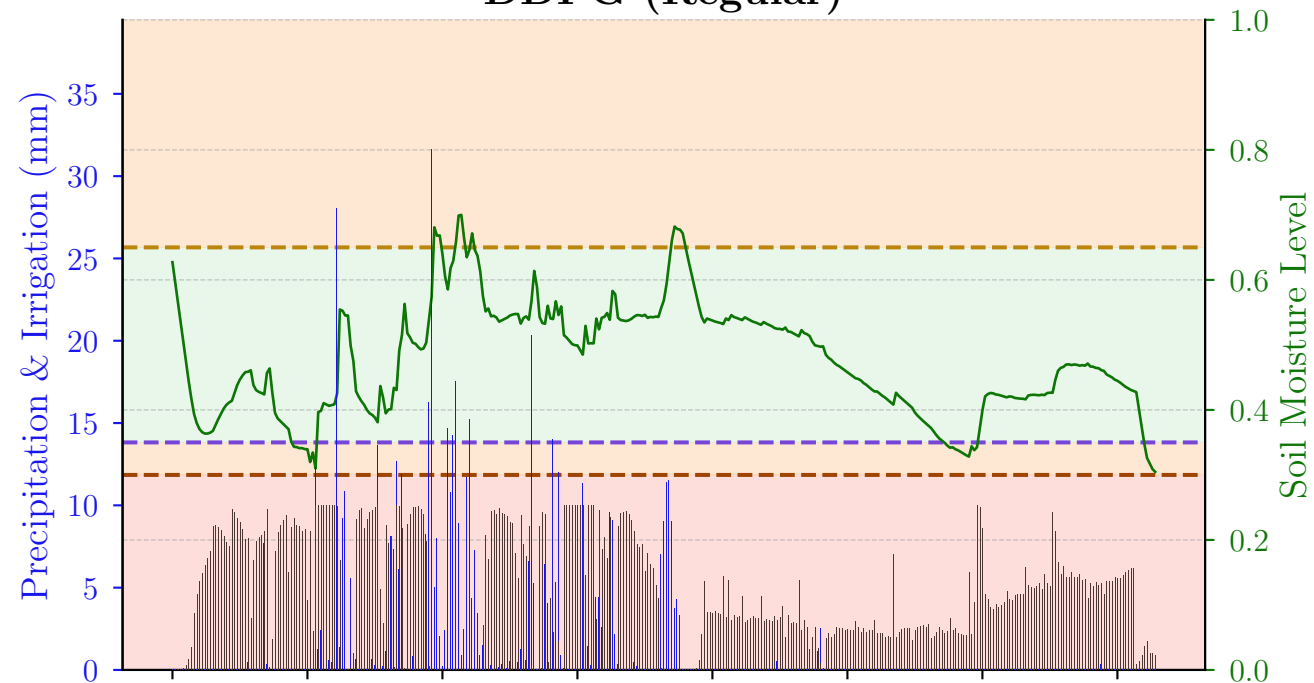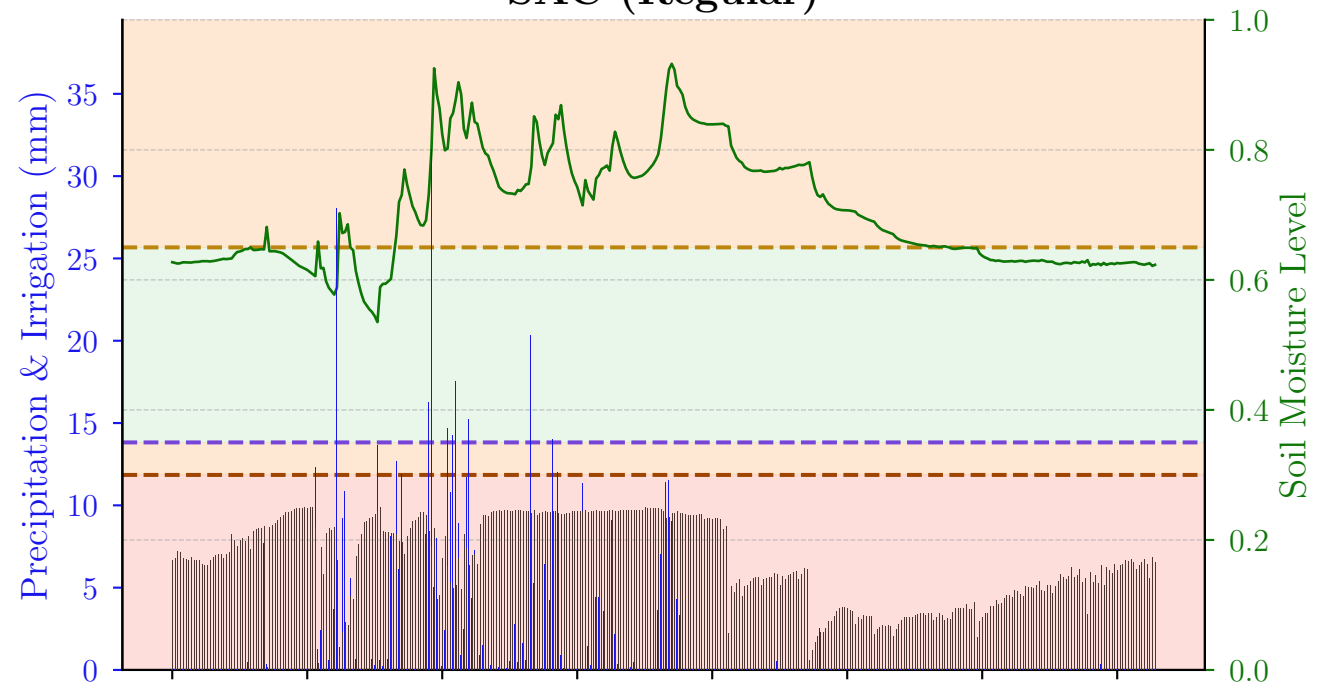Model Performance During Evaluation, Seed 59 ($d = 1$)
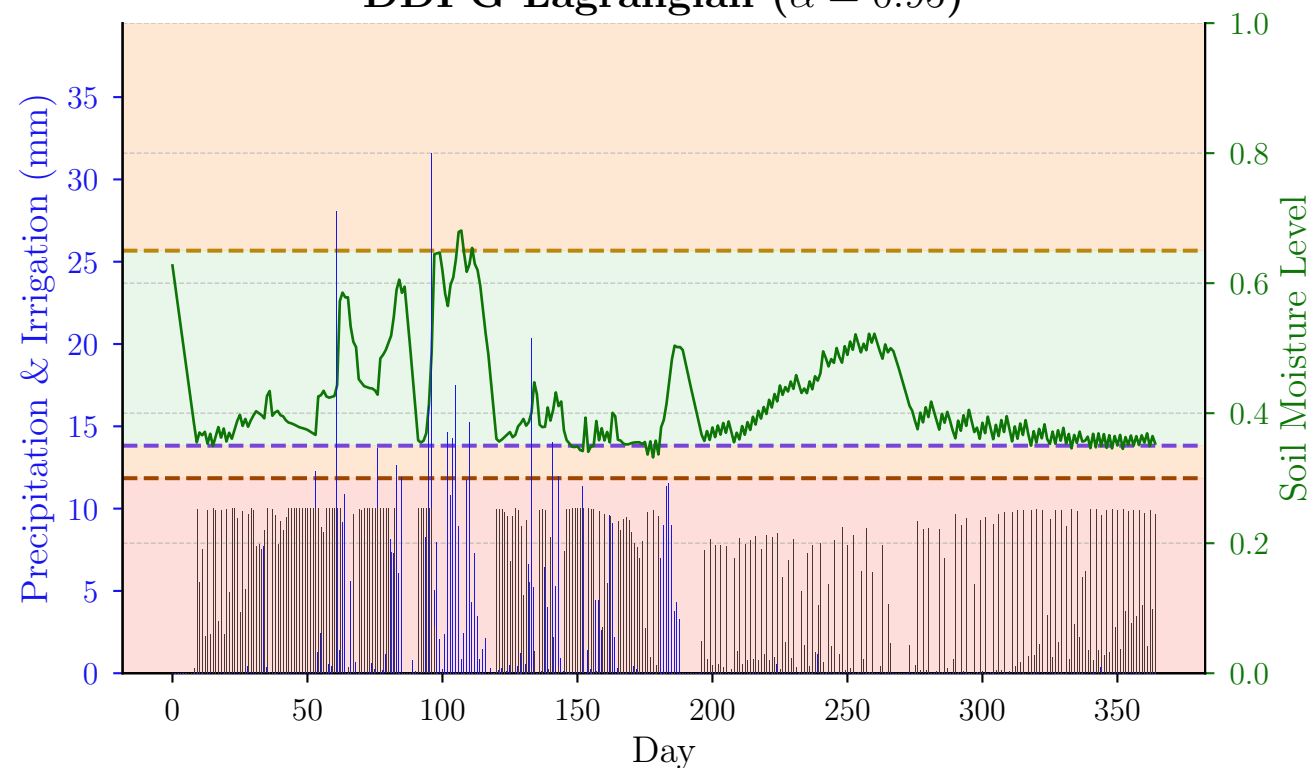
DDPG (Regular)
