Risk Object: New Risk Object [New Risk Object_11]

Model: BN_Model_Iron_170613.cmp

Generated: 4/5/18 1:02 AM

VOI Configuration	
Decision Node	Farmers have trees [M0]
Uncertainty Nodes	Ability to hire labor [Ability_to_hire_labor] Ability to irrigate [M0_1_1_3_1_1_2] Annual mean temperatures [Annual_mean_temperatures] Biophysical suitability [M0_1_1_3] Effect of climatic constraints [M0_1_1_4] Effect of soil fertility constraints [Effect_of_soil_fertility_constraints] Farm income [Farm_income] Food preferences [Food_preferences] Fruit available per person (kg_yr) [Fruit_available_per_person__kg_yr_] Fruit consumed per person (kg_yr) [Fruit_consumed_per_person__kg_yr_] Fruit consumption preference per person (kg_yr) [Fruit_consumption_preference_per_person__kg_yr_] Fruit produced per person (kg_yr) [Fruit_produced_per_person__kg_yr_] Fruit production area (%) [Fruit_production_area____] Fruit production area per person (ha) [Fruit_production_area_per_person__ha_] Fruit species [M0_1_1_3_1_1_1] Fruit yield (kg_ha_yr) [Fruit_yield__kg_ha_yr_] Fruit yield potential (kg_ha_yr) [Fruit_yield_potential__kg_ha_yr_] Genetic yield potential (kg_ha_yr) [Genetic_yield_potential__kg_ha_yr_] Germplasm quality [M0_1_1_2_1] Handling, storage and processing quality (PHL) [Handling__storage_and_processing_quality__PHL_] Household composition (nutrient demand groups) [Household_composition__nutrient_demand_groups_] Household labor availability [Household_labor_availability] Household size [Household_size] Iron content fruit (mg_kg) [Iron_content_fruit__mg_kg_] Iron from fruits per person (mg_yr) [Iron_from_fruits_per_person__mg_yr_] Iron from off_farm (mg yr) [Iron_from_off_farm__mg_yr_] Iron from on farm (mg_yr) [Iron_from_on_farm__mg_yr_] Iron intake (mg_yr) [Iron_intake__mg_yr_] Iron needs per person (mg yr) [Iron_needs_per_person__mg_yr_] Knowledge and skills [Knowledge_and_skills] Labor constraints to irrigation [Labor_constraints_to_irrigation] Labor constraints to pest and disease management [Labor_constraints_to_pest_and_disease_management] Labor constraints to postharvest and storage [Labor_constraints_to_postharvest_and_storage] Labor constraints to Soil Fertility Management (SFM) [Labor_constraints_to_Soil_Fertility_Management__SFM_] Losses due to biophysical unsuitability (%) [Losses_due_to_biophysical_unsuitability____] Losses due to pests and diseases (%) [Losses_due_to_pests_and_diseases____] Natural soil fertility [M0_1_1_1_1_1_4] Non_fruit consumption potential per person (kg_yr) [Non_fruit_consumption_potential_per_person__kg_yr_] Non_fruit production area per person (ha) [Non_fruit_production_area_per_person__ha_] Non_fruit yield (kg_ha_yr) [Non_fruit_yield__kg_ha_yr_] Non_fruit yield per person (kg_yr) [Non_fruit_yield_per_person__kg_yr_] Off farm product consumed per person (kg_yr) [Off_farm_product_consumed_per_person__kg_yr_] On farm product consumed per person (kg_yr) [On_farm_product_consumed_per_person__kg_yr_] Other off_farm Iron content (mg_kg) [Other_off_farm_Iron_content__mg_kg_] Other on_farm Iron content (mg_kg) [Other_on_farm_Iron_content__mg_kg_] Pest & disease management effectiveness [Pest___disease_management_effectiveness] Pest & disease management inputs [Pest___disease_management_inputs] Pest and disease pressure [Pest_and_disease_pressure] PHL (%) [PHL____] Rainfall adequacy [Rainfall_adequacy] Rainfall regime [Rainfall_regime] SFM quality [SFM_quality] Soil fertility [M0_1_1_4_1] Soil fertility needs [M0_1_1_3_1_1_1_2] Temperature suitability [Temperature_suitability] Total production area (ha) [Total_production_area__ha_] Total production area per person (ha) [Total_production_area_per_person__ha_] Water availability [Water_availability] Water needs [Water_needs] Water sufficiency [Water_sufficiency]
Utility Node	Iron gap per person (mg_yr) [Iron_gap_per_person__mg_yr_]
Optimisation Type	maximum
Scenario	Scenario 1

