Agriplots Linear Programming Model

# Decision Variables

* : Binary variable, equals 1 if a PV is installed at location , 0 otherwise.

# Objective Function

# Constraints

# Explanations

* The **objective function** maximizes the total energy production from the installed PV systems at various locations.
* **Constraint (1)** ensures that the total energy production for each city does not exceed its energy consumption limit.
* **Constraint (2)** limits the energy produced within each eshkol (group) to a certain percentage of the overall energy production.
* **Constraint (3)** places an upper bound on the total area used for PV installations.
* **Constraint (4)** ensures that the total influence on crops from installed PV systems remains above a certain threshold.
* **Constraint (5)** guarantees that the total revenue from the PV systems meets or exceeds the required minimum revenue.
* **Constraint (6)** requires that each decision variable is binary, meaning that a PV system is either installed or not at each location.