

Animal Welfare Judging Competition 2013

Turkey Scenario

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Maple Farm



Farm is in Michigan.

Farming only turkeys.

4 curtain-sided barns, each holding 5,000 Hybrid hen turkeys (white curtains).

Strict biosecurity is observed (change clothes to enter barns).

Pine Farm



Farm is in Michigan.

Part of mixed enterprise – turkeys + cash-cropping corn and soybeans.

1 curtain-sided barn holding 500 Nicholas tom turkeys (black curtains).

Some biosecurity is observed (only owners enter barn).

Maple Farm

Staffing:

- **Owner / manager (Joe) is a 48 year-old man with BSc (Agr) who lives on the farm.**
- **Farm laborer (Fred) is a 55 year-old man who has no formal training but has worked on this farm for 15 years.**
- **Joe looks after the equipment (feeders, drinkers, fans, curtains), orders feed and walks through each barn several times a week. Takes Thursdays and Fridays off. Checks birds on Saturdays and Sundays – but only does essential tasks then.**
- **Fred spends his time walking through the barns (at least once a day), reporting on any equipment problems, picking up dead birds, transferring any sick or injured birds to a hospital pen or euthanizing them. Works Monday – Friday.**

Pine Farm

Staffing:

- **Owners are a couple in their 40s (Alex and Jenn) who both have Diplomas from a local Ag College.**
- **Alex took over this mixed farm from his Dad 10 years ago and decided to start keeping turkeys.**
- **They share the chores with Jenn doing more when Alex is busy with other farm duties.**
- **They make sure that one of them walks through the barn at least twice a day**

Maple Farm

At the hatchery:

Poults are vaccinated via spray with Coccivac (vaccine against 4 *Eimeria* species).

Poults' beaks are heat-treated with precision infra-red equipment (beak tip sloughs off 6 days later).

Poults have the outside toe on both feet treated using infra-red equipment. The claw sloughs off after 8 days.

Chicks are transferred to Maple Farm from the hatchery – a journey of about 2 hours.

At Maple Farm:

Vaccinated (vaccine in water) with Oralvax HE against Haemorrhagic enteritis at 6 weeks of age.

Pine Farm

At the hatchery:

- Poults are vaccinated via spray with Coccivac (vaccine against 4 *Eimeria* species).
- Poults are beak-trimmed using a hot-blade de-beaker ($\frac{1}{3}$ of beak is removed).
- Poults are transferred to Pine Farm from the hatchery – a journey of about 4 hours. A little “oasis” is added to each box for transporting poults.

At Pine Farm

- Vaccinated (vaccine in water) for Newcastle Disease at 3, 7 and 12 weeks.
- Vaccinated (vaccine in water) with Oralvax HE for Haemorrhagic enteritis at 6 weeks of age.

Maple Farm

Whole-house brooding is used. In fact only half the house is heated; a plastic sheet divides the house in half lengthwise and saves heating costs. Plastic sheet removed at 3 weeks .