Total build time: 27091885 ms

Expected Maximum Value (Utility|Decision) – EMV

Expected Value Given Perfect Information – EV|PI

Expected Value of (Partially) Perfect Information – EV(P)PI

Click on the name of an Uncertainty node to see detailed utility table showing utility values per each combination of Uncertainty and Decision states.

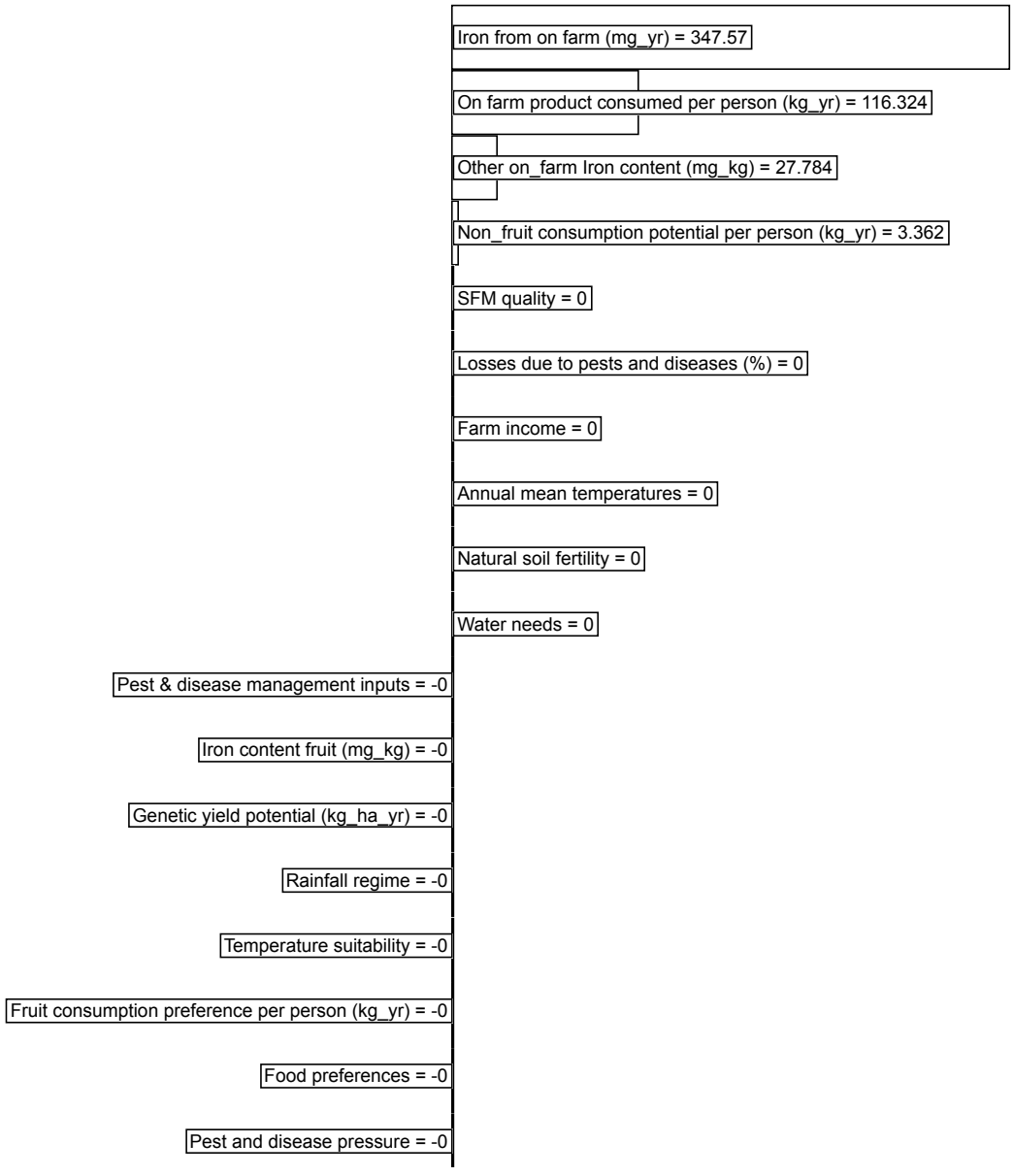
EMV	**458.241**
	458.241

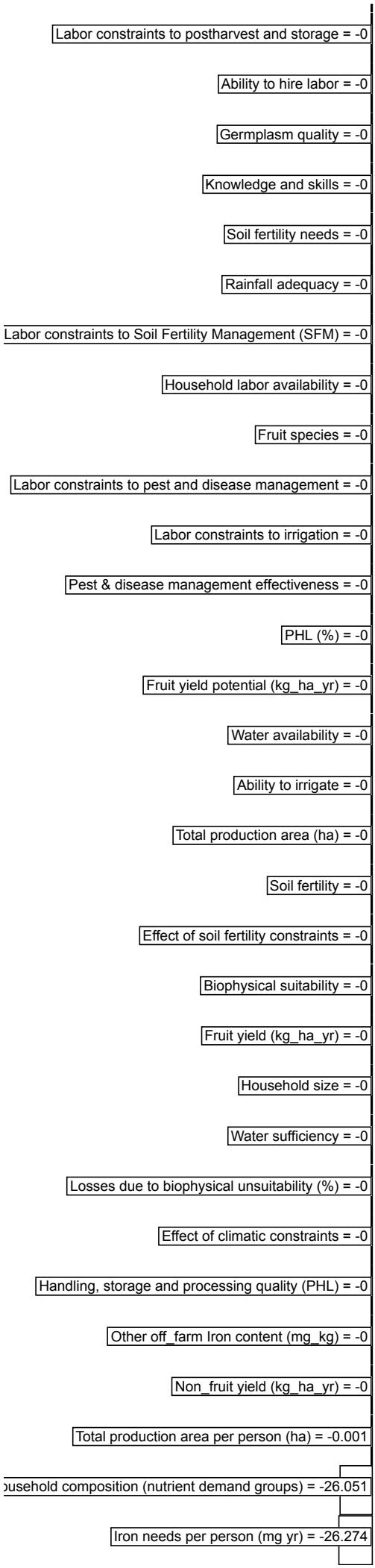
Ability to hire labor [Ability_to_hire_labor]	EV|PI	
	EV(P)PI	-0
Ability to irrigate [M0_1_1_3_1_1_2]	EV|PI	458.241
	EV(P)PI	-0
Annual mean temperatures [Annual_mean_temperatures]	EV|PI	458.241
	EV(P)PI	0
Biophysical suitability [M0_1_1_3]	EV|PI	458.241
	EV(P)PI	-0
Effect of climatic constraints [M0_1_1_4]	EV|PI	458.241
	EV(P)PI	-0
Effect of soil fertility constraints [Effect_of_soil_fertility_constraints]	EV|PI	458.241
	EV(P)PI	-0
Farm income [Farm_income]	EV|PI	458.241
	EV(P)PI	0
Food preferences [Food_preferences]	EV|PI	458.241
	EV(P)PI	-0
Fruit available per person (kg_yr) [Fruit_available_per_person__kg_yr_]	EV|PI	-67.591
	EV(P)PI	-525.832
Fruit consumed per person (kg_yr) [Fruit_consumed_per_person__kg_yr_]	EV|PI	-62.945
	EV(P)PI	-521.186
Fruit consumption preference per person (kg_yr) [Fruit_consumption_preference_per_person__kg_yr_]	EV|PI	458.241
