2 Inch hook and latch: preferred!

Buy at auction! Buy used!

Don’t do this!

BRASS IMPACT SPRINKLERS (birds)

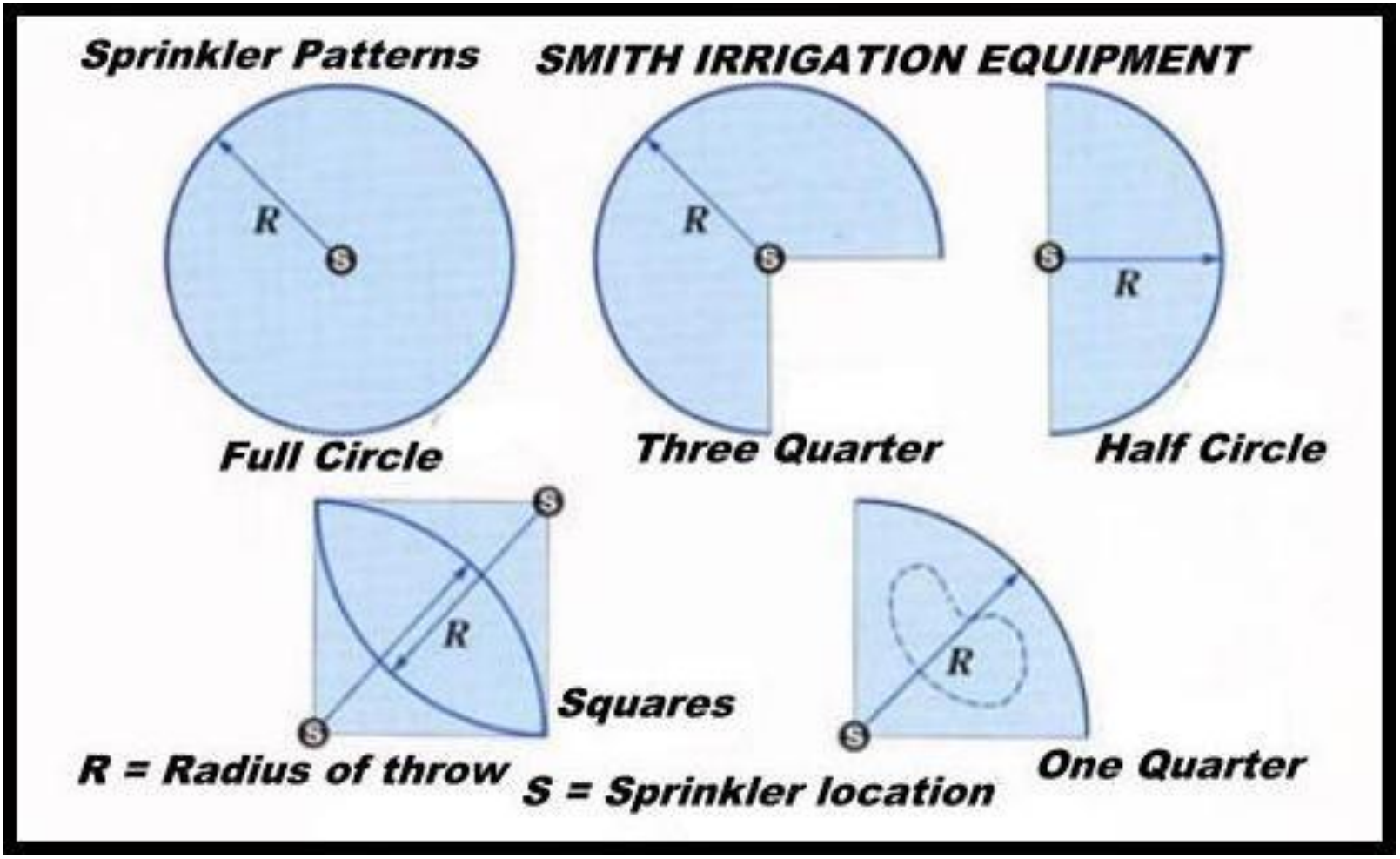
Standard, hold value

$12 - $40 each depending on features

Change nozzle to change flow rate & spray pattern

PART-CIRCLE BIRDS

Part-circle adds control options



Typical scenario

- Set up pipe and check it

Typical scenario

- Connect water source

Typical scenario

- Remove plug and flush debris (mice, toads, rocks, soil)

