

Reduction Protocols

Beef Feeding
Beef Lifecycle

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Beef Feeding

- Seed Materials
 - Work of the beef technical working group
 - Other Good Practice Guidance
 - CDM protocols
 - Project evaluations
- Technical Review
 - Multi-stakeholder discussion
 - Alberta process with gov't and industry stakeholders

Beef Feeding

- Project Condition
 - Inclusion of 4% - 6% edible oils in the finishing diet
- Baseline Condition
 - Feeding regime did not include 4% - 6% edible oils for three years prior to project

Beef Feeding

- **Functional Equivalence**
 - Inputs and Outputs
 - Unit of Production
- **Emission Reduction Mechanisms**
 - Reduction in enteric methane emissions

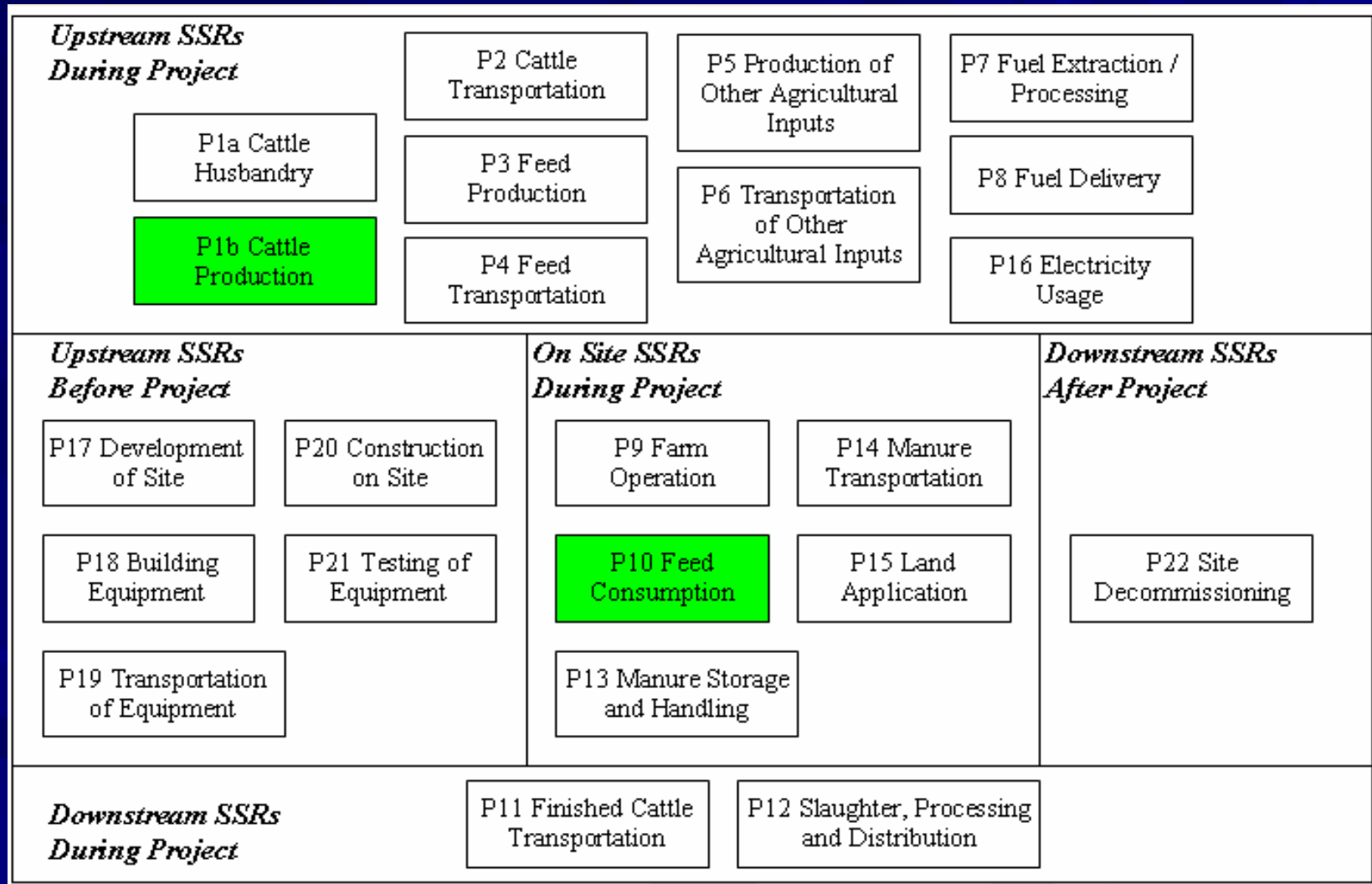
Beef Feeding

- Applicability criteria
 - Feeding practices are materially consistent with protocol
 - Manure management consists of storing and land application
 - Change in feeding practice can be confirmed by operational records
 - Based on actual measurement and monitoring