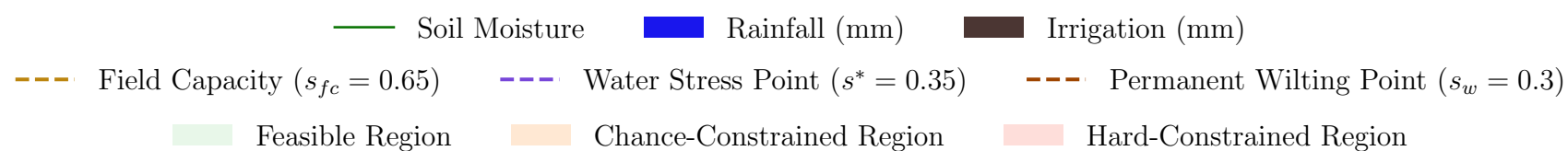
SAC (Regular)
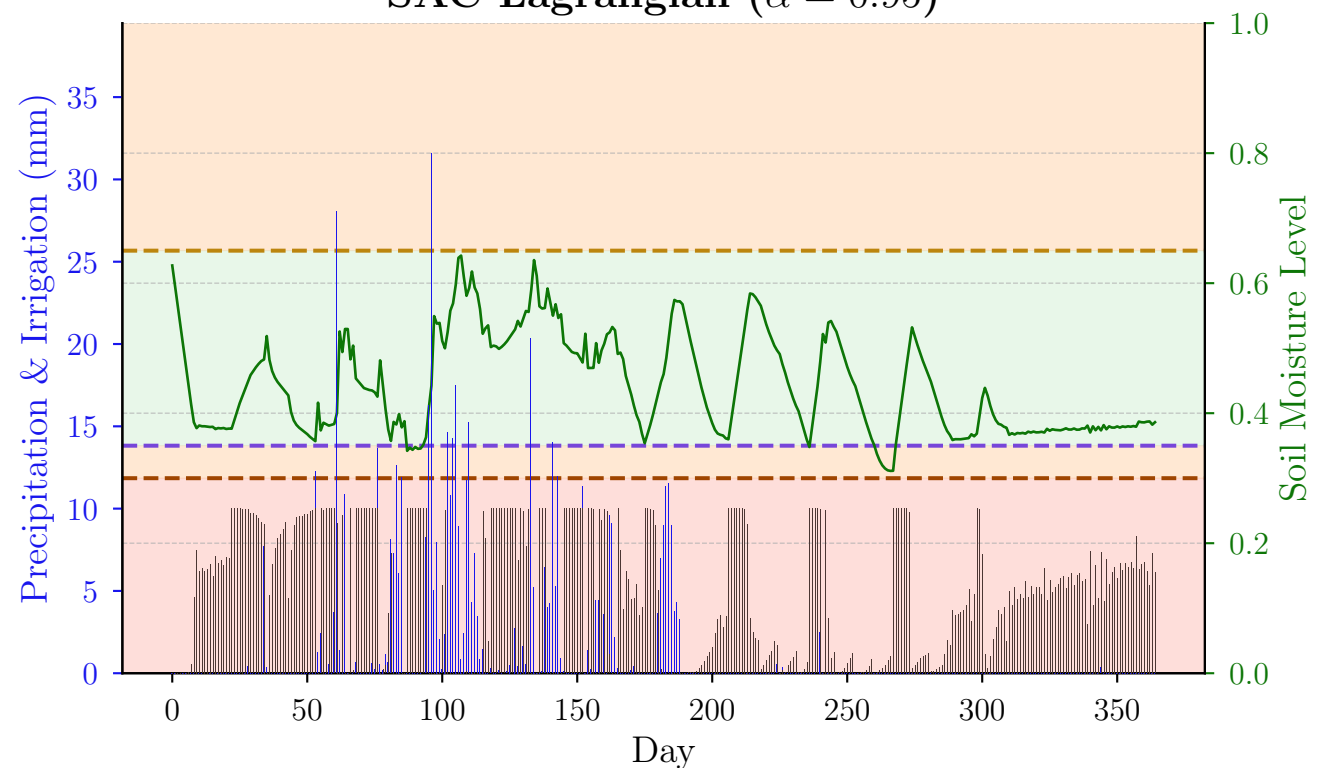
DDPG Lagrangian ($\alpha = 0.95$)
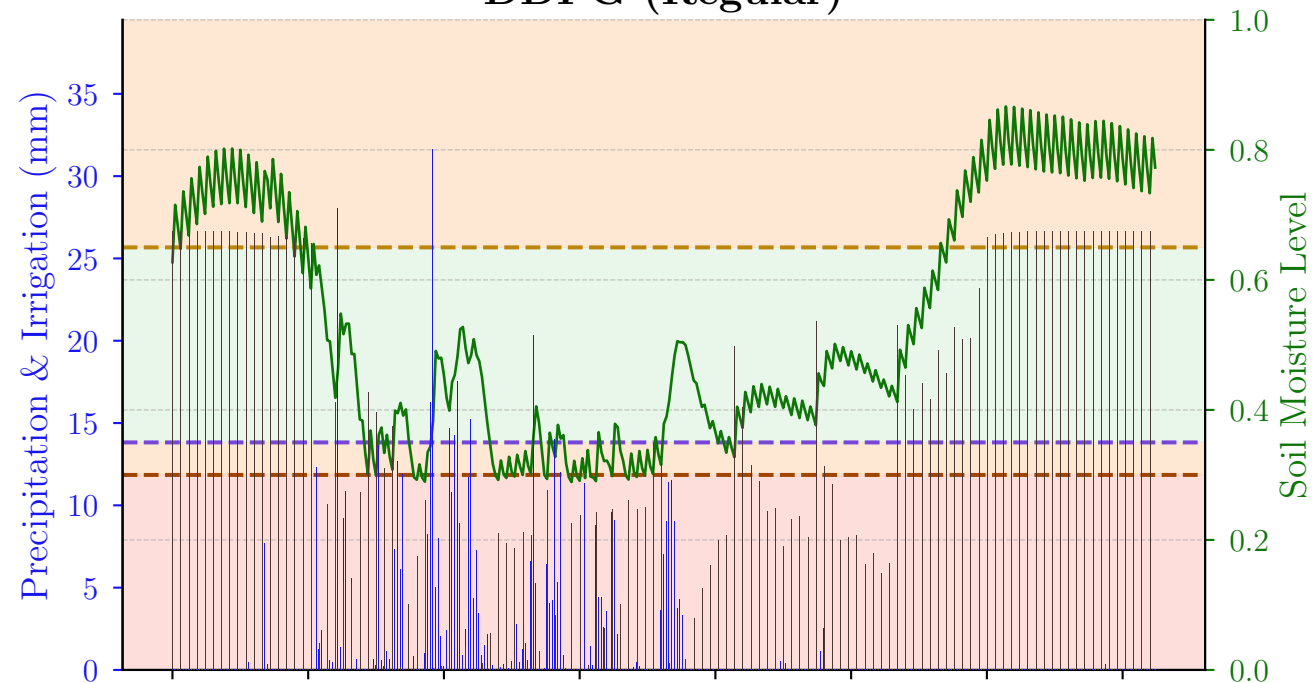
SAC Lagrangian ($\alpha = 0.95$)