	EV(P)PI	-0
Fruit produced per person (kg_yr) [Fruit_produced_per_person__kg_yr_]	EV|PI	-66.106
	EV(P)PI	-524.348
Fruit production area (%) [Fruit_production_area____]	EV|PI	-67.645
	EV(P)PI	-525.886
Fruit production area per person (ha) [Fruit_production_area_per_person__ha_]	EV|PI	-67.643
	EV(P)PI	-525.884
Fruit species [M0_1_1_3_1_1_1]	EV|PI	458.241
	EV(P)PI	-0
Fruit yield (kg_ha_yr) [Fruit_yield__kg_ha_yr_]	EV|PI	458.241
	EV(P)PI	-0
Fruit yield potential (kg_ha_yr) [Fruit_yield_potential__kg_ha_yr_]	EV|PI	458.241
	EV(P)PI	-0
Genetic yield potential (kg_ha_yr) [Genetic_yield_potential__kg_ha_yr_]	EV|PI	458.241
	EV(P)PI	-0
Germplasm quality [M0_1_1_2_1]	EV|PI	458.241
	EV(P)PI	-0
Handling, storage and processing quality (PHL) [Handling__storage_and_processing_quality__PHL_]	EV|PI	458.241
	EV(P)PI	-0
Household composition (nutrient demand groups) [Household_composition__nutrient_demand_groups_]	EV|PI	432.191
	EV(P)PI	-26.051
Household labor availability [Household_labor_availability]	EV|PI	458.241
	EV(P)PI	-0
Household size [Household_size]	EV|PI	458.241
	EV(P)PI	-0
Iron content fruit (mg_kg) [Iron_content_fruit__mg_kg_]	EV|PI	458.241
	EV(P)PI	-0
Iron from fruits per person (mg_yr) [Iron_from_fruits_per_person__mg_yr_]	EV|PI	-62.616
	EV(P)PI	-520.857

