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# Power Equipment for the Gardener



# Power Equipment for the Gardener

- Ground Rules for session
  - Ask questions, do not leave with any issues unanswered during lecture – interaction is good
  - Outside– Please place safety first
- Agenda
  - Introduction to Tools
  - Purchase versus Rental
  - Today's Gas – not your father's gasoline
  - Safety – apparel & operating safety

# Power Equipment for the Gardener

- Outdoor Power Equipment Industry
  - \$15Billion/year Industry – 400 million machines in US
  - Represents 95%+ of Industry
  - Founded in 1952, primary focus was/is sale
    - Current major issues are Environment & Fuel
  - Annual Expo is 16<sup>th</sup> largest in US
- News and Trends
  - US Manufacturing Trends
    - Tecumseh – Briggs & Stratton – Kohler – Japan – China
    - Fuel
    - Ethanol changes the rules
  - Environmental concerns



# Power Equipment for the Gardener

## ■ Power Equipment Vocabulary

### ■ Handheld

- Usually 2 cycle engines (mix oil & gas together)
- Engine Design – Formix – C4

### ■ Wheeled

- Usually 4 cycle – separate gas and oil reservoirs

### ■ Green – Environmentally Friendly

- Propane and Electric alternatives to gas engines
  - Zero carbon emissions/footprint



# Power Equipment –

- Rotary
  - Push – Self Propelled
  - Green Electric & Reel model
  - Excellent cut quality
- Tractors
  - Declining US market – still popular in New
  - Most tractors made by either AYP or MTD
  - Good cut quality
- Zero Turn
  - Commercial mower of choice – Rapidly growing sales
  - Best cut quality
  - Optional Green Propane engines



# Power Equipment –



# Power Equipment –

## ■ Curved Shaft

### ■ Features

- Flexible drive shaft
- Uses .080in line
- Usually least expensive

### ■ Benefits

- Lighter

Grass is closer to operator – more control



## ■ Straight Shaft

### Features

Solid drive shaft

Uses .095+in line

Blade capable

### Benefits

Can trim grass – weeds –  
brush – saplings – barberry  
– Euonymus

Large choice of models



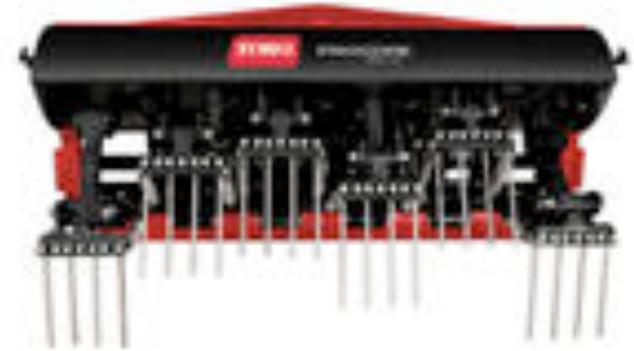
# Trimmers



# Power Equipment – Grass

- Aerators – De-Thatchers – Over Seeders
- Aerators
  - Piston type, plug type, attachment & pull behind
    - Golf courses use piston type – highest quality
    - Plug type best value for residential lawns
- De-Thatchers
  - Commercial rakes (JRCO) – flails– attachments
- Over Seeders

# Grass Care Equipment



# Grass Care – Hints & Tips

- Sharpen your mower blades 2–3X a season
  - Especially if you are mulching
- Cut your grass at 3–3.5 inches
  - First & last cuts can be at 2 in
- Get a soil test
  - New lawns every year, est. lawns every 2–3years
  - Over seed every 2–3 years, use high quality grass seed – fescue anyone
- Aerate every 3 years or as needed – 9–12 & 9–3
  - Low traffic lawns add 1–2 years
  - Plantain weeds = compacted soil = aerate
  - Share a rental with a neighbor
- If you use a commercial cutter
  - Examine his equipment
    - ask what mower he uses – condition – how often do they sharpen their blades?

# Flower Bed Equipment



# Power Equipment – Tillers

- Tillers – many types
  - Rear tine – front tine – convertible – multiple sizes
    - I prefer rear tine for large jobs: ex. Troy-bilt Horse
      - Creating new gardens, turning over large garden fall
  - Small Tillers
    - 2 Or 4 cycle
    - Lighter & easier to handle
    - More versatile
      - Prepare Beds, cultivate, dig holes for bushes & bulbs
      - Tines – cultivator versus bolo style



# Tillers



# Power Equipment – Edgers & Bed Shapers

- Edging
  - Line trimmers popular in NE
  - Blade Edgers – precise & better quality
    - Popular in South & corporate environments
- Bed Shapers
  - Excellent for creating new flower beds & rejuvenating existing beds
  - Good Rental Candidate



# Blowers – Leaf Season Necessities

- Hand Held
  - 2 cycle & electric
  - Light & powerful
    - Grass, Snow, Decks
- Back Pack
  - Very popular
  - Huge growth in last few years
- Wheeled or Push
  - Most powerful & excellent for large pro
  - Hard work for home owners if you have