— Soil Moisture   ▬ Rainfall (mm)   ▬ Irrigation (mm)

---- Field Capacity ($s_{fc} = 0.65$)   ---- Water Stress Point ($s^* = 0.35$)   ---- Permanent Wilting Point ($s_w = 0.3$)

Feasible Region   Chance-Constrained Region   Hard-Constrained Region

Model Performance During Evaluation, Seed 59 ($d = 3$)

Legend:
- Soil Moisture
- Rainfall (mm)
- Irrigation (mm)
- Field Capacity ($s_{fc} = 0.65$)
- Water Stress Point ($s^* = 0.35$)
- Permanent Wilting Point ($s_w = 0.3$)
- Feasible Region
- Chance-Constrained Region
- Hard-Constrained Region

Subplot titles:
- DDPG (Regular)
- SAC (Regular)
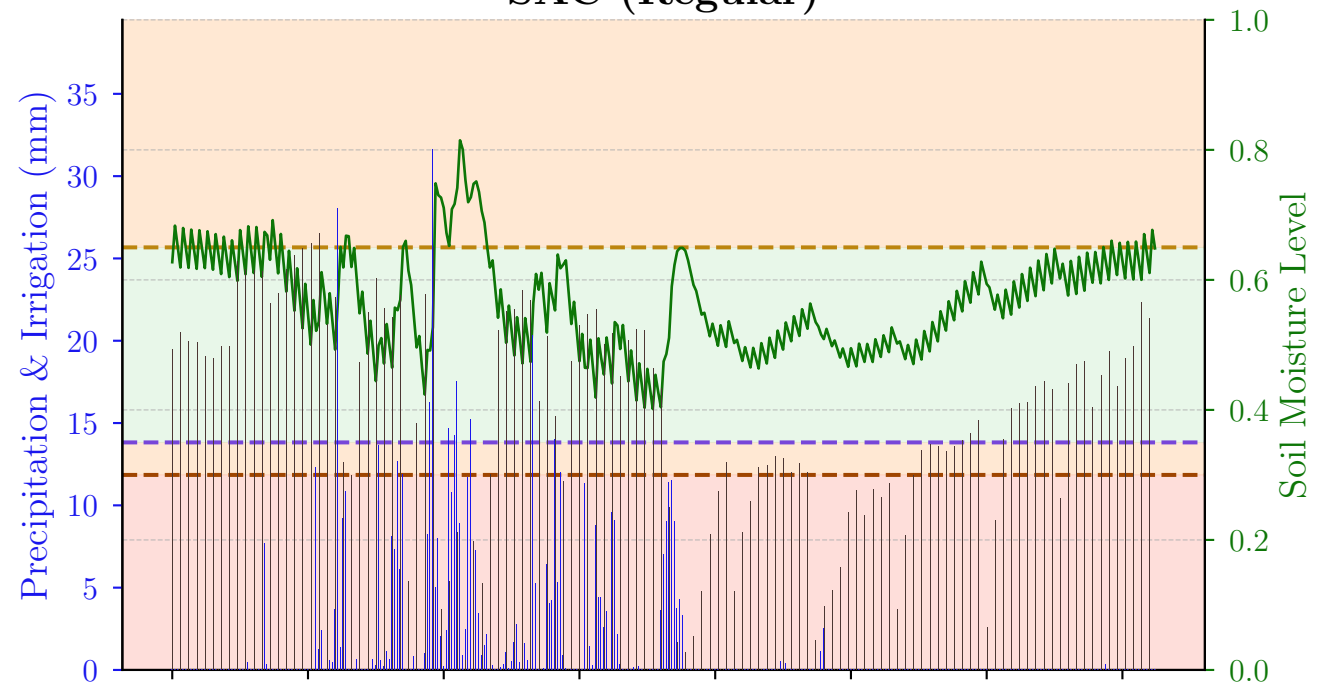