Typical scenario

- Plug pipe and pressurize

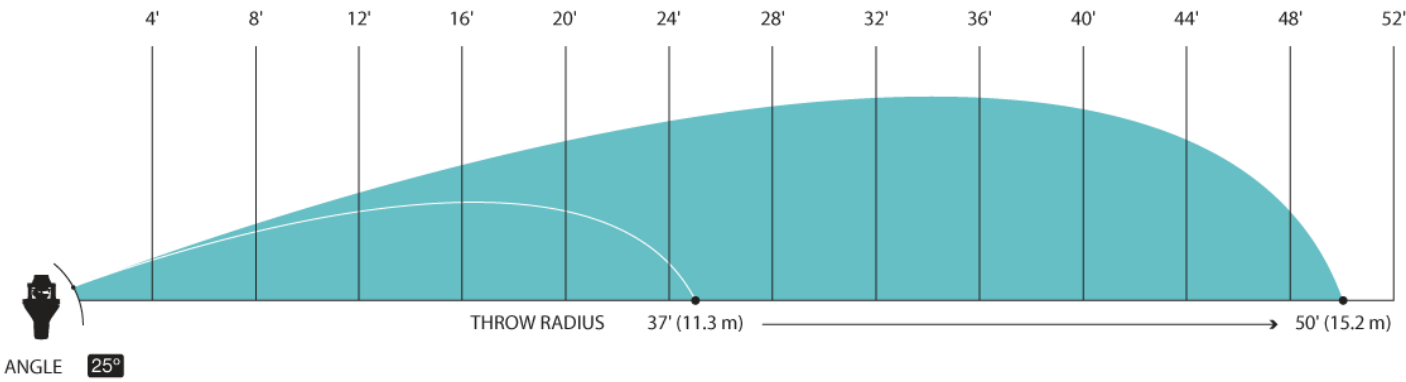
Typical scenario

- Adjust pump pressure & run

NELSON ROTATORS

FLOW RANGE
2.9 to 8.5 GPM
659 to 1935 LPH

CHEAPER THAN BRASS ($15.50 ea)
EASIER TO CLEAN IN THE FIELD
WIND RESISTANT
WIDER COVERAGE



Move pipe from field to field

Experience

- In dry times, we try to run each field every three days more or less
- A “set” is about 1.5 hours
- Run in early morning or late evening, night to avoid wind and evaporation
- Pay special attention to new seedings, plantings
- Don’t get behind
- Keep track

