

SESSION TWO

A. Limitations of peat

**B. THE SOLUTION FOR
PEAT PROBLEMS**



A. LIMITATION OF PEAT

Caused by peat chemical properties

1. Poor nutrient uptake
2. More fertilizer needed
3. Fixation of micro nutrients



1. POOR NUTRIENT UPTAKE



2. HIGH DOSAGE OF FERTILIZER



3. FIXATION OF MICRO NUTRIENT



PEAT YELLOW

12-13-2007

1. POOR ROOT ACHORAGE

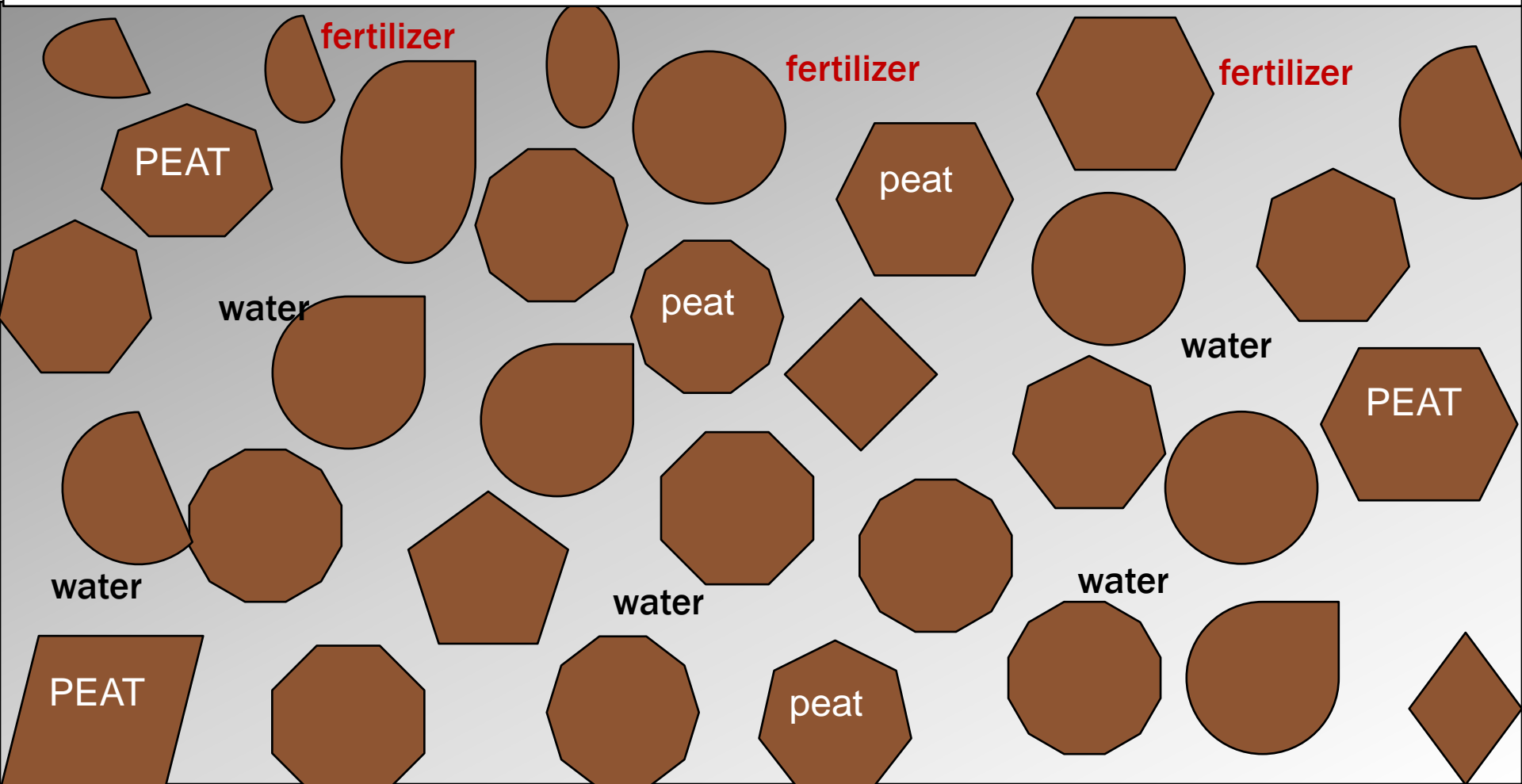


2. POOR ACCESSIBILITY



3. HIGH LEACHING

original ground level



4. WATERLOGGED



LIMITATION OF PEAT AFTER DRAINAGE

Caused by peat physical properties

Peat after drainage

- 1. Irreversible dryness of peat
- 2. Fire prone
- 3. Peat subsidence

16. 2. 2005

1. IRREVERSIBLE DRYNESS

Irreversible dryness on top layer

peat above soil water table

soil water table
peat under water

2. FIRE PRONE



3. SUBSIDENCE OF PEAT



