Grade and Condemnation Trends

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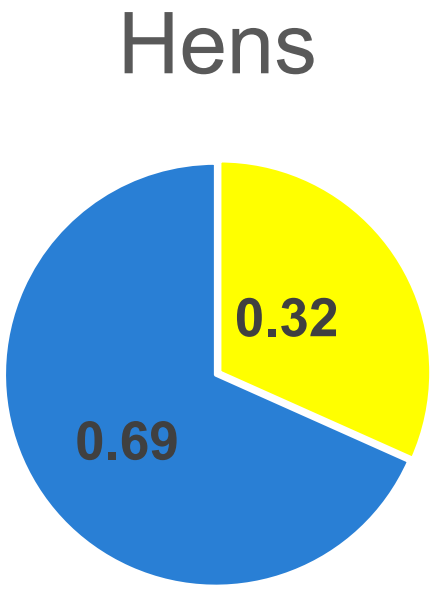
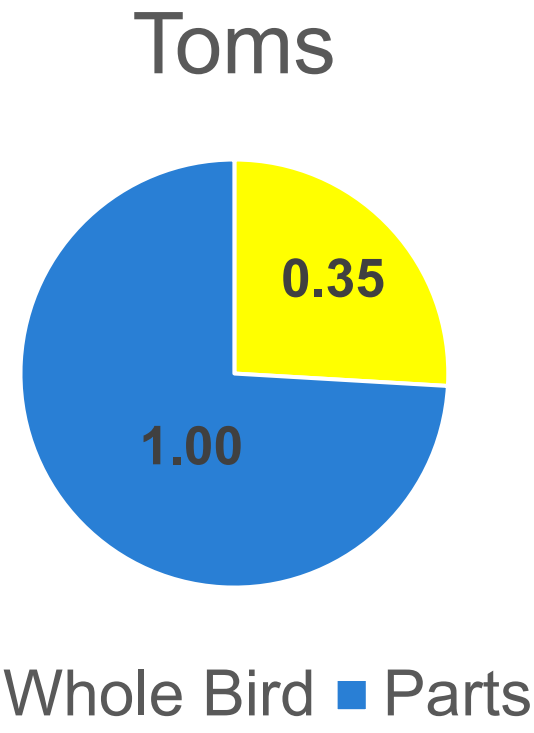
Aviagen® Turkeys | B.U.T. Nicholas®

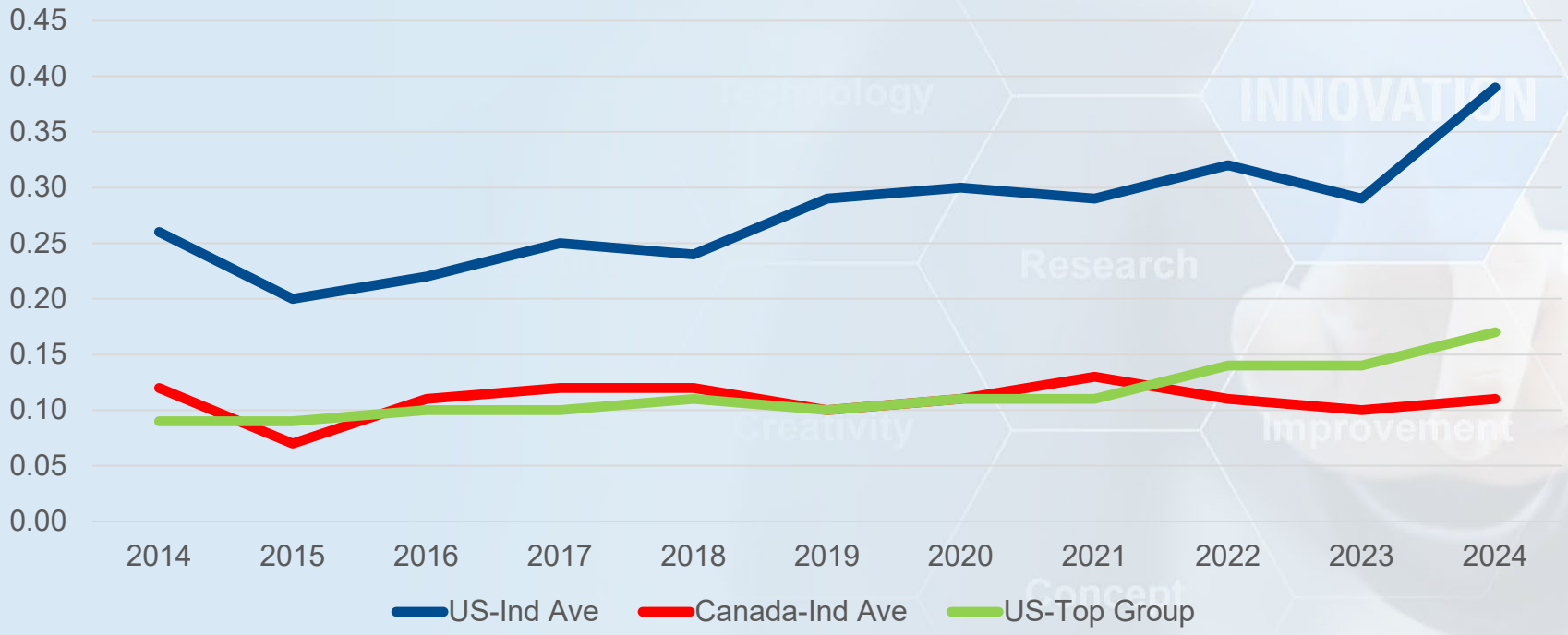
- For most plants, just prior to the chilling process, the carcasses will pass a plant employee or government inspector who removes all unwholesome or contaminated portions.
- These parts are often separated and weighted. Depending on the country and company, the weight can be subtracted from the total weight supplied by the farmer.
- In most cases, any trimmed portions more than the wing tip or tail results in the loss of Grade A for that carcass