Natural gas radiant heaters



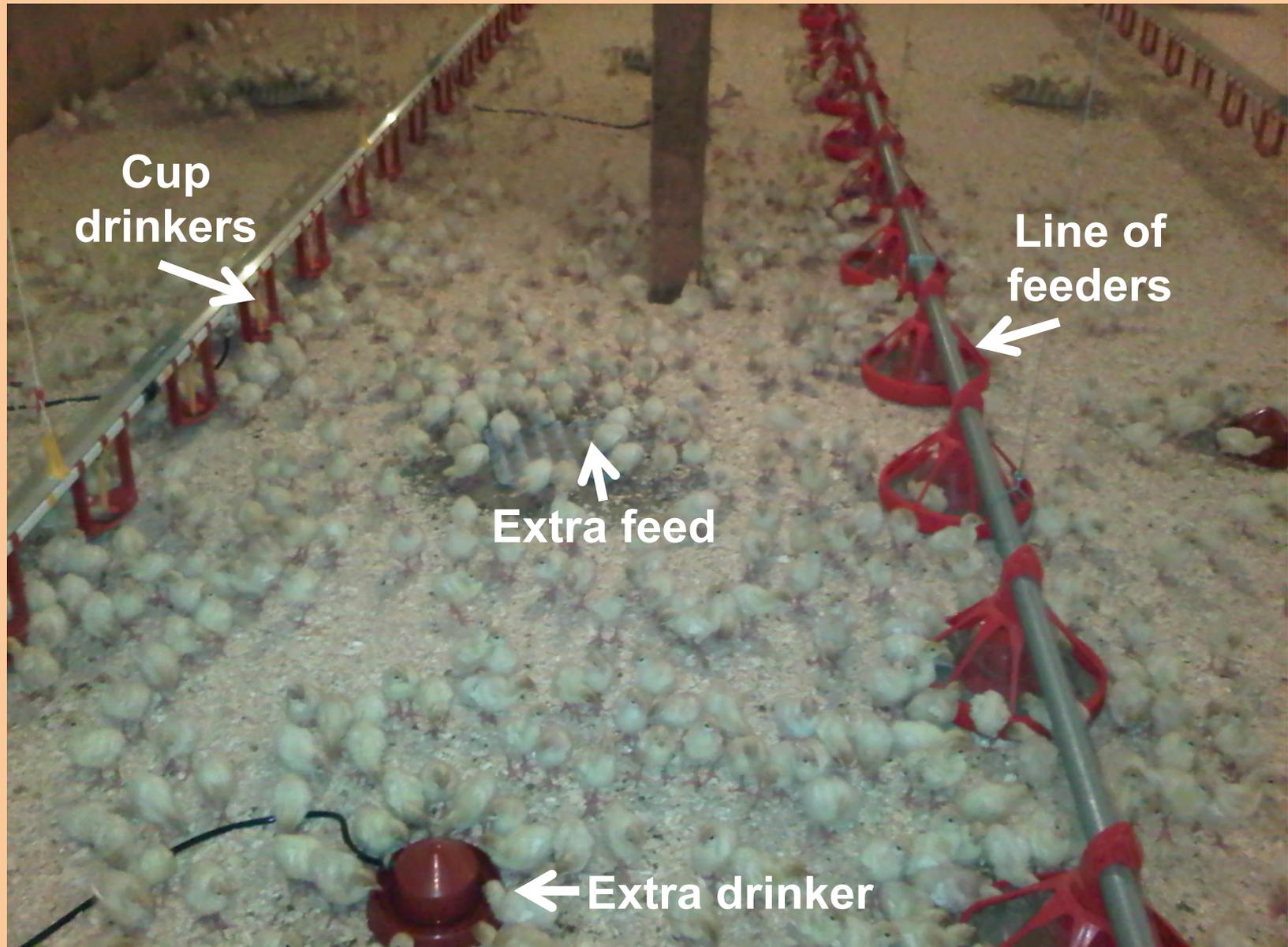
Line of cup drinkers

Line of feeders

Extra drinkers

Extra feed

Maple Farm



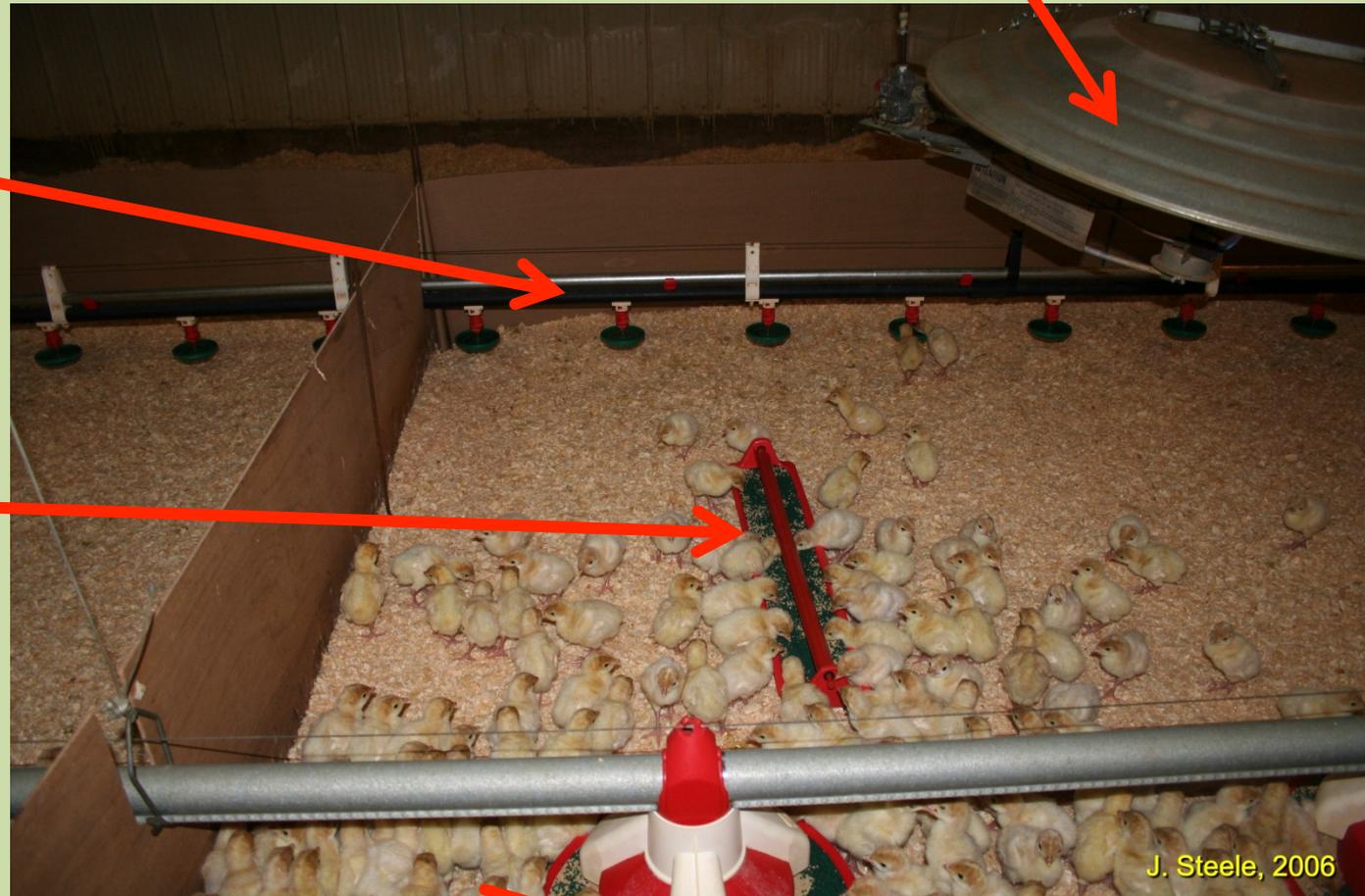
Pine Farm

Propane radiant heater

Line of cup
drinkers

Extra feeder
'oasis' mixed
with feed

Line of
feeders



Poults brooded in groups of 100 in small areas fenced with cardboard.

Pine Farm



**'Oasis' mixed with feed.
Cardboard fences removed at 3 weeks.**

Maple Farm

**Incidence of “starve-out”
at 7 days = 3.0%.**

Pine Farm

**Incidence of “starve-out”
at 7 days = 1.5%.**



Maple Farm

Lighting (Compact fluorescent)

23L:1D for first 3 days.

Then 16L:8D until shipped.

Light intensity 100 lux for first 3 days.

Then 60 lux for next 2 weeks.

Then 20 lux until shipped*.

***In fact intensity and photoperiod are very variable due to daylight penetrating white curtains.**

Pine Farm

Lighting (Compact fluorescent)

23L:1D for first day.

22L:2D for second day.

20L:4D for third day.

Then 16L:8D until shipped.

Light intensity 100 lux for first 3 days.

Then 80 lux for next 3 weeks.

Then 15 lux until shipped.

Light intensity is much greater on both farms when curtains are raised to increase

ventilation.