# Leaf Vacuums – unsung

- Great for leaf pick up and garden & flower bed cleanups

Handheld models for small gardens & be



- Wheeled Models for lawns, gardens ,flower beds and rock wall cleanups

- Hose kit makes fall and spring cleanup a breeze
- Reduces leaves, sticks and stems 4:1
- Good rental candidate or share with a neighbor



# Power Equipment – What is new?

- Combination Systems

- Best system for gardeners
  - Single engine with multiple attachments



- Wheel Barrows

- Powered wheel barrows –Wheeleu productivity



- Bed Re-Definers

- Keep bed edges looking their best in minutes



# Combination Systems

- Buy a single Engine and attach what you need
  - Multiple engine sizes available
    - Single Engine to maintain
  - Easy to connect attachments
    - Trimmers – Edgers – Blades
    - Pole Pruners – Hedge Trimmers
    - Blowers – engine size determines air volume
    - Cultivator
    - Brushes & Paddles

# Combination Equipment



# Motorized Wheel Barrows

- The best labor saving device for the gardener
  - Move & Dump – Mulch, Soil, Rock, Firewood with ease compared to traditional wheel barrow
  - Great for hills and stairs/steps
  - Versatile
    - Dumper fits thru doorways – firewood – demolition
    - Vacuum system – great for barnyards & stalls & leaves

# Motorized Wheel Barrow

- Muck truck
  - 4 wheel drive
  - video



# Bed Re-Definer

- Introduced by ECHO in January 2009
- Great productivity tool for gardeners
  - Does not create beds but keeps bed edges new

- video



# Flower Bed Care – Hints &

- Creation
  - Rent a large tiller for breaking ground
  - Consider purchase of small tiller for maintenance
- Spring & Fall Cleanups
  - Fall – mulch/compost leaves, flower stems with chipper/shredder or leaf vacuum
    - Do not mulch diseased leaves – dispose in garbage
    - Till leaves, compost, grass clippings into garden with tiller – create the best soil
    - Bulb Augers – plant 50X faster than ever – every Garden club should own one
  - Spring – blow leaves off beds ( blower)
    - Edge (BRD) – every 6–7 weeks
    - Mulch with Muck truck
    - Till before planting

# Engines – easier to start than ever

- Most major brands have designed easier starting engines
  - Premium priced offerings – adds about \$25–40
  - Stihl – “easy start” branded
  - ECHO – “istart” branded

# Today's Ethanol Gas

## “Not your Father's Gasoline”

- Ethanol – the big difference in today's gas
  - Chemically attracts water
    - In 1 month – 5gal container of gas attracts 12oz of water
    - Gasoline or mixed gas (oil & water) is lighter than H<sub>2</sub>O
    - Result – hard starting due to water in carburetor, esp. 2 cycle
  - Ethanol
    - eats plastic fuel lines
    - Pits inexpensive metal in carburetors
  - Storage recommendation
    - Mix/store only what you can use in 1 month
    - Pour remaining gas/mix into tractor/car/truck and use
    - Mix new when required

# Chipper/Shredders – Mulch & Compost Wonders



# Power Equipment – Chain

- Chain Saws – one of the best tools for a gardener/ homeowner & the most dangerous
- Razor sharp & operate at high speeds
  - Imperative you get proper training before use
  - Always concentrate – never operate when tired
  - Only takes a fraction of a second to hurt you
  - Protect yourself by wearing:
    - Safety footwear
    - Snug-fitting clothing & Chaps
    - Protective Gloves
    - Eye, Ear and Head protection
- Very productive tool
  - Pruning, felling trees, removing brush, fire wood



# Chain Saws



# Safety – First and Foremost

- Power Equipment is Wonderful & Dangerous
  - Keep in good working order
  - Only use equipment for stated purpose
- Always wear protective apparel
  - Shoes – tight clothing – hat or helmet – gloves – chaps
- Always wear eye & ear protection
  - Safety Glasses – ear muffs or ear plugs
- Always look before starting work
  - Make sure no one is in work area or machine

# Equipment – Hints & Tips

- Maintain your Equipment
  - Check the oil regularly
    - Buy top branded oil – do not skimp on cheaper brands
  - New Spark plugs, air filters, oil filters are an inexpensive way to a long and happy relationship
  - Est. a relationship with your local dealer – regular tune-ups
  - Use middle to high grade Gas
    - 89–93 octane
  - At end of season – put stabil into last tank of gas and run equipment dry
  - Spray Fluid Film or WD–40
    - on metal to retard rust
    - Spray underside of decks or snow blower housings

# Dealer versus Big Box Store

## FULL SERVICE DEALER

- Provides highest level of service  
Before, During & After sale  
More choice – better fit
- Equipment: set up and tested & delivered
- Should carry proven high quality equipment
- Is price competitive
- Local business – supports community

## BIG BOX STORE

- Offers large selection of entry level models
- End of season sales
- Open on Sundays  
Longer hours of operation

# Power Equipment for the Gardener

- Questions
- Thank you to UConn Extension Program
  - Sandi Wilson, Bethel co-ordinator
- Short break and meet outside for Demos