Total Condemnation

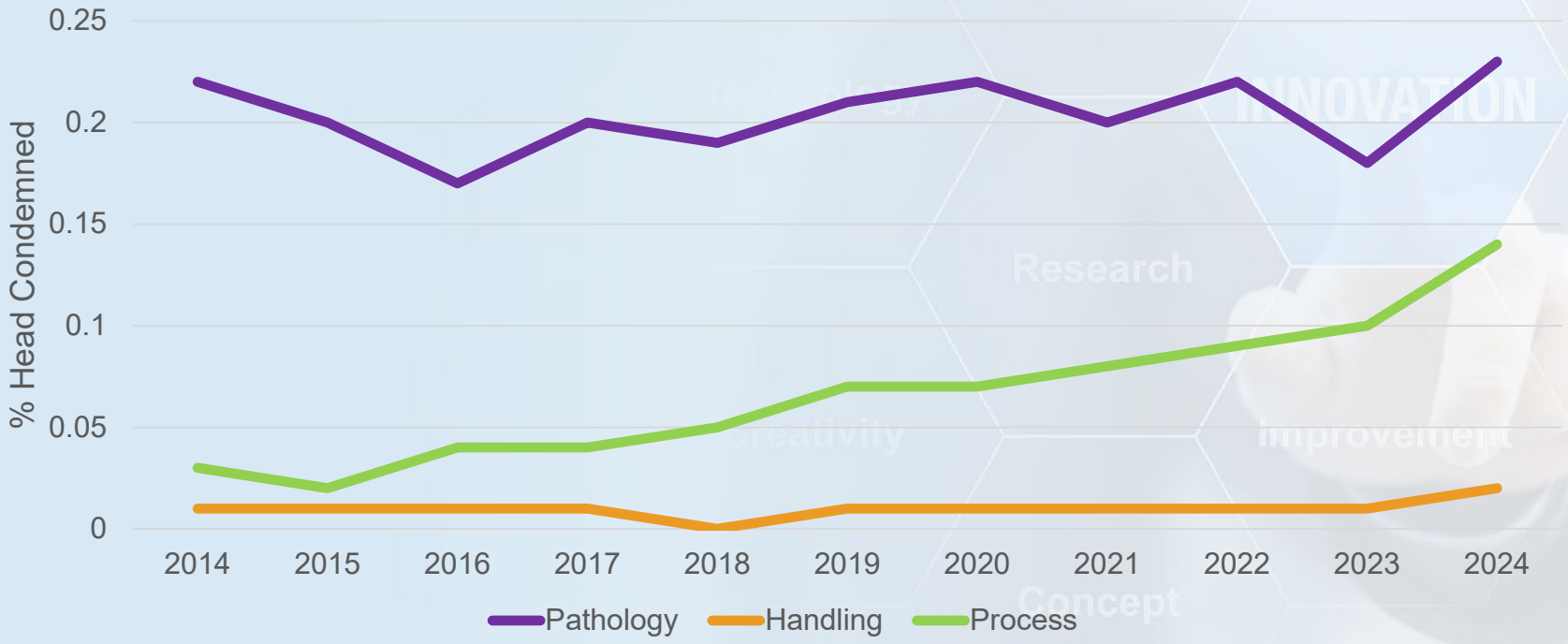




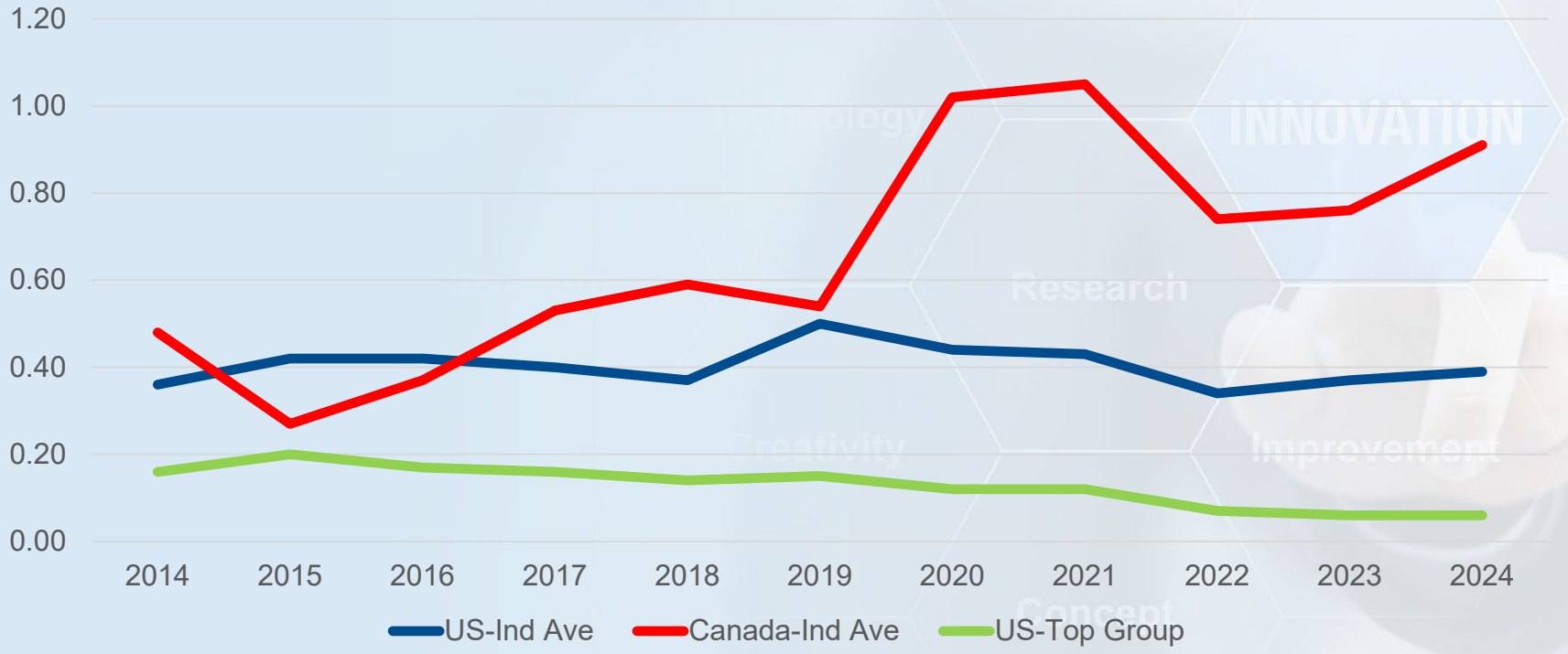
Hen Whole Bird Condemned



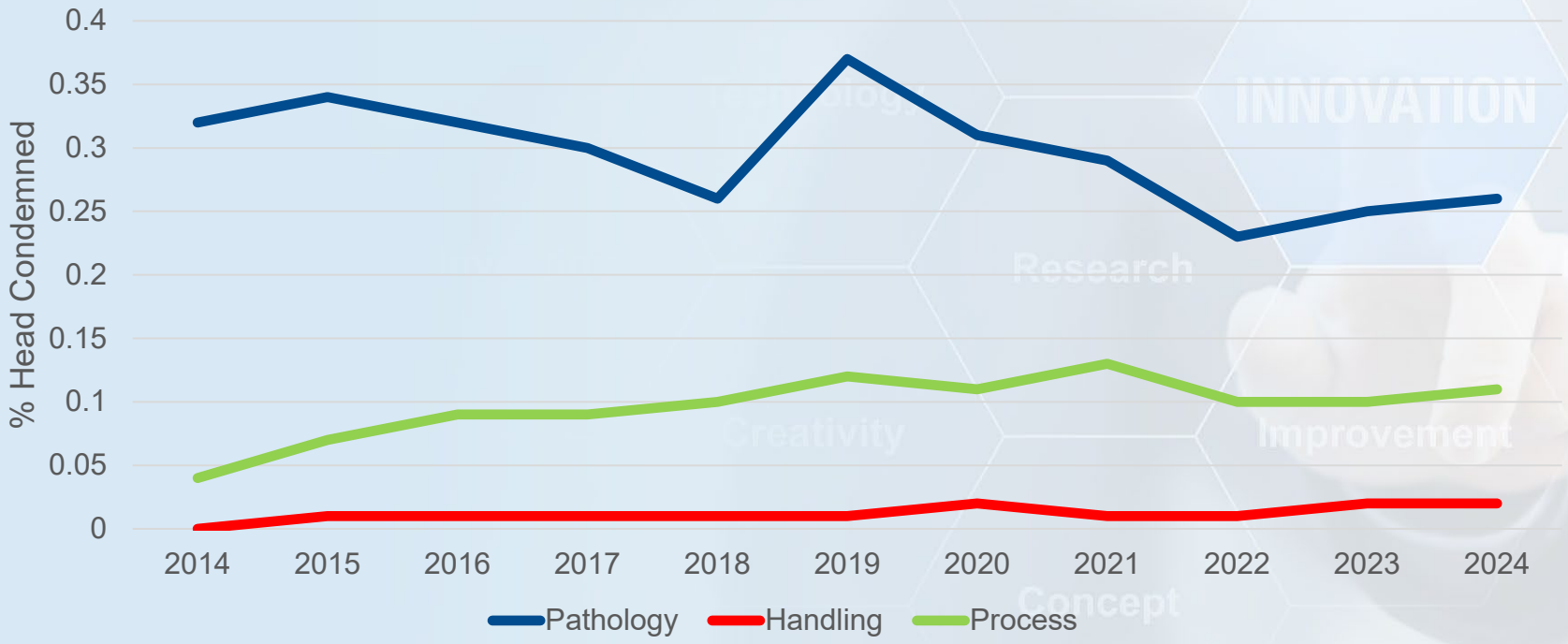
Hen Whole Bird Condemned by Source



Tom Whole Bird Condemned



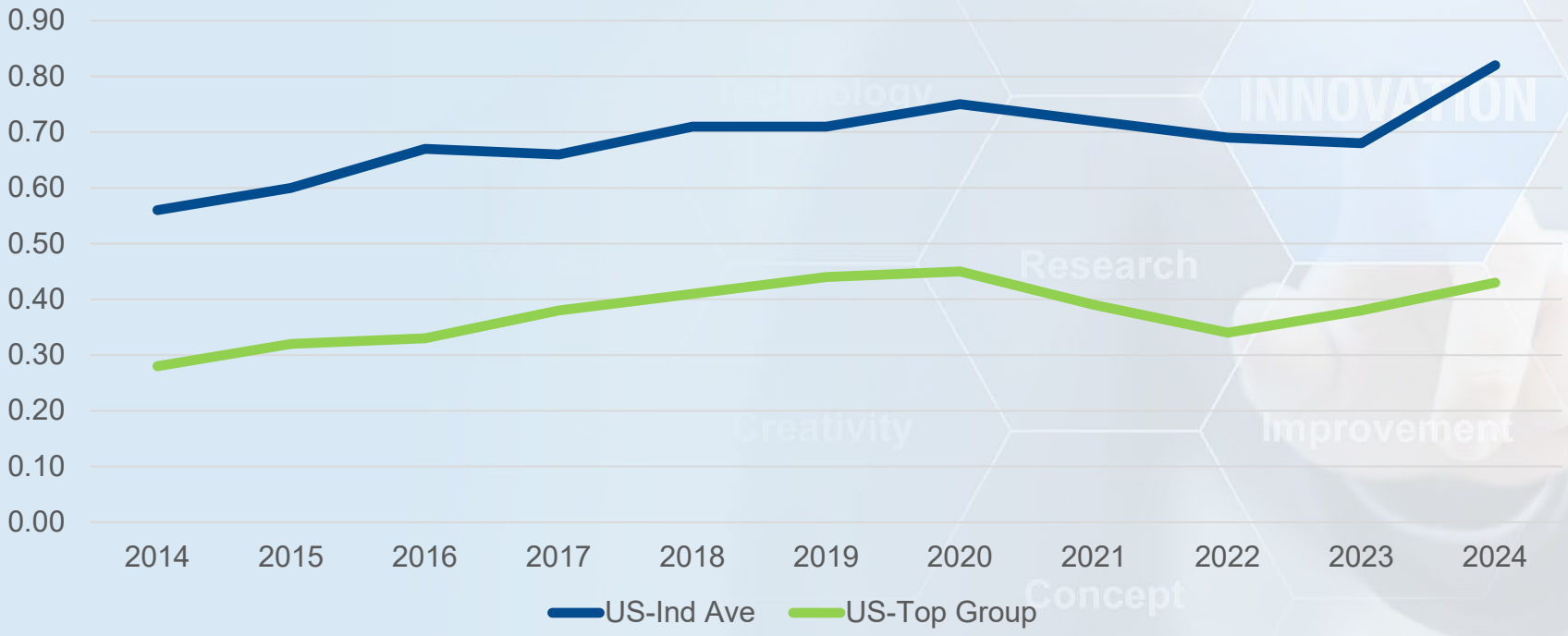
Tom Whole Bird Condemned by Source