Maple Farm

Feeding

Poults on commercial starter crumbs for 4 weeks (28% protein, 2,900 kcals).

Then on to commercial grower pellets with protein reduced by 2% every 2 weeks to a level of 18% and energy increased every two weeks to a level of 3,250 kcals.

Pine Farm

Feeding

Poults on commercial starter crumbs for 4 weeks (28% protein, 2,900 kcals).

Then on to home mixed ration (based on corn and soybean + commercial supplement with essential amino acids and minerals).

These rations are aiming for gradual reduction of protein to 16% and gradual increase of energy to 3,300 kcals.

Feed is in mash form.

Maple Farm



Some problems with wet litter at 8-10 weeks. Maximum ventilation in attempt to dry litter. Birds very active. Bird density = 0.28 m²/bird (3.0 ft²/bird).

Maple Farm



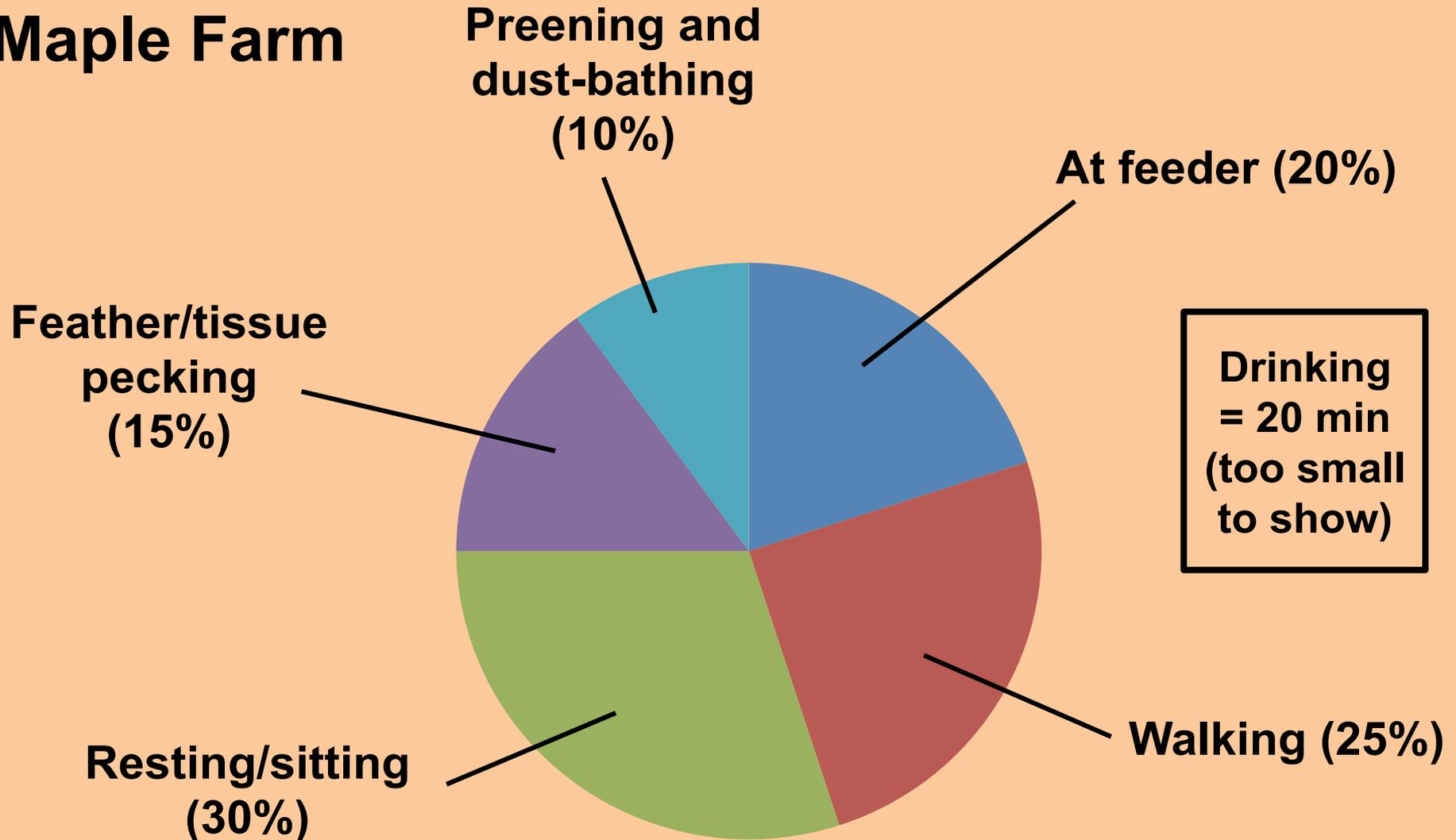
From 12 weeks to finish, dry dusty litter and very dusty atmosphere. Birds showing signs of respiratory distress.

