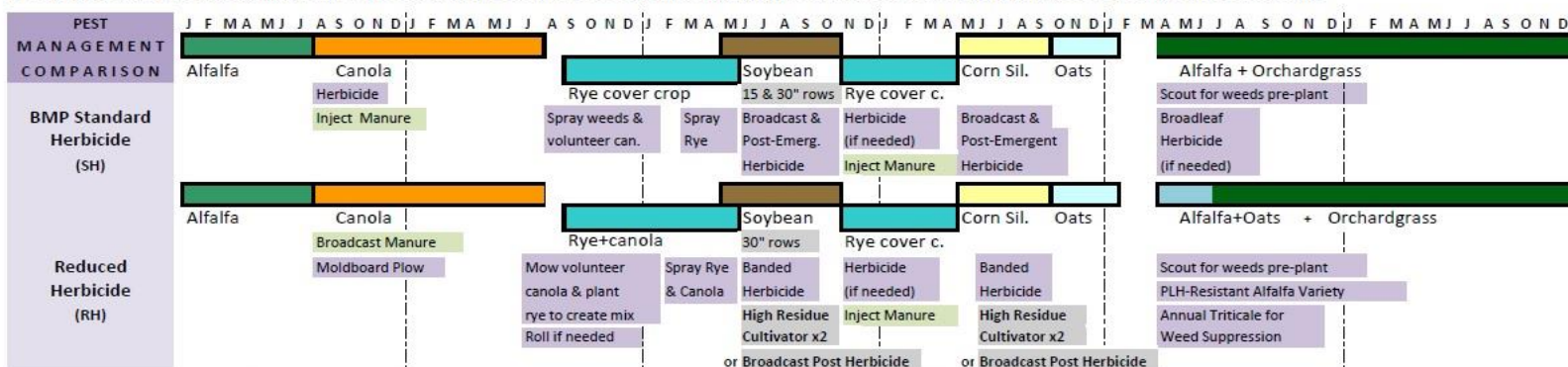


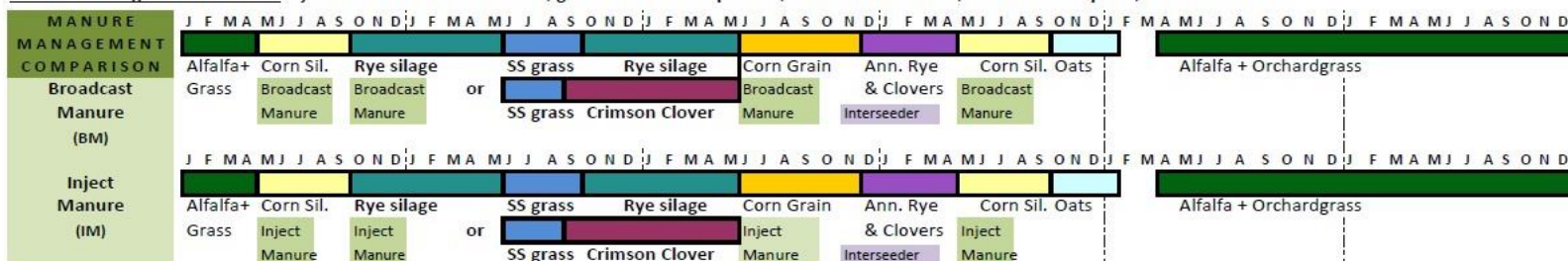
2016-2019 NESARE Dairy Cropping System Schematic:

2016 PENN STATE SUSTAINABLE DAIRY CROPPING SYSTEMS (All systems are no-till, except in the 'Reduced Herbicide Grain Rotation' and Corn-Soy Broadcast Manure with Tillage)

Pest Management Rotation: IPM for insect pests, multiple tactics for weed control (RH), inject manure for canola (SH) and rye cover crop before corn silage



Manure Management Rotation: injection vs. broadcast manure, green manure comparison, standard herbicides, IPM for insect pests, and non-Bt corn



Corn-Soy Conventional Grain Rotation: manure or fertilizer, with or without tillage, standard herbicide regime, prophylactic insecticides, and Bt corn