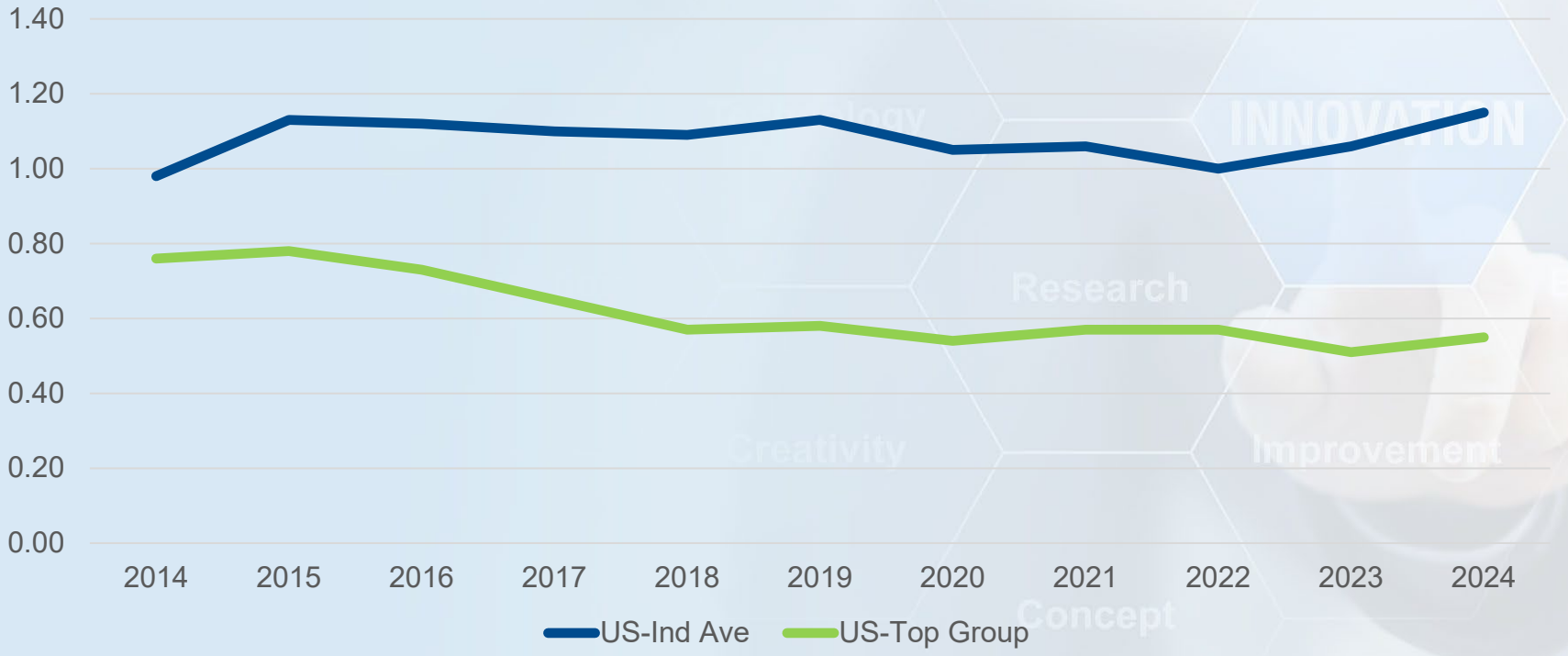
Increased Whole Condemned

- Avian metapneumovirus was a major contributor to higher whole carcass condemnation in 2024
- Canadian tom whole bird condemnation largely driven by sub-cutaneous condemnation from infected breast blisters
- Breakdowns due to increased automation, including CAS systems, has increased ‘process’ condemnation: overscalds, contamination, mutilation, and plant rejects, including birds in CAS too long

Hen Parts Condemned



Tom Parts Condemned



Increased Parts Condemned

- A general rise in defects for hens, especially bruised/broken wings and ruptured leg tendons has been a major contributor to parts condemned.
- Reduced workmanship to lower condemned parts
- Less labor for parts salvage processes
- Increased automation resulting in more internal contamination resulting in more debone-knife salvage

What is Grade ?

What is Grade ?