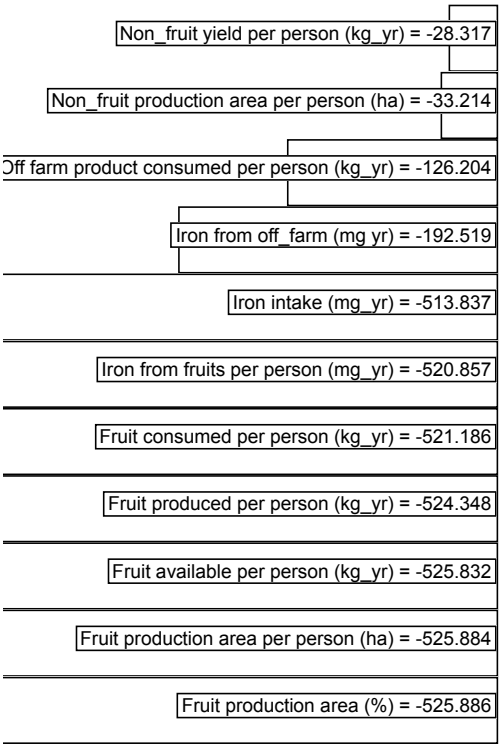
Iron from off_farm (mg yr) [Iron_from_off_farm__mg_yr_]	EV|PI	265.722
	EV(P)PI	-192.519
Iron from on farm (mg_yr) [Iron_from_on_farm__mg_yr_]	EV|PI	805.812
	EV(P)PI	347.57
Iron intake (mg_yr) [Iron_intake__mg_yr_]	EV|PI	-55.595
	EV(P)PI	-513.837
Iron needs per person (mg yr) [Iron_needs_per_person__mg_yr_]	EV|PI	431.967
	EV(P)PI	-26.274
Knowledge and skills [Knowledge_and_skills]	EV|PI	458.241
	EV(P)PI	-0
Labor constraints to irrigation [Labor_constraints_to_irrigation]	EV|PI	458.241
	EV(P)PI	-0
Labor constraints to pest and disease management [Labor_constraints_to_pest_and_disease_management]	EV|PI	458.241
	EV(P)PI	-0
Labor constraints to postharvest and storage [Labor_constraints_to_postharvest_and_storage]	EV|PI	458.241
	EV(P)PI	-0
Labor constraints to Soil Fertility Management (SFM) [Labor_constraints_to_Soil_Fertility_Management__SFM_]	EV|PI	458.241
	EV(P)PI	-0
Losses due to biophysical unsuitability (%) [Losses_due_to_biophysical_unsuitability____]	EV|PI	458.241
	EV(P)PI	-0
Losses due to pests and diseases (%) [Losses_due_to_pests_and_diseases____]	EV|PI	458.241
	EV(P)PI	0
Natural soil fertility [M0_1_1_1_1_1_4]	EV|PI	458.241
	EV(P)PI	0
Non_fruit consumption potential per person (kg_yr) [Non_fruit_consumption_potential_per_person__kg_yr_]	EV|PI	461.603
	EV(P)PI	3.362
Non_fruit production area per person (ha) [Non_fruit_production_area_per_person__ha_]	EV|PI	425.027
	EV(P)PI	-33.214
Non_fruit yield (kg_ha_yr) [Non_fruit_yield__kg_ha_yr_]	EV|PI	458.241
	EV(P)PI	-0
Non_fruit yield per person (kg_yr) [Non_fruit_yield_per_person__kg_yr_]	EV|PI	429.924
	EV(P)PI	-28.317
Off farm product consumed per person (kg_yr) [Off_farm_product_consumed_per_person__kg_yr_]	EV|PI	332.038
	EV(P)PI	-126.204
On farm product consumed per person (kg_yr) [On_farm_product_consumed_per_person__kg_yr_]	EV|PI	574.565
	EV(P)PI	116.324
Other off_farm Iron content (mg_kg) [Other_off_farm_Iron_content__mg_kg_]	EV|PI	458.241
	EV(P)PI	-0
Other on_farm Iron content (mg_kg) [Other_on_farm_Iron_content__mg_kg_]	EV|PI	486.026
	EV(P)PI	27.784
Pest & disease management effectiveness [Pest___disease_management_effectiveness]	EV|PI	458.241
	EV(P)PI	-0
Pest & disease management inputs [Pest___disease_management_inputs]	EV|PI	458.241
	EV(P)PI	-0
Pest and disease pressure [Pest_and_disease_pressure]	EV|PI	458.241
	EV(P)PI	-0
PHL (%) [PHL____]	EV|PI	458.241
	EV(P)PI	-0
Rainfall adequacy [Rainfall_adequacy]	EV|PI	458.241
	EV(P)PI	-0