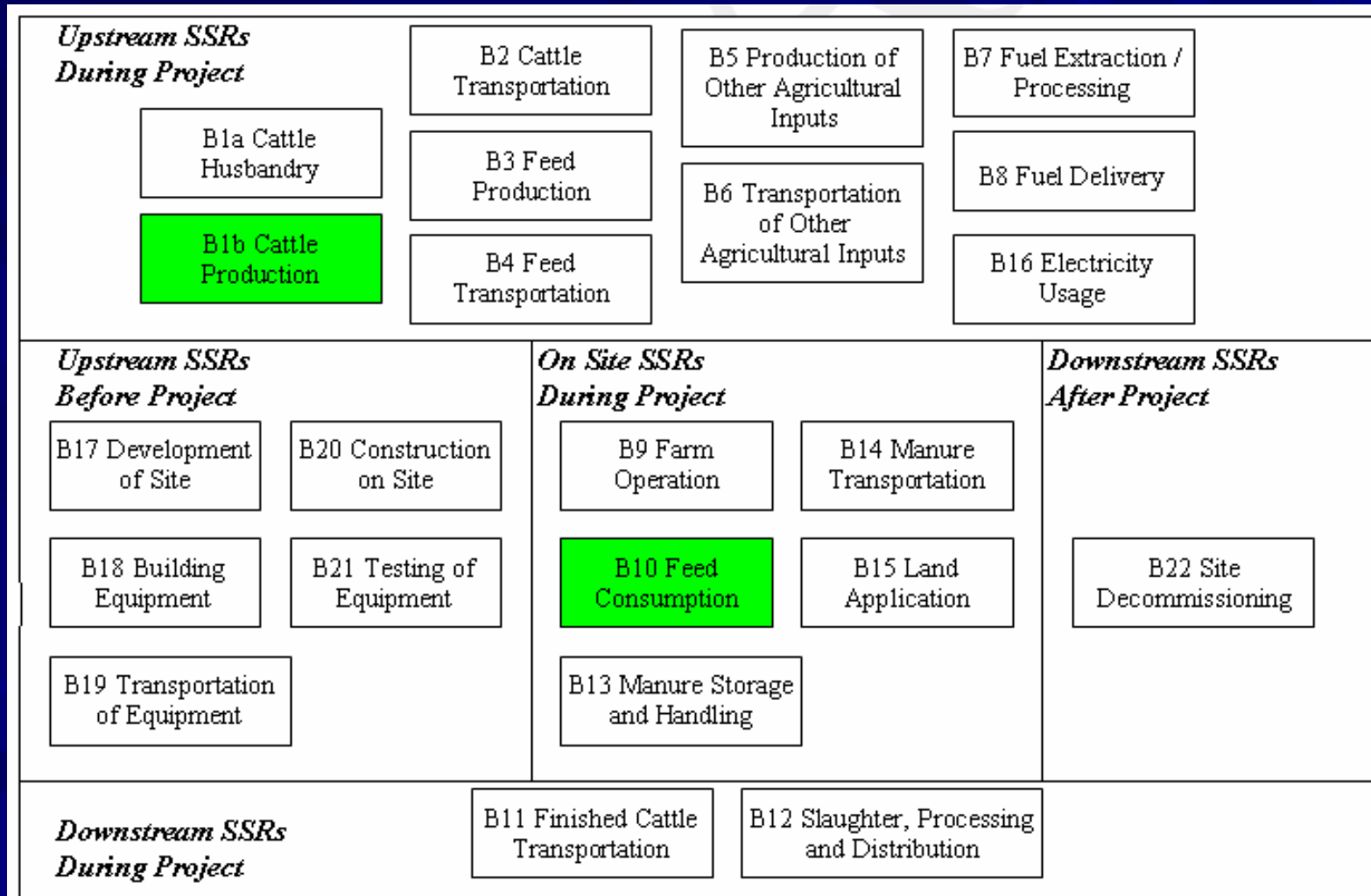
Beef Feeding

- Flexibility mechanisms
 - Baseline can be established without three years of data
 - Available data
 - Industry practice
 - Animals can be grouped by feeding regime for data tracking purposes
 - Site specific emission factor usage
 - Custom factors may be calculated based on materially different feeding regimes

Beef Feeding



Beef Feeding



Beef Feeding

$$\text{Emission Reduction} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

$$\text{Emissions}_{\text{Baseline}} = \text{Emissions}_{\text{Cattle}}$$

$$\text{Emissions}_{\text{Project}} = \text{Emissions}_{\text{Cattle}}$$

- Data Capture
 - Mass of beef produced
 - Diet information

Beef Feeding

- Questions and Comments
 - Technical issues?
 - Policy concerns?
 - Customization questions?
 - Linkage issues?