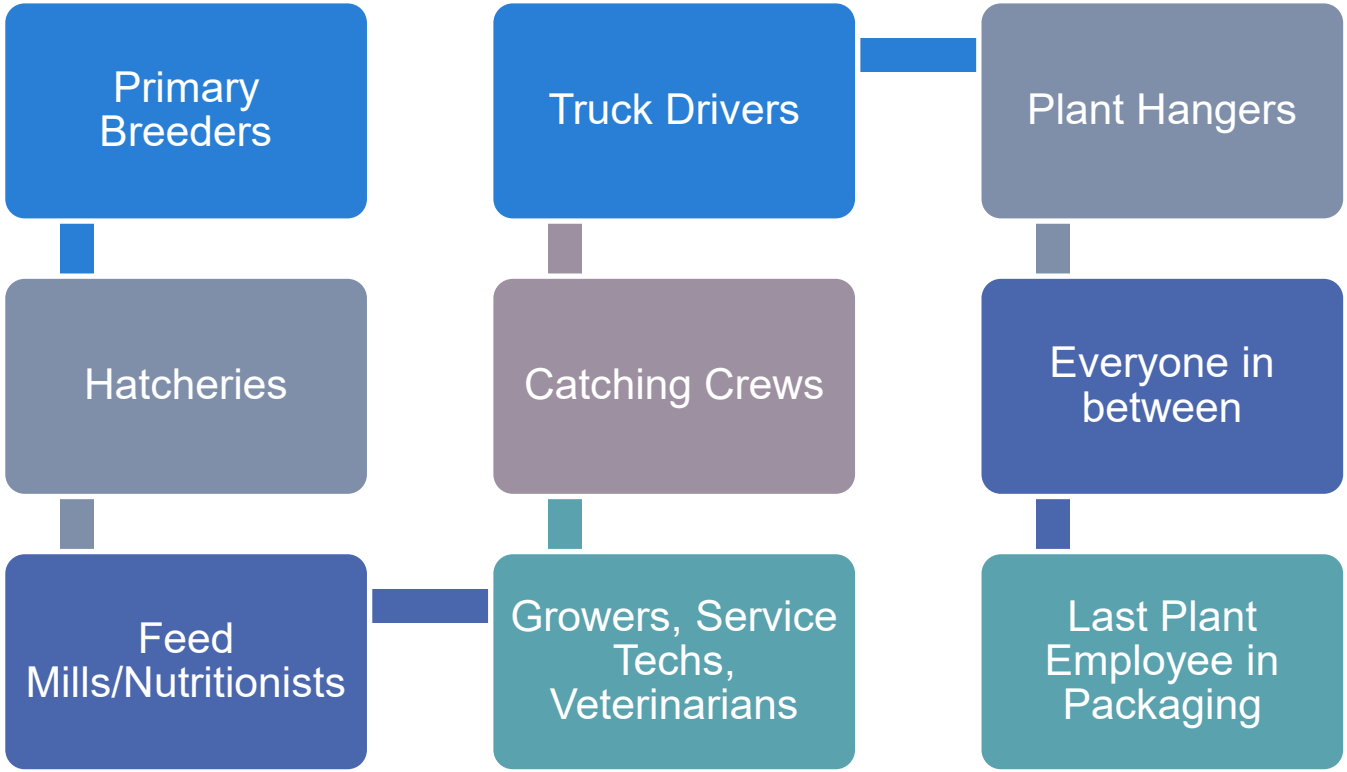
Grade A Standards

- Grade criteria usually includes
  - No missing portions except wing tips & tail
  - Limited tolerance for Discolorations
  - Limit for skin tears
  - No broken bones
  - Acceptable finish and conformation
  - Ready to cook factors
    - Feathers
    - Head, crop, trachea removed
    - Oil glands removed?

