System of Rice Intensification

Desirable and Non Desirable Practices
System of Rice Intensification (SRI)

**Principle**
Utilize early vigour of young seedlings

**Rationale**
Facilitate rice plant's prolonged and profuse tillering

**Desirable**
- Transplant seedlings up to 3-leaf stage and less than 14 days old
- Quick and careful transplanting of young seedlings
- Transplant seedlings older than 3-leaf stage

**Best Practice**
System of Rice Intensification (SRI)

Principle
Reduce competition for light and nutrients

Rationale
Increase in plant's efficiency in using sunlight and nutrients

Best Practice

Desirable
- Plant at 25 cm x 25 cm spacing or wider if soil is fertile
- Minimum seedlings per hill
- Wider and regular spacing
- Single seedling per hill
- 25 x 25 cm square planting

Not Desirable
- Random and close spacing
- Bunch planting
- Adopting row spacing only
System of Rice Intensification (SRI)

**Principle**
Reduce external inputs (seeds, water, fertilizers, pesticides) with better and different management

**Rationale**
Realize more fully the biological potential of rice plants by the optimal use of inputs in a sustained way, (e.g., avoid suffocation of the roots)

**Best Practice**
- Single seedling per hill (Low seed rate i.e. 5-7.6 kg/ha and upto 2.5 cm)
- Unflooded irrigation
- Less chemical inputs
- Single seedling per hill (Seed rate 5-7.5 Kg/ha)
- Alternate wetting and drying with shallow (2.5 cm) irrigation
- Integrated Nutrient Management

**Desirable**
- More than 2 seedlings per hill (Seed rate higher than 7.5 Kg/ha)
- Continuous flooding of soil
System of Rice Intensification (SRI)

**Principle**
- Keep soil from becoming anoxic (without oxygen)

**Rationale**
- Prevent negative effects of submergence: facilitate exit of poisonous gases, and promote abundance, diversity and activity of life in the soil

**Best Practice**

**Desirable**
- Use weeder at 10-day intervals (2 or 3 times)
- First weeder use 10-12 days after transplanting
- Inter-cultivation which aerates soil by use of mechanical weeder

**Not Desirable**
- No use of weeder that aerates soil
- Chemical weedicides do not do this
System of Rice Intensification (SRI)

**Principle**

Promote healthy root growth

**Rationale**

Avoid inhibition and degradation of root systems as occurs with current paddy cultivation

**Best Practice**

- Quick and careful transplanting of young seedlings
- Wider spacing & square planting
- Single seedling per hill
- Alternate wetting & drying
- Less chemical inputs
- Inter-cultivation with weeder which aerates soil and also has pruning effect
- Enhance soil organic matter which feeds soil organisms
**System of Rice Intensification (SRI)**

**Principle**
- Increase soil microbial activity
- Enhance soil organic matter

**Rationale**
- Feed the soils - and the soil system will feed the plants
- Realize the biological potential of soil systems

**Best Practice**
- Green manure crops / green leaves / Azolla / crop residues / compost / FYM / Bio-fertilisers
- Addition of in-situ / ex-situ organic matter - as much as possible
- Usage of only chemical fertilizers

**Desirable**

**Not Desirable**