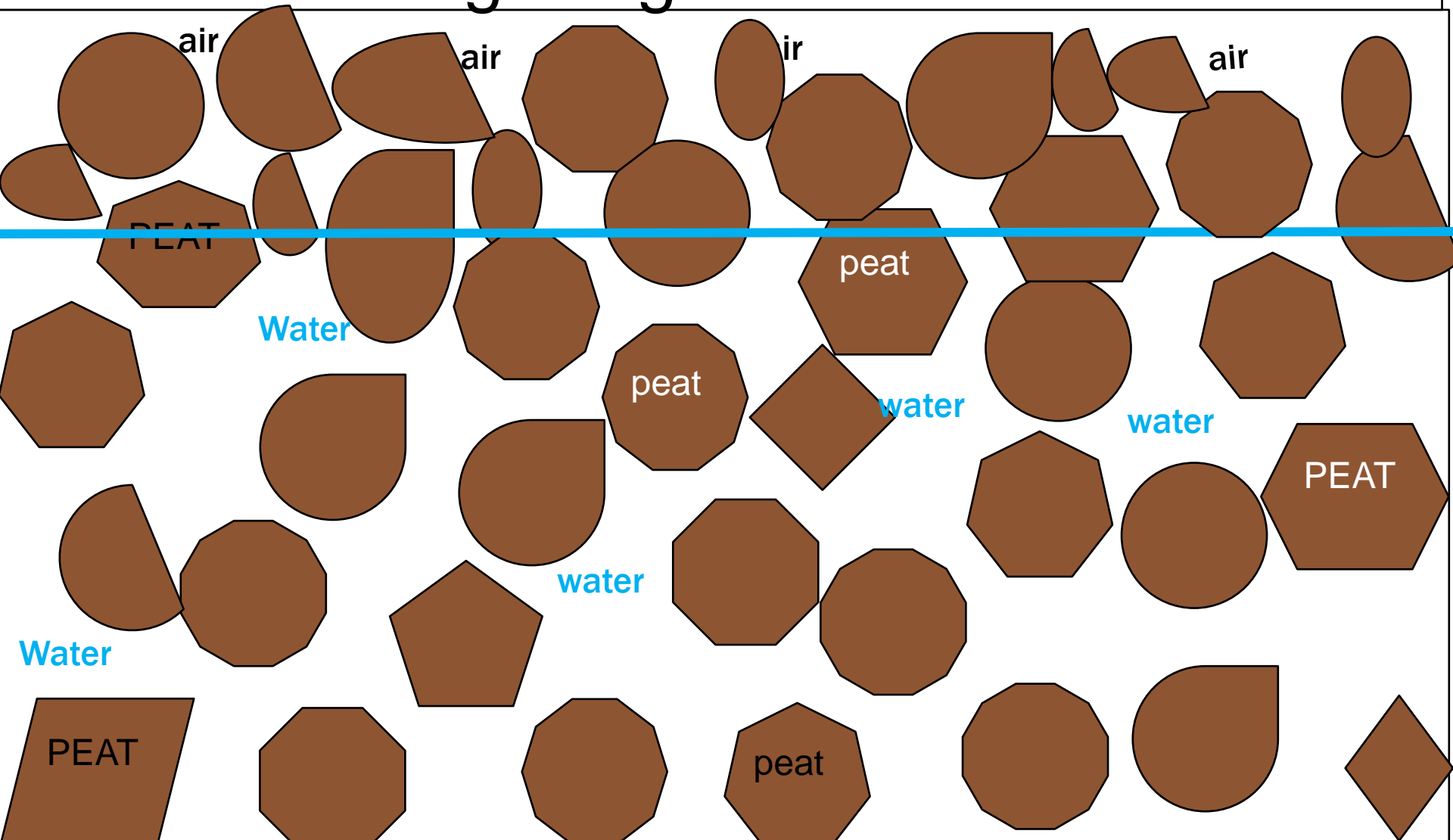
2.2.2006

3.PROCESS OF PEAT SUBSIDENCE



3a. Process of subsidence

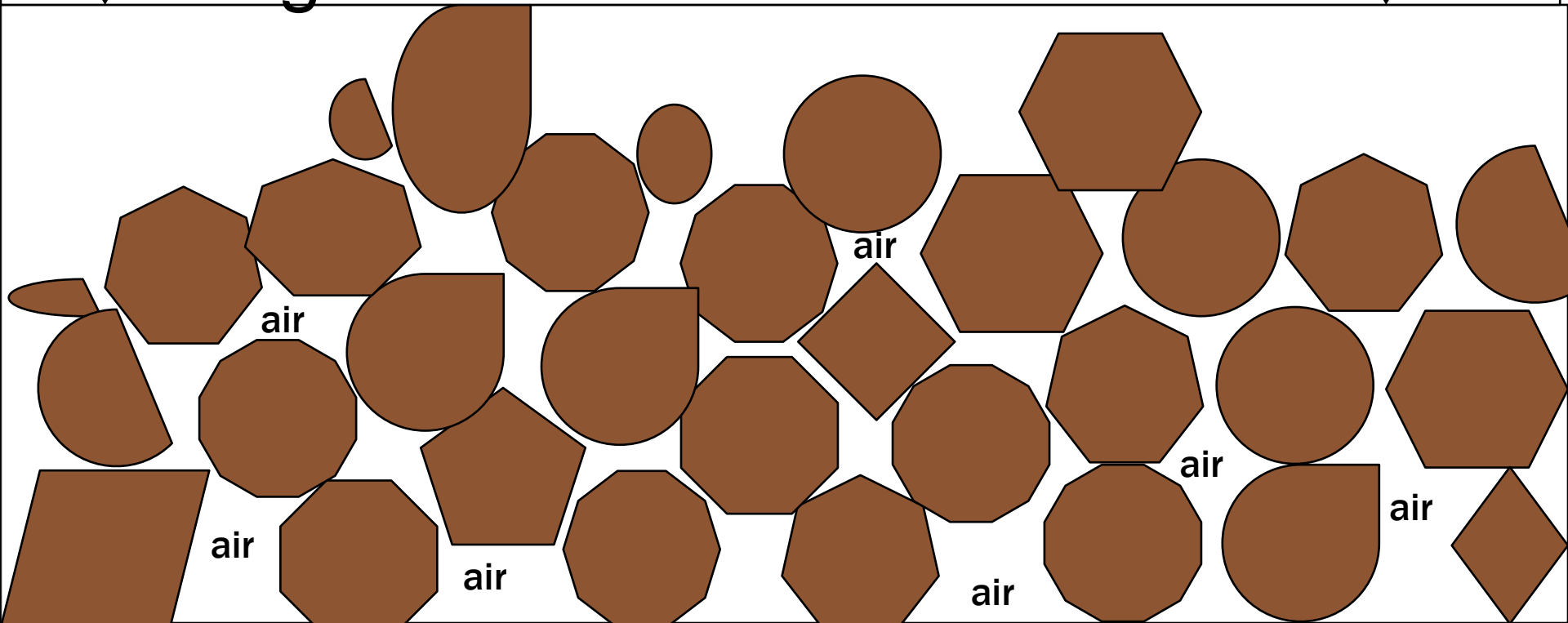
original ground level



3b. Process of subsidence

Original ground level

ground level after subsidence



3c. Process of subsidence

ORIGINAL GROUND LEVEL

GROUND LEVEL AFTER SUBSIDENCE

PEAT UNDER SOIL WATER TABLE

Example of subsidence



2.2.2006

Example of subsidence



Advantages of peat

Peat

- 1. Good growing medium
- 2. High moisture content
- 3. Good water holding capacity



Advantages of peatland

Peatland

1. Abundant water source
 2. Possible water transport system
 3. Cheap transportation cost
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1. ABUNDANT WATER SOURCE



2. POSSIBLE WATER TRANSPORT SYSTEM



3. Cheap transport cost



B. SOLUTION FOR PEAT PROBLEMS

16.8.2005

1. LOW pH

Solution

- Liming of peat
- Crops adaptable to low pH like pineapple
- Crops tolerance to low pH like tapioca



2. LOW NUTRIENTS



3. HIGH CARBON NITROGEN RATIO

Solution

- High dosage of nitrogen fertilizer
- Plant leguminous plants

4. HIGH CATION EXCHANGE CAPACITY

Solution

- Extra dosage of micro nutrient
- Apply burnt wood ash

5. LOW BULK DENSITY

Solution

- Maintain constant soil water table
- Compacting the peat after drainage



6. LOW BEARING

Solution

- Wide track machinery
- Water transportation system



7. HIGH POROSITY

Solution

- Compaction of top peat layer
- Slow release fertilizer
- Animal dung



9. HIGH WATER TABLE

Solution

- Crops adaptable to high water table
- Lowering soil water table through drainage



THANK YOU

WE HOPE

THESE TWO SESSIONS

CAN BENEFIT YOU