Earth Springs Farm – no pipes

Mike uses two travelling guns for overhead, no pipe

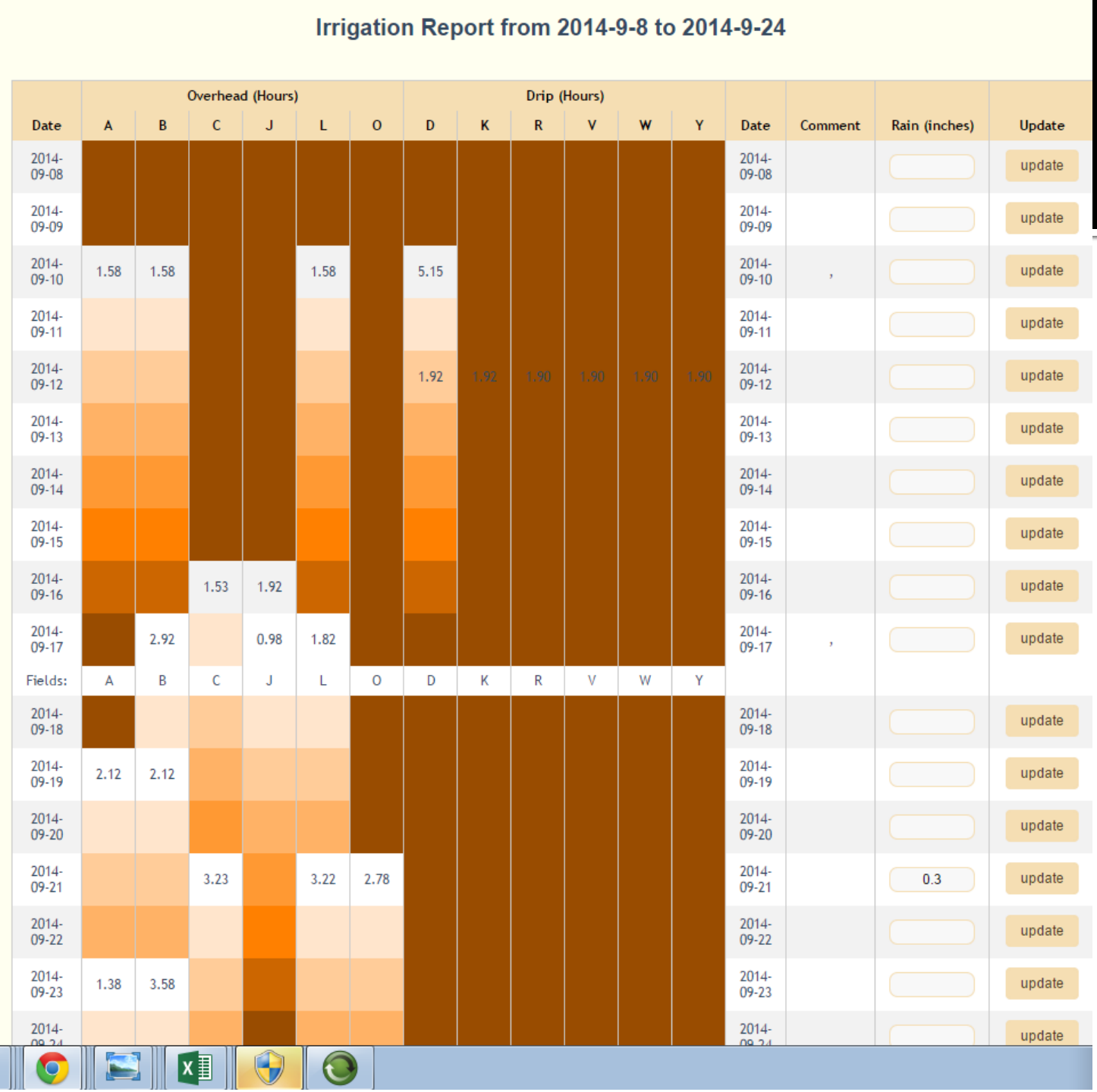
580 foot run

12-14 beds at once

About 1 acre per set

$10,000

Optional gas powered booster pump for adding pressure if needed



Irrigation Report from 2014-9-8 to 2014-9-24

Date	Overhead (Hours) A	B	C	J	L	O	Drip (Hours) D	K	R	V	W	Y	Date	Comment	Rain (inches)	Update
2014-09-08													2014-09-08			update
2014-09-09													2014-09-09			update
2014-09-10	1.58	1.58			1.58		5.15						2014-09-10	,		update
2014-09-11													2014-09-11			update
2014-09-12							1.92	1.92	1.90	1.90	1.90	1.90	2014-09-12			update
2014-09-13													2014-09-13			update
2014-09-14													2014-09-14			update
2014-09-15													2014-09-15			update
2014-09-16			1.53	1.92									2014-09-16			update
2014-09-17		2.92		0.98	1.82								2014-09-17	,		update
Fields:	A	B	C	J	L	O	D	K	R	V	W	Y				
2014-09-18													2014-09-18			update
2014-09-19	2.12	2.12											2014-09-19			update
2014-09-20													2014-09-20			update
2014-09-21			3.23		3.22	2.78							2014-09-21		0.3	update
2014-09-22													2014-09-22			update
2014-09-23	1.38	3.58											2014-09-23			update
2014-09-24													2014-09-24			update

FARMDATA

Digital records management system

Record planting, harvest, irrigation, production and sales through smartphone and desktop

WATER USAGE: OVERHEAD

- Typically 5 gallons per minute per bird, 50 PSI
- Example: 1/3rd acre
  - 300 foot field, 20 foot pipes
  - 15 pipes per field = 15 birds
  - 15 x 5 = 75 gallons per minute, plus leaks

  - 75 GPM x 1.5 hours = 6750 gallons + per set
  - Approx 20,000 gal per acre per set!

Experience

- Spending money on irrigation brings rainy years
- Making your system efficient and easy will pay off in reduced labor & headaches and healthier crops
- Building a system that allows us to water multiple fields at once is a huge relief in the high season

DRIP IRRIGATION

Water just where you need it

Drip benefits

- Water the crop, not the weeds & paths
- Use less water
- Doesn't wet foliage, reduced disease
- Low pressure, low flow
- Fertilizer injection possible

- Tomatoes, squash, melons, pepps, sweet potato

Great for single or twin rows

Many rows – less practical

Essential for plastic mulch

Lay drip & plastic together

Buckeye bedshaper with drip mast

Lay drip mechanically

Bury drip:

