



fintrac

# BASIC PRIORITIES & PRACTICES



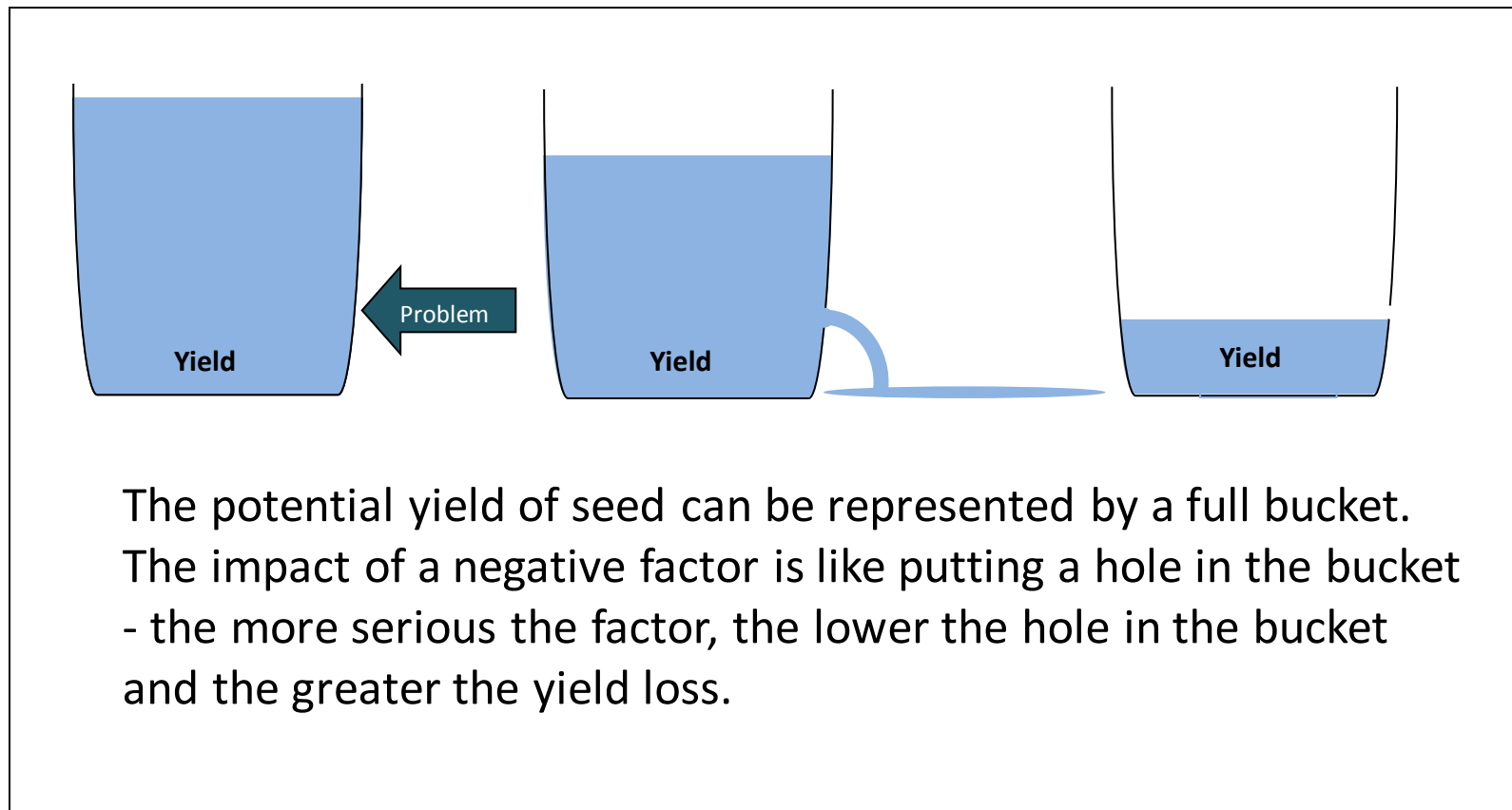
Dedication

Hard work

Knowledge

Experience

# There's a hole in my bucket....



Concentrate on the factors that make the lowest holes  
What are they?

