Preliminary Information

- Soil type
- Soil fertility
- Previous vegetation
- Rainfall pattern
- Area to be planted
Land Clearing

From forests

- Revenue from logging
- Leave trees for shade
- Normally carried out by contractor
- Leave steep slopes and ravines
From abandoned land

- More easily cleared
- Problem of weeds
- Soil of lower fertility
- Needs higher rates of fertilizer and liming
BURNING – not recommended
Soil preparation

Clay and loamy soils

- Use disc plough to turn soil over
- Disc harrows to break up soil clods
- Final round with rotovator to make soil fine for seed sowing
- Soil need not be fine with vegetative propagation
Sandy soils

- Can use chisel plough to break up soils and remove weeds
DISC PLOUGH – to overturn soil and bury existing vegetation
DISC PLOUGH – cutting and overturning soil
Large clods of soil left during disc ploughing
Liming

- Use lime if pH < 4.5
- Apply about 2 tonnes/ha
Liming after disc ploughing
Liming manually
Harrow

- Disc harrows used after ploughing and liming
Disc harrows breaking up clods into smaller particles
Rotovator

14/01/2004
Basal fertilizers

Fertilisers applied during planting

- **Pure grass pastures:**
  - 60 kg N, 40 kg P and 50 kg K/ha

- **Legume grass:**
  - Apply only P and K
Planting grass/legume seeds using seed drill
Compartments on seed drill for seeds and fertilizers
Disc to cut soil

funnel
Seed drill
Seed drill with operator
NO-TILL DRILL FOR SOIL CONSERVATION
Seeding Rates

- Grasses 5-10 kg/ha
- Legumes 2-6 kg/ha
- Seed depth – small seeds 5-10 mm
- Large seeds (legumes) – 15-20 mm
Grasses that can be planted with seeds

- Signal grass (*Brachiaria decumbens*)
- Guinea grass (*Panicum maximum*)
- *Setaria sphacelata* var *sericea*
Vegetative Planting
Vegetative materials

- Divided root stocks
- Cuttings
- Whole stems

e.g. MARDI Digit, Setaria splendida, Napier
VEGETATIVE PLANTING – Napier grass

Planting material – mature stems

Stems stripped off leaves
Bare stems laid in furrow, base to tip
Planting cuttings of napier - slanted

New tillers
VEGETATIVE PLANTING Guinea grass

Planting material – rooted clumps

3 tillers per planting hole
Guinea grass clumps in rows
VEGETATIVE PLANTING - MARDI Digit
VEGETATIVE PLANTING
– stoloniferous grasses
Good establishment – after 2 weeks
Weed problems
Good legume-grass pasture
HAPPY STUDENTS AFTER SUCCESSFUL PLANTING!