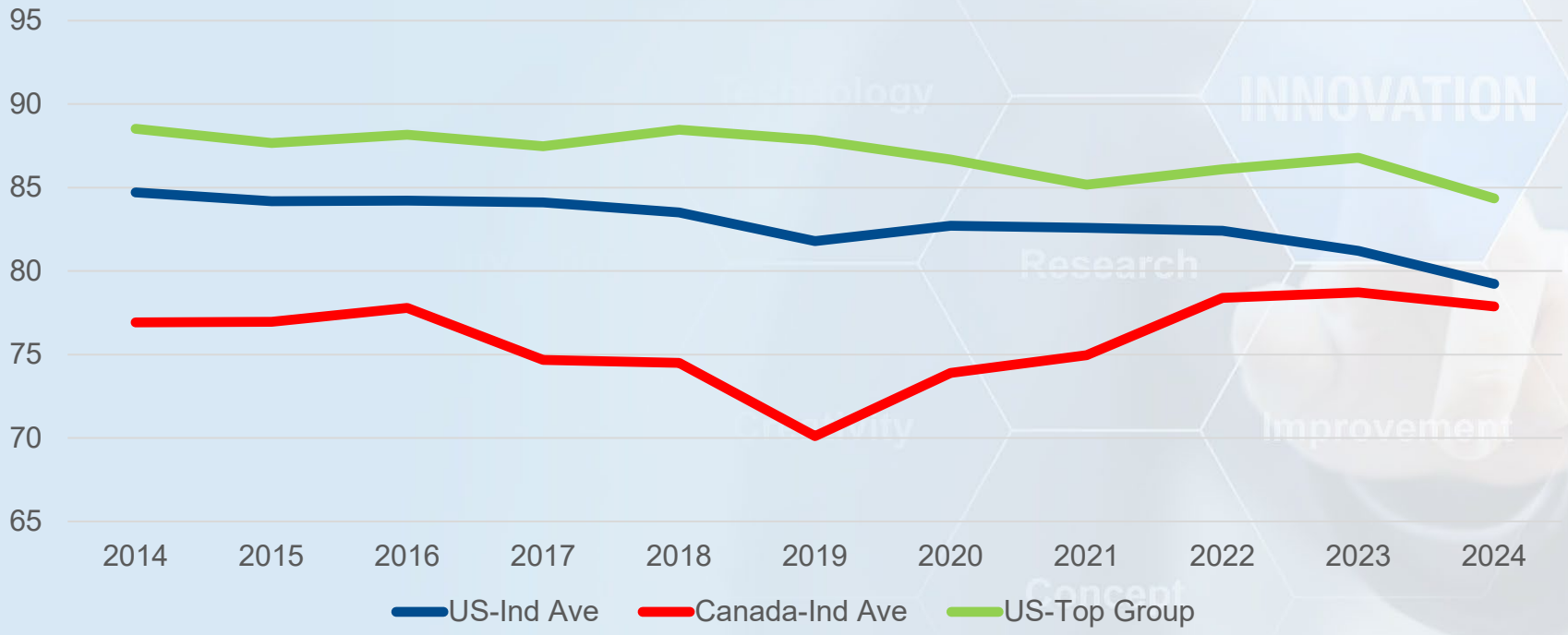
Grade A Carcass is Most Efficient

- Even if the product will not be sold as a whole bird, a Grade A carcass
  - Is the most efficient to process and debone, especially with automation
  - Possesses the greatest product flexibility
  - Most economical due to lower condemned parts
  - Generally fewer animal welfare concerns