Pine Farm



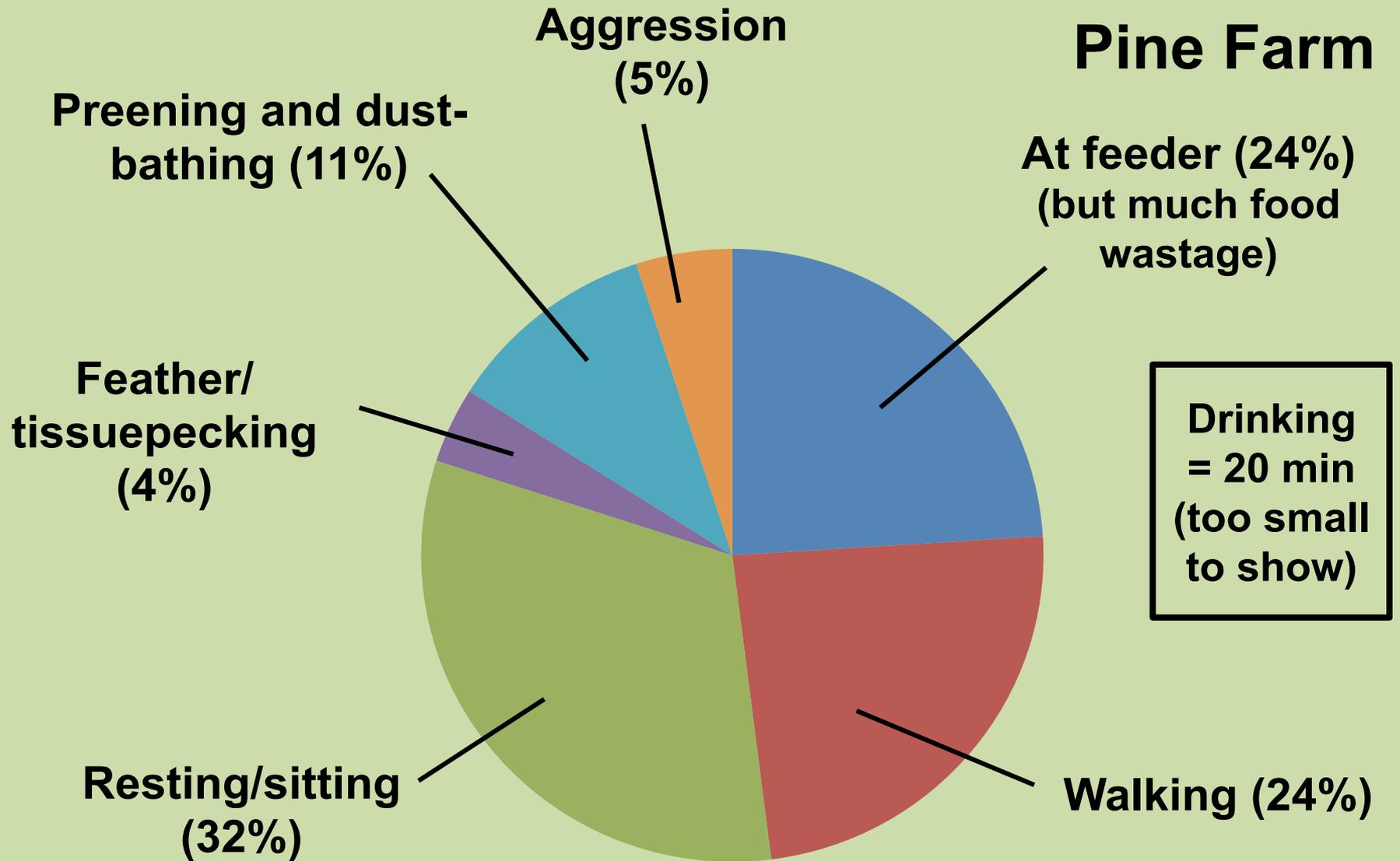
Birds very active at 8-10 weeks, with some signs of aggression. Lights dimmed and curtains lowered in attempt to reduce activity. In summer, this results in high temperatures (82⁰F, 28⁰C), open-mouth breathing, and gular fluttering. Bird density 0.46 m²/bird (5.0 ft²/bird)