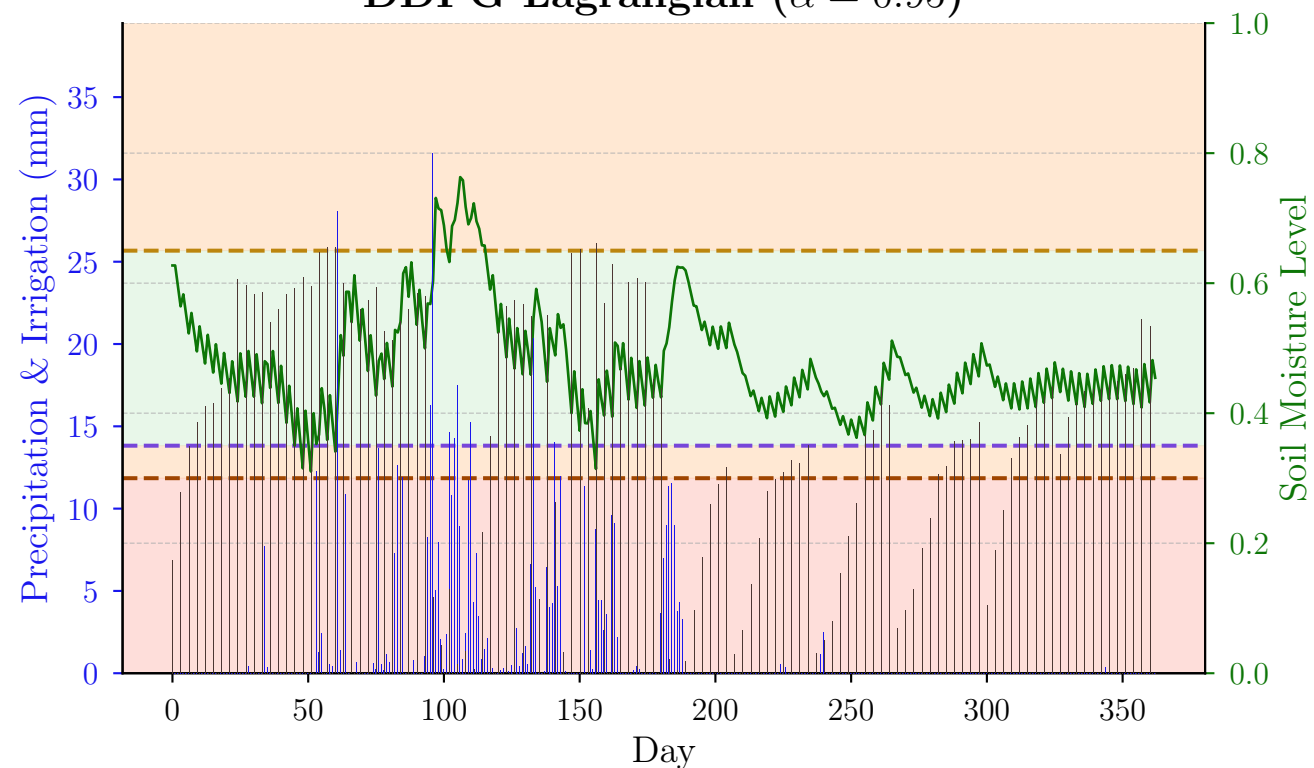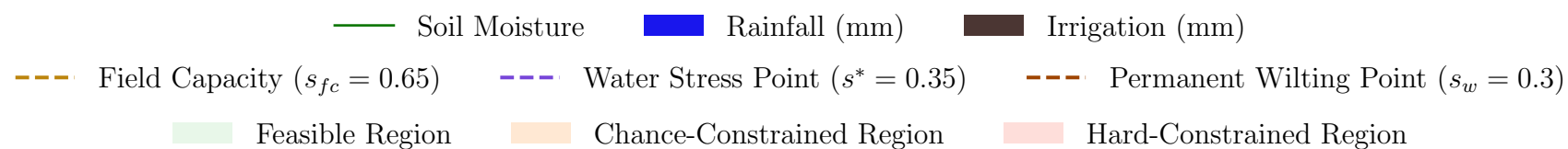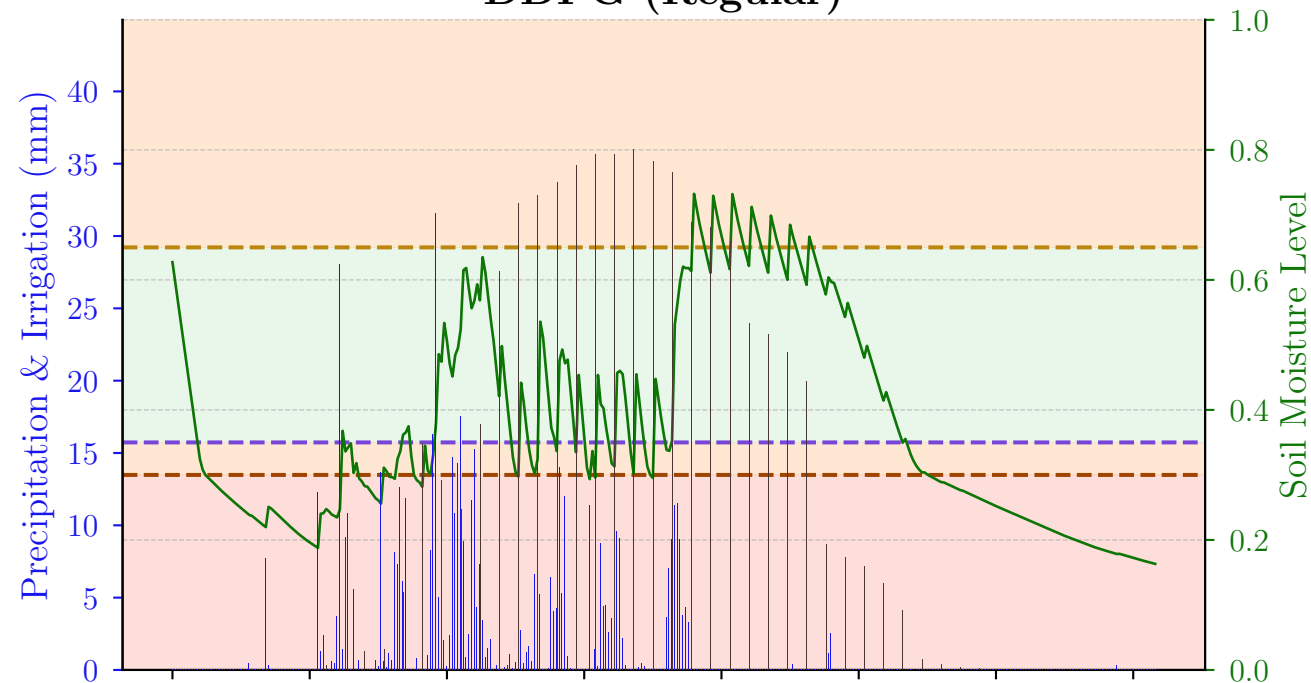- DDPG Lagrangian ($\alpha = 0.95$)
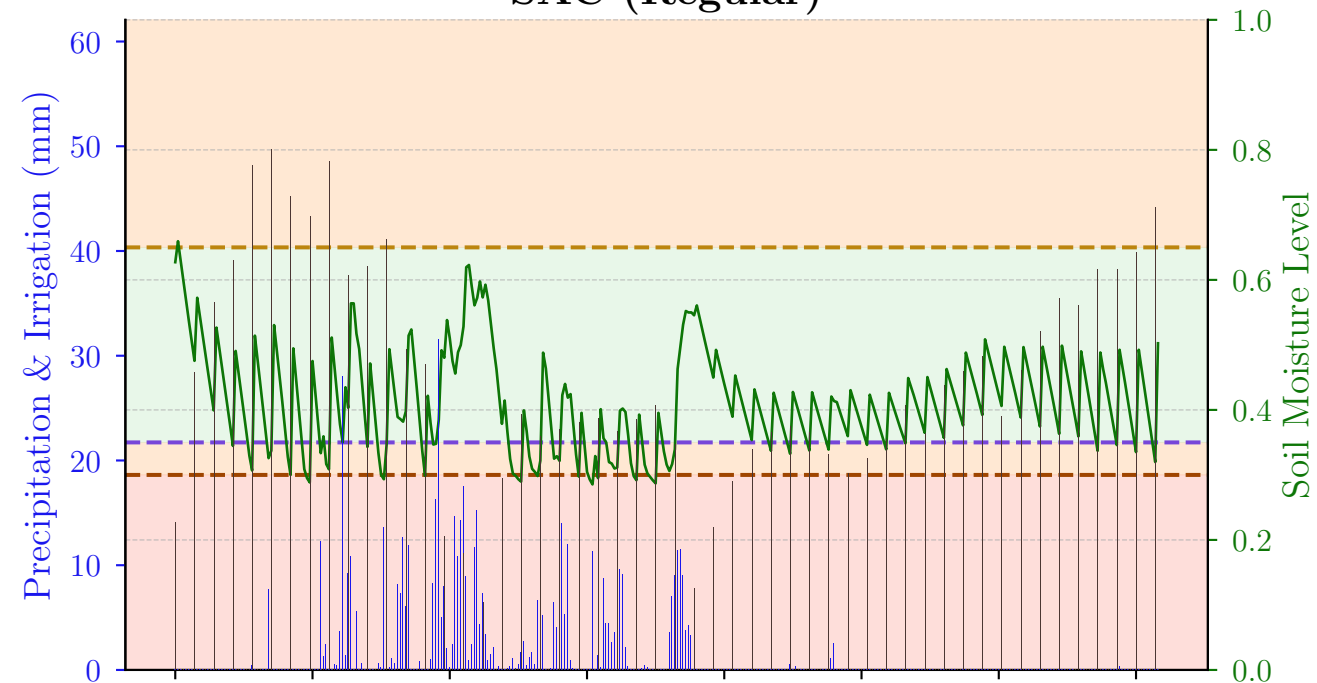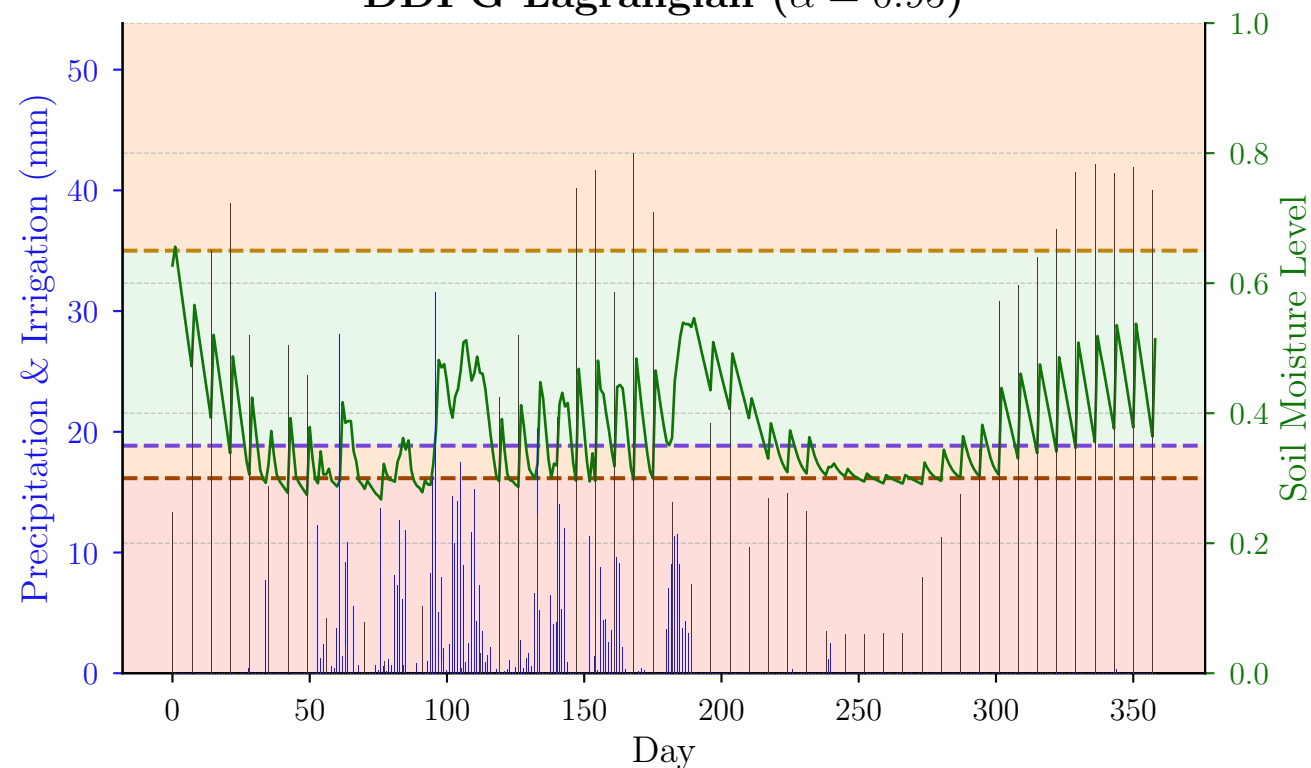- SAC Lagrangian ($\alpha = 0.95$)

Axis labels: Precipitation & Irrigation (mm), Soil Moisture Level, Day

Model Performance During Evaluation, Seed 59 ($d = 7$)

Legend:
- Soil Moisture
- Rainfall (mm)
- Irrigation (mm)
- Field Capacity ($s_{fc} = 0.65$)
- Water Stress Point ($s^* = 0.35$)
- Permanent Wilting Point ($s_w = 0.3$)
- Feasible Region
- Chance-Constrained Region
- Hard-Constrained Region