Beef Lifecycle

- Seed Materials
 - Work of the beef technical working group
 - Other Good Practice Guidance
 - CDM protocols
 - Project evaluations
- Technical Review
 - Alberta process with gov't and industry stakeholders
 - Multi-stakeholder discussion

Beef Lifecycle

- Project Condition
 - Reduction of slaughter age
- Baseline Condition
 - Average slaughter age on project farm for three years prior to change

Beef Lifecycle

- **Functional Equivalence**
 - Inputs and Outputs
 - Unit of Production
- **Emission Reduction Mechanisms**
 - Reduction in enteric methane emissions
 - Reduction in emissions from manure handling, storage and application

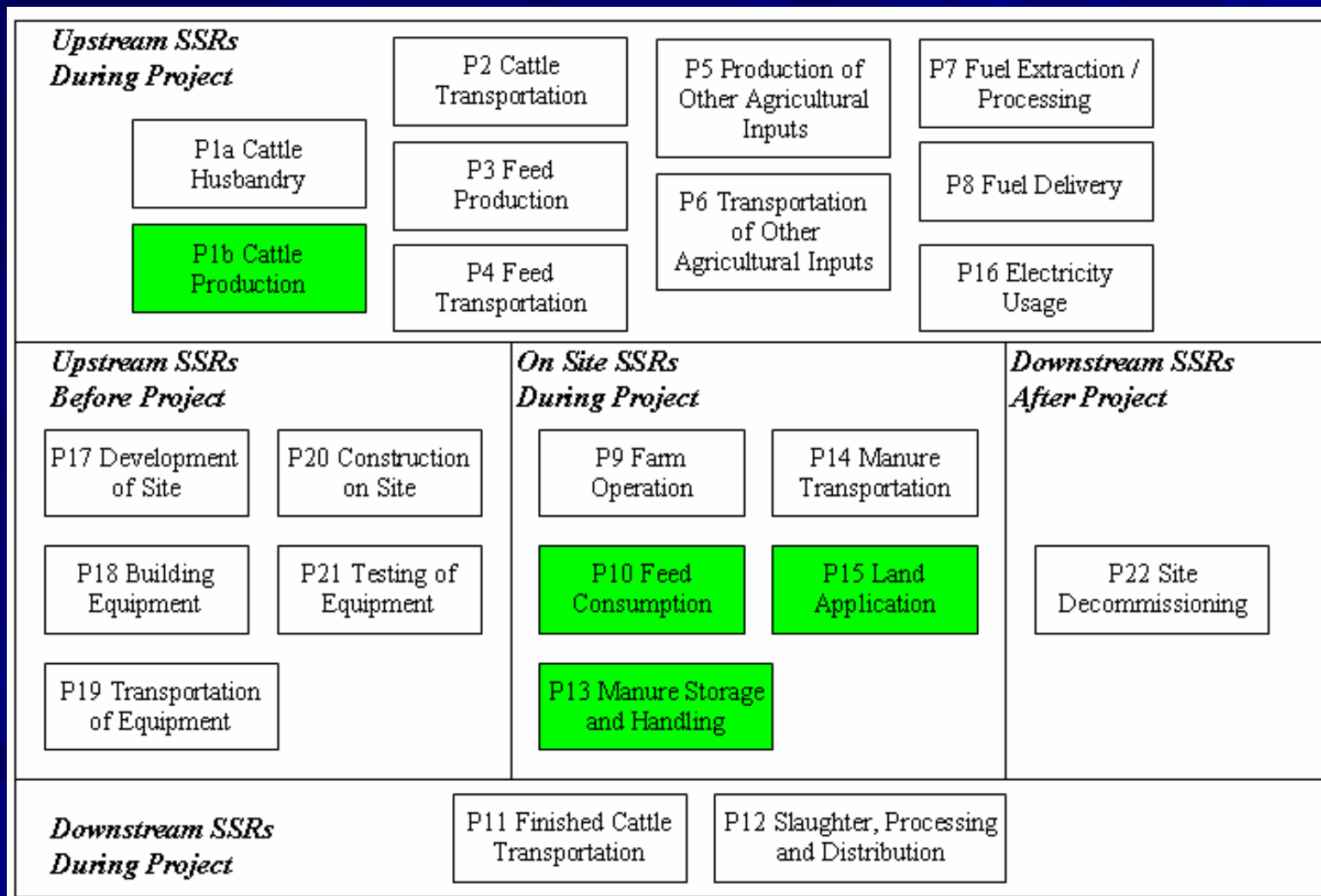
Beef Lifecycle

- Applicability criteria
 - Feeding practices are materially consistent with protocol
 - Manure management consists of storing and land application
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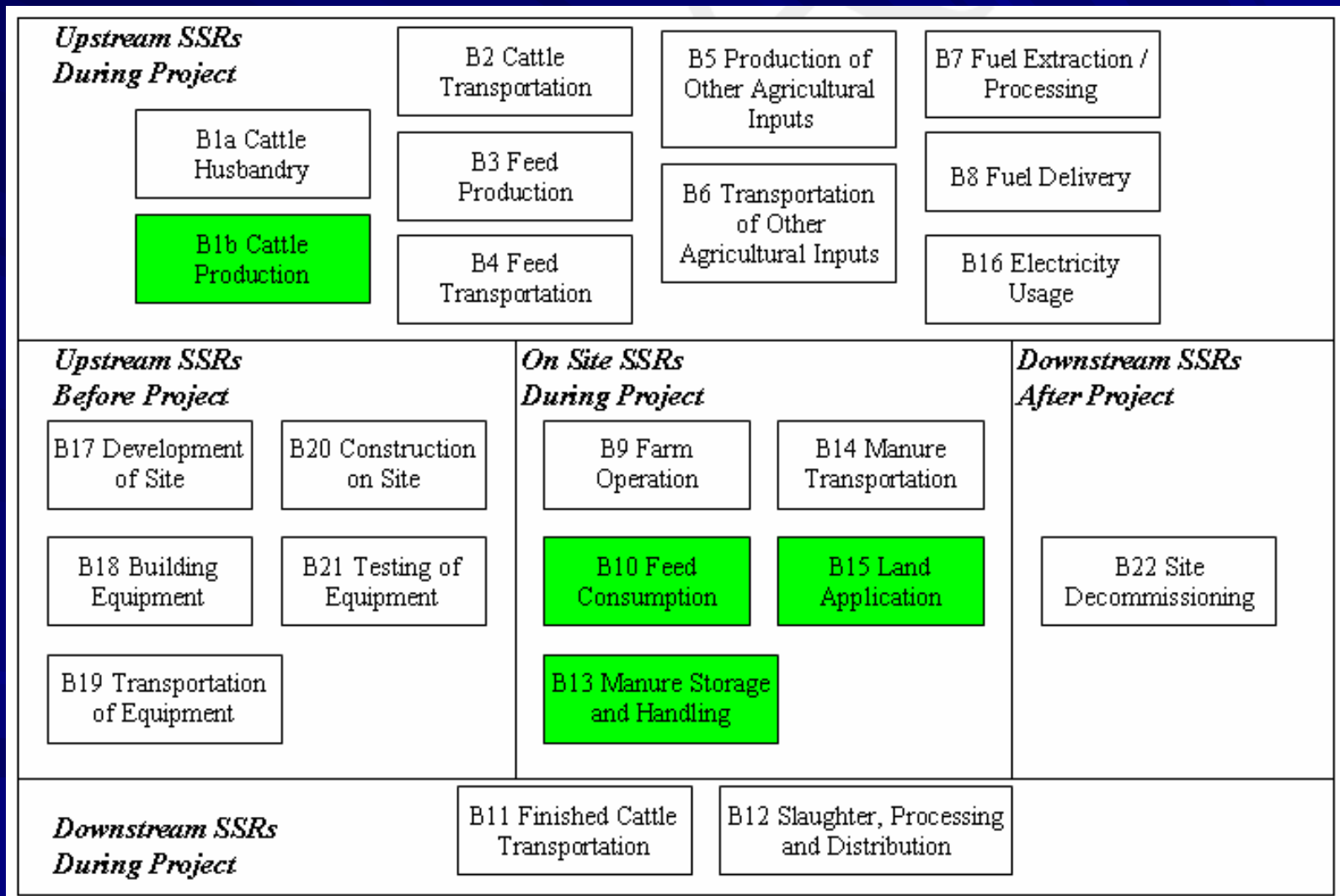
Beef Lifecycle

- Flexibility mechanisms
 - Baseline can be established without three years of data
 - Available data
 - Industry practice
 - Animals can be grouped by slaughter age for data tracking purposes
 - Site specific emission factor usage
 - Custom factors may be calculated based on materially different feeding cycles

Beef Lifecycle



Beef Lifecycle



Beef Lifecycle

$$\text{Emission Reduction} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

$$\text{Emissions}_{\text{Baseline}} = \text{Emissions}_{\text{Cattle}} + \text{Emissions}_{\text{Manure}}$$

$$\text{Emissions}_{\text{Project}} = \text{Emissions}_{\text{Cattle}} + \text{Emissions}_{\text{Manure}}$$

- Data Capture
 - Mass of beef produced
 - Slaughter ages
 - Diet information

Beef Lifecycle

- Questions and Comments
 - Technical issues?
 - Policy concerns?
 - Customization questions?
 - Linkage issues?