- Easier weeding and cultivating
- Tape stays put

Field filters, regulators

Disc & Screeen Filters

Fertilizer injection

Dosatron piston type

Sand Filters : 90 gallons per minute

DRIP WATER USAGE

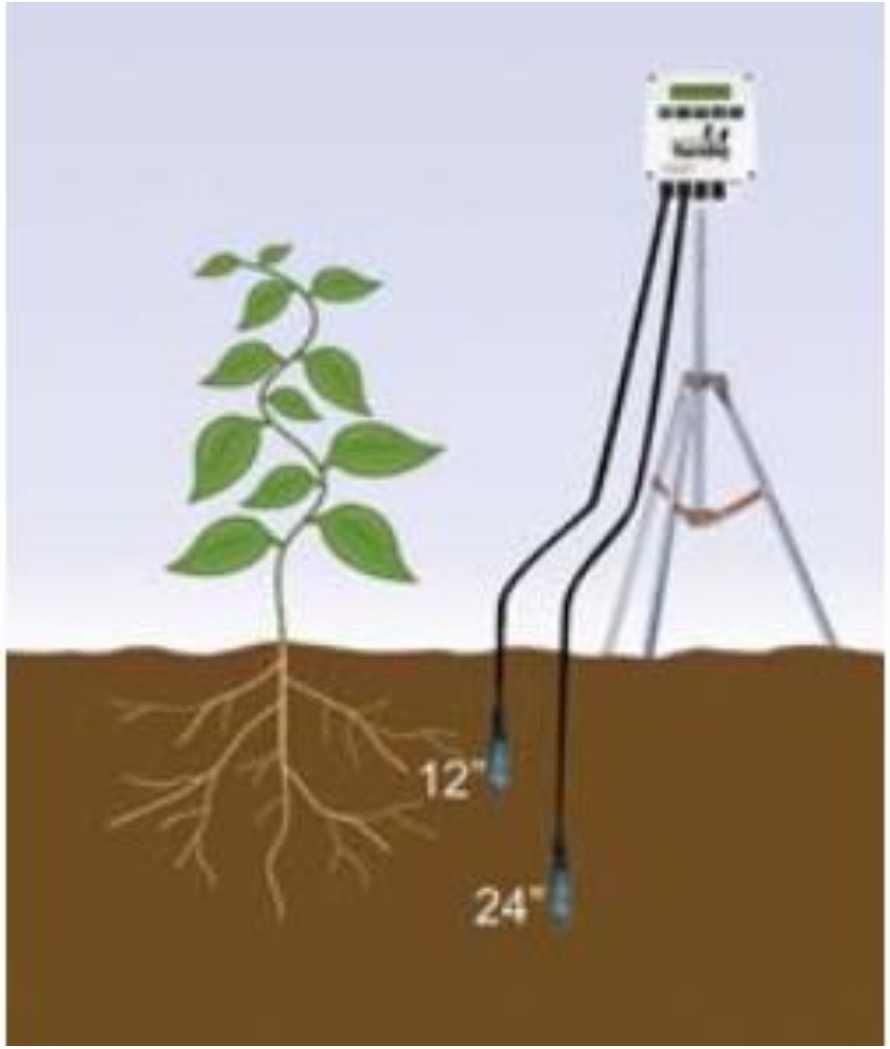
- Typically ½ gallon per minute for 100 feet
- 20-30 gallons per minute per acre
- 1200-1800 gallons per hour per acre

- SOAK:
  - Run 5 hours per day, 2 – 3 days per week
- PULSE:
  - Run 1 hour, 2 x per day, every day

Irrometer – keep track!

Spectrum Technologies

WaterScout SM 100 sensor shown with the FieldScout Soil Sensor Reader (Item 6465)



- Re-use of drip tape is very time consuming
- My conclusion after 10 years of trying, its not worth the headache and labor
- Used drip tape can be recycled
- Must be tied in neat bundles, no twine

- Google: "PA Plastics Recycling List"
- Daniel Zook: Leola: 717-656-4422

Alternate storage options

Algae is a pain in above ground tanks

Cover or paint tanks

Gravity feed: 1 PSI per 2.3 feet of head

- "HEAD" is vertical drop
- Subtract friction loss
- Drip needs about 10 PSI minimum (23 feet)

Greenhouse irrigation: $200 and worth every penny!

RONDO mini sprinklers (from RainFlo Irrigation)

Automation

- Affordable controllers for simple projects: $150 for two valve system
- Useful if not on site every day
- Battery operated
- Leaks can be a problem

Automated seedling waterer

GREENHOUSE TECHNOLOGY INCORPORATED $5000 PER 30X96

Learn your parts, keep some stock

Suppliers

Rain flo: 717 445-3000 www.rainfloirrigation.com

Find somebody trustworthy who will help you out!

Martins Produce Supply: 717-532-5918

Burying small water lines

Trenching machine $160 per day

150 feet per hour

10 feet per hour

Thank You!

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