Blending Model

Sets I Oils

Data

$IsVeg_i$ { True if oil i is vegetable, $i \in I$
False if not

$Cost_i$ cost ($/tonne) of oil $i \in I$

H_i hardness of oil $i \in I$

Sell sell price ($/tonne)

MaxH, MinH max and min hardness of blend

MaxVeg max processing of veg oils (tonnes)

MaxNonveg ——— " ——— non-veg ——— " ———

Variables x_i amount of oil $i \in I$ to process (tonnes)

Objective Max $\sum_{i \in I} (Sell - Cost_i) x_i$

Constraints

$$\sum_{\substack{i \in I \\ IsVeg_i}} x_i \leq MaxVeg$$

$$\sum_{\substack{i \in I \\ \text{not } IsVeg_i}} x_i \leq MaxNonveg$$

$$\sum_{i \in I} (H_i - MinH) x_i \geq 0$$

$$\sum_{i \in I} (H_i - MaxH) x_i \leq 0$$

$$x_i \geq 0 \quad \forall i \in I$$