

Sustainable and Regenerative Framework Summary

	Principle	Practices <i>(appropriateness of each practice determined by environmental factors)</i>	Recommended Metrics
Soil Health and Agricultural Productivity	Soil Organic Matter Conservation	<ul style="list-style-type: none"> No-till Conservation tillage Maintain living soil cover (e.g. cover crops) Maintain non-living soil cover (e.g. residue) Precision applied fertility and soil amendments Crop rotation 	<ul style="list-style-type: none"> Recurring measurement of SOC using stratified sampling protocol with ground truthing.
	Erosion Prevention and Soil Cover	<ul style="list-style-type: none"> No-till Conservation tillage Maintain living soil cover (e.g. cover crops) Maintain non-living soil cover (e.g. stubble or trash) Alternative cropping areas Shelterbelts 	<ul style="list-style-type: none"> Bare soil measured by automated imagery during non-crop season (such as SWAT CAM). <ul style="list-style-type: none"> Target <10% bare soil in non-crop season. Water quality testing (surface water/groundwater, where appropriate)
	Fertility Optimization	<ul style="list-style-type: none"> 4R fertility management Precision applied fertility and soil amendments Crop rotation 	<ul style="list-style-type: none"> Crop yield (compared to target) Nutrient use efficiency (compared to target) Regular soil testing (residual soil nutrient levels, pH, organic matter, salts) Tissue testing to measure plant nutrient uptake Water quality testing (surface water/groundwater, where appropriate)
Integration with Agro-ecosystems	Biodiversity Enhancement	<ul style="list-style-type: none"> Riparian buffers Alternative cropping areas Crop rotation Precision applied pesticides Shelterbelts 	<ul style="list-style-type: none"> % of linear extent of field boundaries in non-crop use. Maximum distance in field to non-crop area. Water quality testing (surface water/groundwater, where appropriate). Species counts (optional).
	Integrated Pest Management	<ul style="list-style-type: none"> Crop rotation Precision applied pesticides Biosecurity Rotation in chemical mode of action used to control weeds, diseases, and insects Incorporation of a variety of chemical, cultural, physical, and biological pest control methods Management of soil and irrigation water to minimize off-target movement of pesticides 	<ul style="list-style-type: none"> Inclusion of one legume, one biomass-yielding crop and minimum of 3-year crop rotation. Insect, weed, and disease monitoring.
	Plant Available Water Management	<ul style="list-style-type: none"> Maintain living soil cover (e.g. cover crops) Maintain non-living soil cover (e.g. residue) Active drainage (only if warranted) Maintain standing crop stubble in non-growing season Riparian buffers Alternative cropping areas Shelterbelts 	<p>Monitoring Salinity:</p> <ul style="list-style-type: none"> EC mapping Soil testing <p>Monitor Plant Available WHC:</p> <ul style="list-style-type: none"> Soil moisture probes to measure spatial variability of plant-available water. <p>Monitor Crop WUE:</p> <ul style="list-style-type: none"> Relate crop yield with crop water usage (from soil moisture sensors/modelling) to diagnose/monitor productivity limitations associated with soil salinity, water deficit or excess stresses, and/or nutrient imbalances.