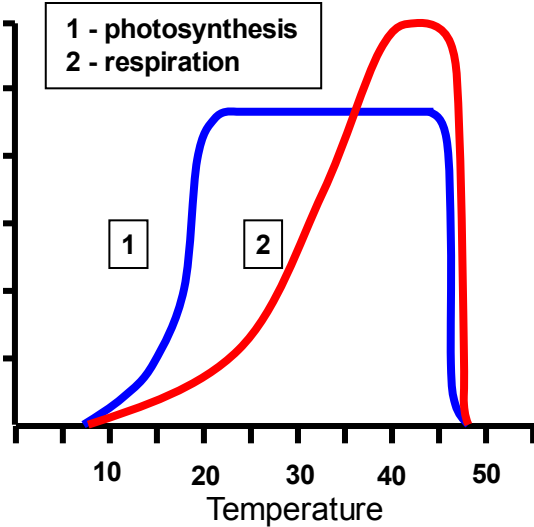
# What is the most important priority?



1. Climate
2. Pests & Diseases
3. Cultural Practices
4. Irrigation
5. Nutrition
6. Others

- Temperature
- Solar radiation (intensity & duration)
- Rainfall (or lack of)
- Relative humidity
- Extreme weather (hurricane, hail, strong winds, heavy rains)
- Annual seasons (temperature, light, rainfall)

# Climatic problems



# Climatic problems – things to do



# Pests & diseases





# Pests & diseases

Don't react to a problem - have a management plan in place before planting



Remove broad leaf weeds



Don't repeat same crop



Proper soil preparation



Early control

# Cultural practices

- Soil preparation, raised beds, field drainage
- Plant density
- Pollination
- Pruning, thinning & weeding
- Trellising and tutoring
- Mulching
- Removing crop residues



## 1. Housekeeping



## 2. Maximizing your land



# Irrigation

- Design, type & management of system
- Water availability & quality
- Irrigation events: water volume and frequency



# Remember...

If an irrigation program is bad, even the best fertilizer program in the world won't make much of a difference.



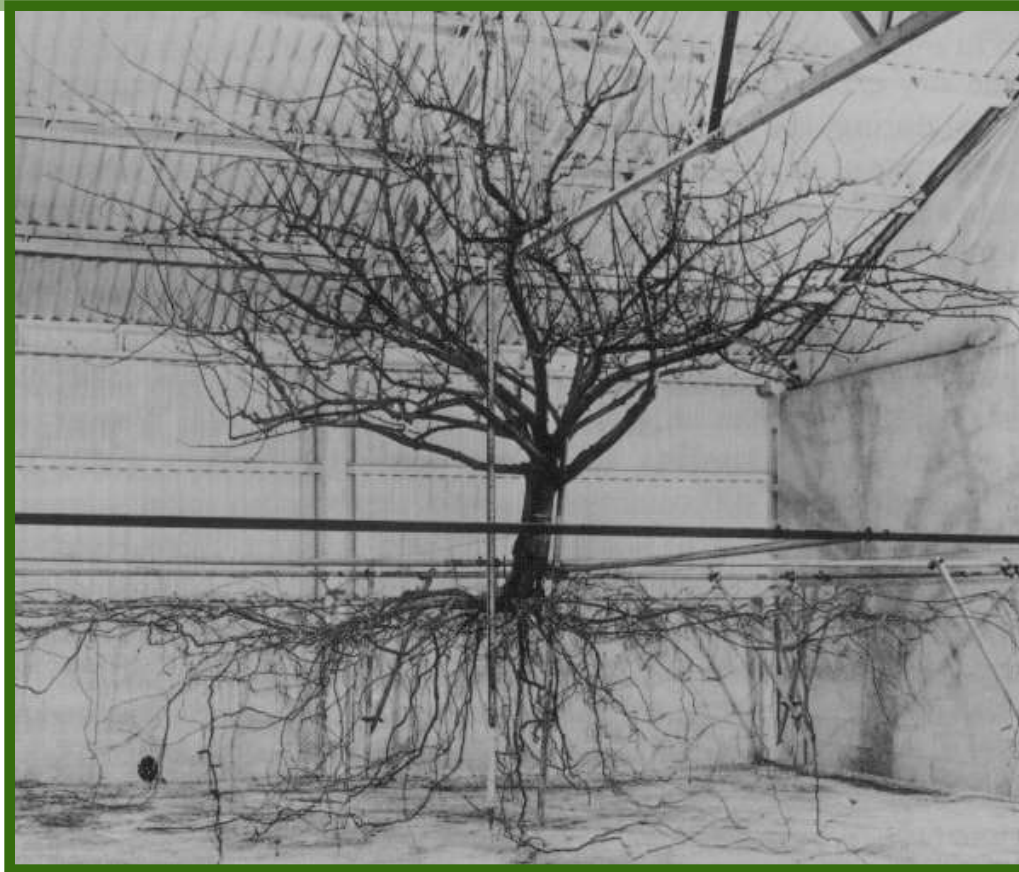
On the other hand, if the irrigation program is good, even a mediocre fertilizer program shows results