Maple Farm



Time budget at 12 weeks for 16 h light period (%)

Pine Farm



Time budget at 12 weeks for 16 h light period (%)

Maple Farm



From 5 weeks, feather pecking and cannibalism are problems. Affected birds are transferred to a hospital pen in each barn. About 40% of hospitalized birds recover (those identified early) and are returned to the flock. The others are euthanized.

Pine Farm

A



B

From 8 weeks, aggressive pecking is a problem, sometimes combined with feather pecking and cannibalism. Bird A was hospitalized and recovered, bird B was found dead. About 60% of hospitalized birds recover and are returned to the flock.

Maple Farm

Production

On average hens reach 8 kg (17.6 lbs) in 12-13 weeks with a food conversion ratio of 2.3:1

Maple Farm aims for 3 crops/year allowing +4 weeks between crops for clean up and sanitization.

60% of hens go for cut-up trade.

Pine Farm

Production

On average toms reach 18 kg (39.7 lbs) in 22 weeks with a food conversion ratio of 2.9:1

Pine Farm aims for two crops/year (one for Xmas). This allows 4 weeks between crops for clean up and sanitization.

Most of toms go for cut-up trade.

Maple Farm

Mortality from housing to 12 weeks

Starve-out	3.0%
Round heart (culled)	1.2%
Aortic rupture	0.8%
Various leg problems (culled)	3.2%
Cannibalised (culled)	<u>4.3%</u>
Total mortality	<u>12.5%</u>

Downgraded at processing plant)

Breast blisters	4.5%
Scarring from being pecked	5.0%

Pine Farm

Mortality from housing to 22 weeks

Starve-out	1.5%
Round heart (culled)	1.0%
Aortic rupture	0.6%
Femur broken lengthwise (culled)	0.8%
Other leg problems (culled)	3.1%
Aggressively pecked (culled)	<u>2.1%</u>
Total mortality	<u>9.1%</u>

Downgraded at processing plant)

Breast blisters	2.1%
Green muscle disease (deep pectoral myopathy)	1.2%

Maple Farm Catching, transport and slaughter

**Feeders are raised 12 hours before catching starts.
Drinkers are raised immediately before catching.**

**Commercial crew catches birds individually at night
and places them in crates.**

**Birds are transported on trucks (fitted with tarps for
cold weather) to a modern processing plant. Max
transport time = 2 h + possibility of 1-2 h wait in
sheltered area at plant.**

**Plant uses 2-stage gas stunning (CO₂). Birds are
stunned and killed in their crates.**

**Birds bleed out well. DOAs can be identified as
'redskins' (but very few DOAs).**

Pine Farm Catching, transport and slaughter

Alex and Jenn get some neighbouring farmers to help them with catching and transporting birds. This is done over 4 consecutive mornings with the lights off and curtains down.

Each morning 120-130 birds are caught and crated without raising feeders or drinkers (small local plant cannot deal with more birds than this per day).

Crates are transported on Alex's truck to small local (old-fashioned) processing plant. Max transport time = 1.5 h. Very few DOAs.

Birds are shackled then stunned/cut with an electrified knife.