Rainfall regime [Rainfall_regime]	**EV|PI**	458.241
	EV(P)PI	-0
SFM quality [SFM_quality]	**EV|PI**	458.241
	EV(P)PI	0
Soil fertility [M0_1_1_4_1]	**EV|PI**	458.241
	EV(P)PI	-0
Soil fertility needs [M0_1_1_3_1_1_1_2]	**EV|PI**	458.241
	EV(P)PI	-0
Temperature suitability [Temperature_suitability]	**EV|PI**	458.241
	EV(P)PI	-0
Total production area (ha) [Total_production_area__ha_]	**EV|PI**	458.241
	EV(P)PI	-0
Total production area per person (ha) [Total_production_area_per_person__ha_]	**EV|PI**	458.241
	EV(P)PI	-0.001
Water availability [Water_availability]	**EV|PI**	458.241
	EV(P)PI	-0
Water needs [Water_needs]	**EV|PI**	458.241
	EV(P)PI	0
Water sufficiency [Water_sufficiency]	**EV|PI**	458.241
	EV(P)PI	-0

EV(P)PI Graph




Labor constraints to postharvest and storage = -0
Ability to hire labor = -0
Germplasm quality = -0
Knowledge and skills = -0
Soil fertility needs = -0
Rainfall adequacy = -0
Labor constraints to Soil Fertility Management (SFM) = -0
Household labor availability = -0
Fruit species = -0
Labor constraints to pest and disease management = -0
Labor constraints to irrigation = -0
Pest & disease management effectiveness = -0
PHL (%) = -0
Fruit yield potential (kg_ha_yr) = -0
Water availability = -0
Ability to irrigate = -0
Total production area (ha) = -0
Soil fertility = -0
Effect of soil fertility constraints = -0
Biophysical suitability = -0
Fruit yield (kg_ha_yr) = -0
Household size = -0
Water sufficiency = -0
Losses due to biophysical unsuitability (%) = -0
Effect of climatic constraints = -0
Handling, storage and processing quality (PHL) = -0
Other off_farm Iron content (mg_kg) = -0
Non_fruit yield (kg_ha_yr) = -0
Total production area per person (ha) = -0.001
ousehold composition (nutrient demand groups) = -26.051
Iron needs per person (mg yr) = -26.274



[+] EV|PI Graph

[+] Copyright and References