Because plants feed on a soup



- The main priority or ‘hole-in-the-bucket’ is not what type of fertilizers you give the plant.
- The main plant nutrition priority is the proper functioning of the roots.

## It's all about the roots





# Out of sight, not out of mind

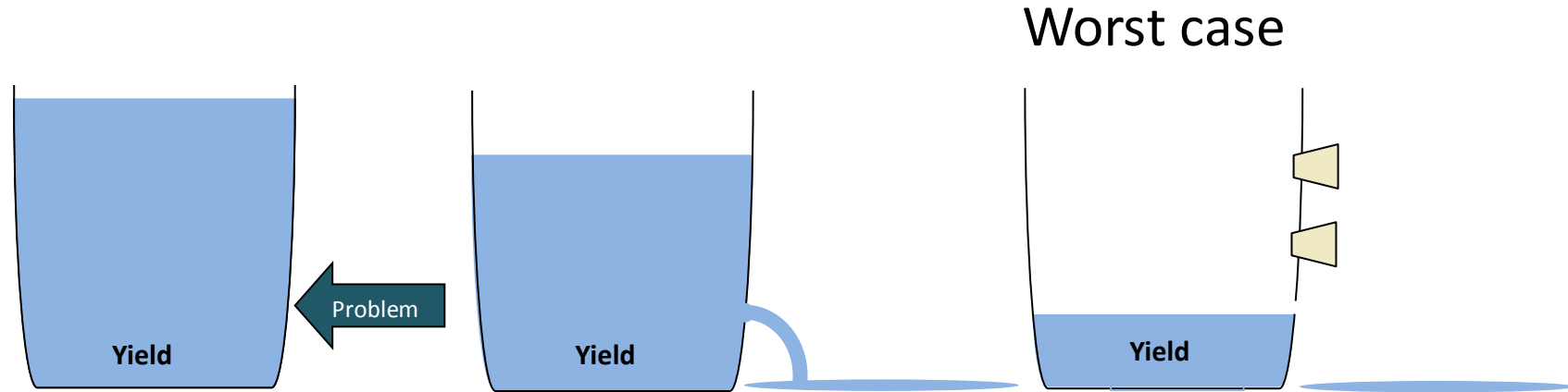
An aerial photograph of a forest with a stream. The stream flows from the top right towards the bottom left. The forest is dense with green trees. Three green text boxes are overlaid on the image, containing the text: 'Give them space to grow', 'Give them air to breathe', and 'Feed them their soup'.

