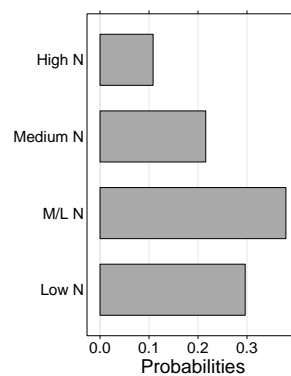


(c) Chlorophyll a

Figure S8: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the equal quantile method into five intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

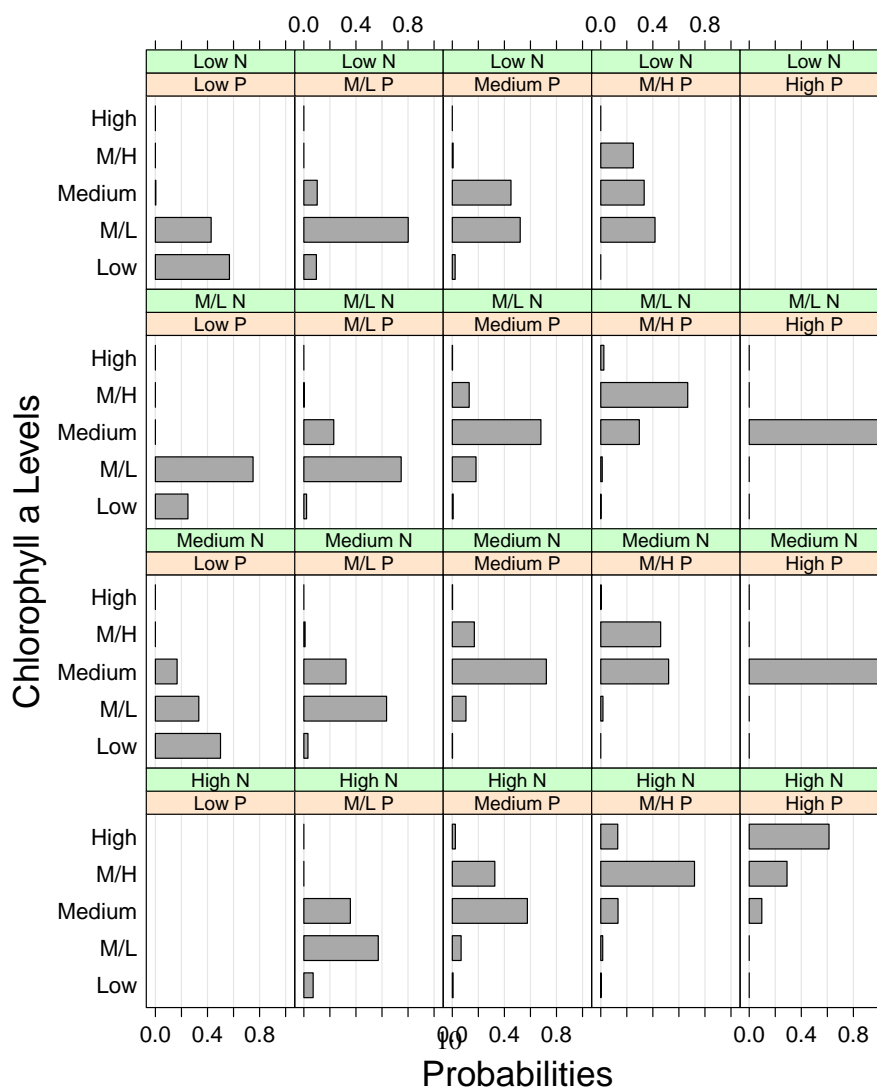


(a) Phosphorus



(b) Nitrogen

Conditional Probabilities



(c) Chlorophyll *a*

Figure S9: Conditional Probability Tables (CPTs) depicted by bar charts for phosphorus, nitrogen, and chlorophyll *a* for the Bayesian network fitted to the data discretized using the moment matching method into five intervals. Figure (c) shows the probabilities for chlorophyll *a* conditional on phosphorus (increasing by row) and nitrogen (increasing by column).

References

Farnaz Nojavan A., Song S Qian, and Craig A Stow. R code for “Comparative analysis of discretization methods in Bayesian networks”. 2015. doi: 10.5281/zenodo.34846.