**Give them space to grow**

**Give them air to breathe**

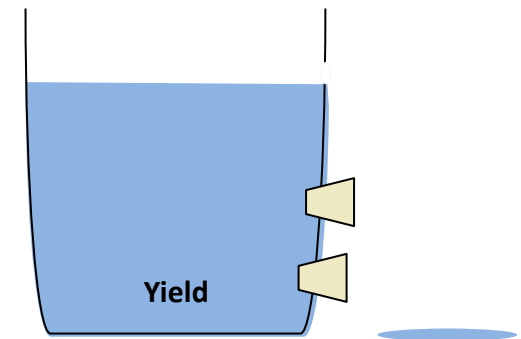
**Feed them their soup**

# Priority-led production

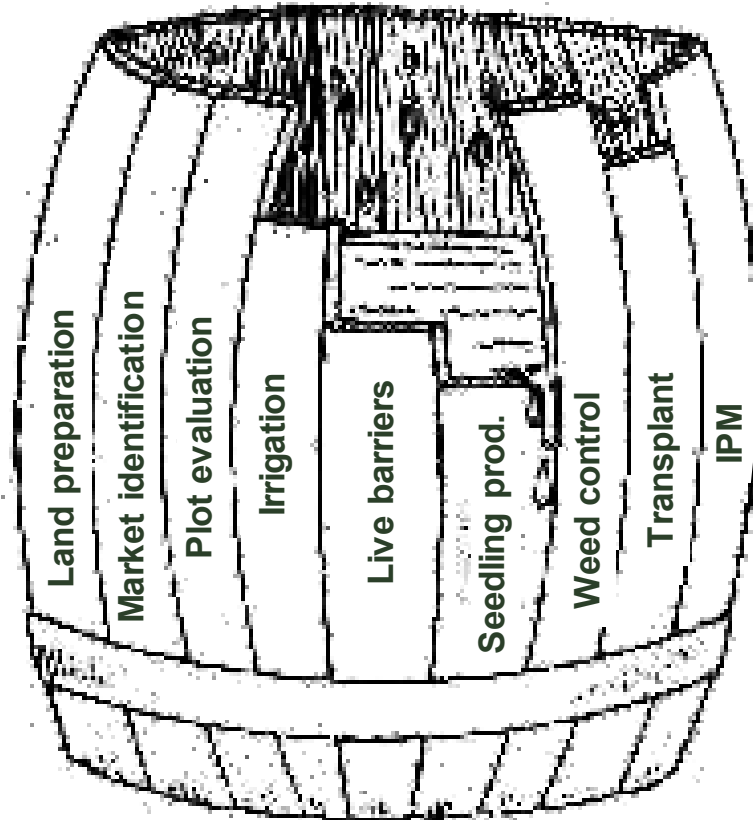


1. Climate
2. Pests & Diseases
3. Cultural Practices
4. Irrigation
5. Nutrition
6. Others

Right case

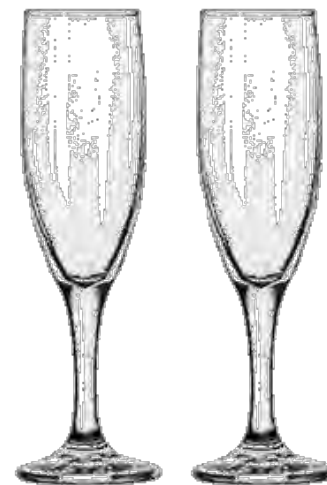


- **Dedication**
- Hard work
- Knowledge
- Experience



“...crops did not fulfill the yield potential because at some stage, basic practices were neglected.”

Complete all steps but also do them at the right time



BASIC PRACTICES (in chronological order)	Days before/after transplant
1. Crop and Market Selection	90 to 60
2. Evaluation of Field & its Surroundings	50 to 45
3. Soil Preparation	45 to 30
4. Seedling Production	45 to 12
5. Irrigation Installation & Assessment	40 to 25
6. Planting of Live Barriers	40 to 25
7. Weed Control of the Field & its Borders	20 to 10
<b>8. TRANSPLANT</b>	
9. Begin Nutrition Program	0 to 1
10. Root Growth Induction	3 to 7
11. Integrated Pest Management	0 to crop end
12. Cultural Practices	0 to crop end
<b>13. CROP ELIMINATION</b>	

# Crop & market selection (days before transplant: 90 to 60)



- Preferred varieties, sizes and desired volumes
- Wholesale prices and retail prices
- Cropping dates
- Market demand windows
- Buyer options & purchase agreements on offer
- Transport options & costs



Revise production plans & assess production costs.



## Water source

*Determine if it is safe for use on crops and if it has the required volume capacity even at times of low water or high demand.*

## Assess potential flooding zones

## Evaluate pests and diseases

*Look in the weeds and surrounding crops. Soil samples can also be taken to look for key soil pests such as nematodes.*

## Identify the weed species present

## Do a soil test done

*Test for pH, macronutrients and humus levels (amount of organic material in the soil). Also assess the soil's physical characteristics (level of compaction, amount of stones, texture & structure).*



# Water source



## Eliminate weeds

*Removes alternative host for pests & diseases.*

*If the weed is nut sedge, prepare the land 45 days before transplant to give time for 1 or 2 applications of glyphosate.*

## Use clean equipment

*Avoids introduction of pests and diseases from other sites*

## Choose the appropriate equipment and practices

*Depends on soil conditions (e.g. a hard pan) and the crop*

## Prepare raised beds (minimum of 30cm or 12 inches)

## Apply lime to acidic soils

*Liming can increase yields by up to 35% - brings up the pH to proper levels*

# Soil preparation (DBT: 45 to 30)



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# Seedling production (DBT: 45 to 12)

- Compact height
- Good root system
- Dark green in color
- Strong stem
- Pests/disease free



- Use certified seed
- Calculate the quantity of seed needed (plant extra)
- Disinfect the seedling trays
- Use an appropriate planting medium
- Plant seeds at proper depth
- Germination chamber
- Regular watering and light fertilization
- Scouting careful use of pesticides

# Seedling production (DBT: 45 to 12)



# Seedling production (DBT: 45 to 12)





- Install irrigation system
- Test and repair the drip system as necessary
- Secure the drip tape or bury it if there is much wind
- Run the irrigation system to pre-germinate weeds
- Plan proper irrigation scheduling & volumes



# Plant live barriers (DBT: 40 to 25)

These act as **wind breaks** and **barriers against insects**

- Use grasses like sorghum, sugar cane, corn
- Plant in a zigzag & irrigate if necessary
- Need to be 30-40 cm (12"-15") tall at transplant
- Can use shade cloth instead



- Sample for pests in the weeds
- Eliminate all broad leaf weeds (alternative hosts)
- Clear weeds in a broad border around the crop
- (Install yellow sticky traps)



- Do not take the seedling trays into the field
- Group the seedlings by size
- Don't leave in the sun
- Irrigate the beds so that they are wet through
- Use a marker stick for planting holes
- Pour a cup of starter solution in each hole
- Transplant seedling and avoid air pockets

# Transplant



# Root growth induction (DBT: 3 to 7)



- Do not irrigate for a number of days
- This will stimulate root division to produce a more extensive root system
- Resume irrigation when the plants start to show wilting symptoms in the heat of the day

1. Crop health & landscape stewardship
2. Scouting & field observations
3. Monitoring & control decisions
4. Pest management activities
5. Follow up & record keeping



# Cultural practices (DAT: 0 to end)

- Staking
- Control of weeds
- Removal of plant with viral symptoms
- Trellising and tutoring
- Pruning
- Collection of fallen fruit
- Harvest & postharvest





# Crop Elimination (immediately after harvest)



14 days after harvest

# When it all comes together