Grade is a major team project



Hen % Grade A Trend – North America



Decline in Hen % Grade A

- Deterioration of experience and workmanship on the farms, catching, and in the plant
  - Increased turnover resulting in new employees
  - Lack of tenured employees in many of the key grade areas: catchers, trimmers, graders, hangers
  - reduced engagement or less focus
- Alternative products do not require Grade A carcasses

Bone-in-Breast

Photo: Bowman's Butcher Shop

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- Increase in automation introduced into the plants
- Water chiller additives (PAA) reacting to slight blemishes

PAA discoloration

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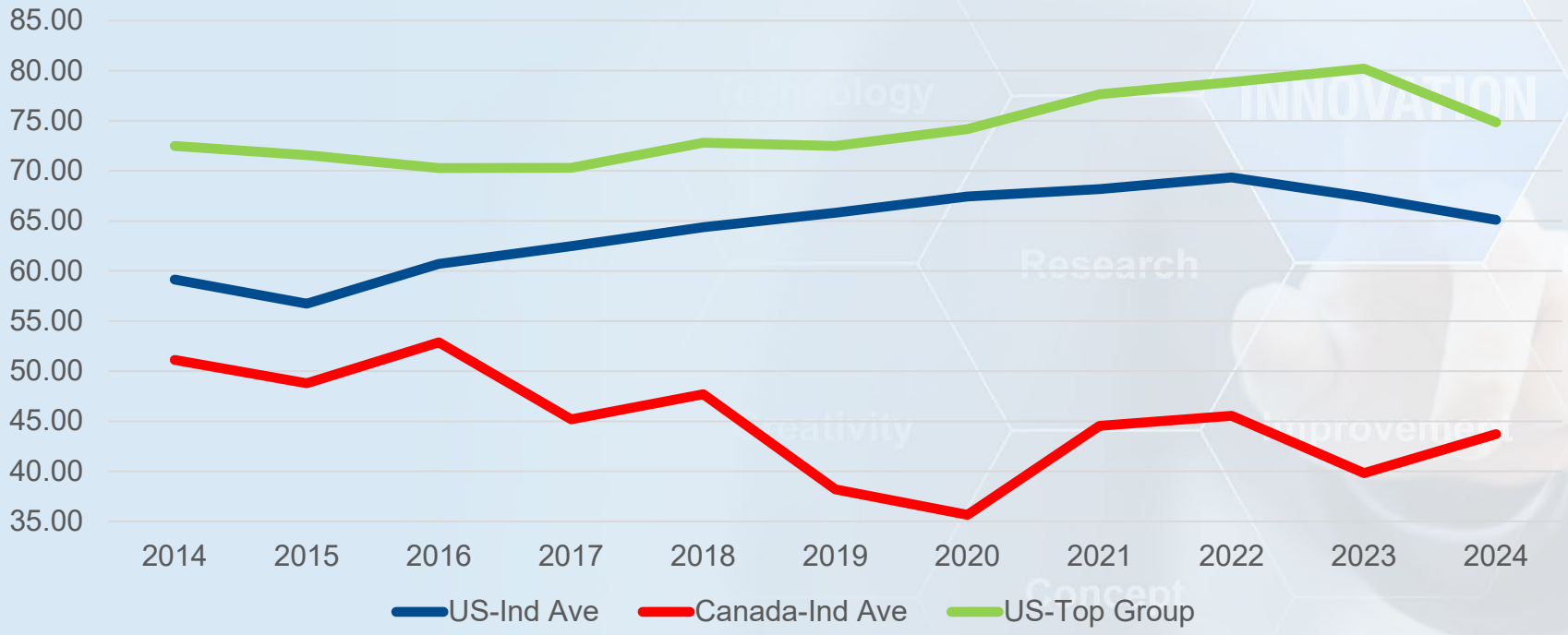
- Alternative products do not require Grade A carcasses
- Increase in automation introduced into the plants
- Water chiller additives (PAA) reacting to slight blemishes
- Increased scratches/scabs
  - Toe treatment less common or increased error on treatment
- Increased picker damage with more powerful pickers

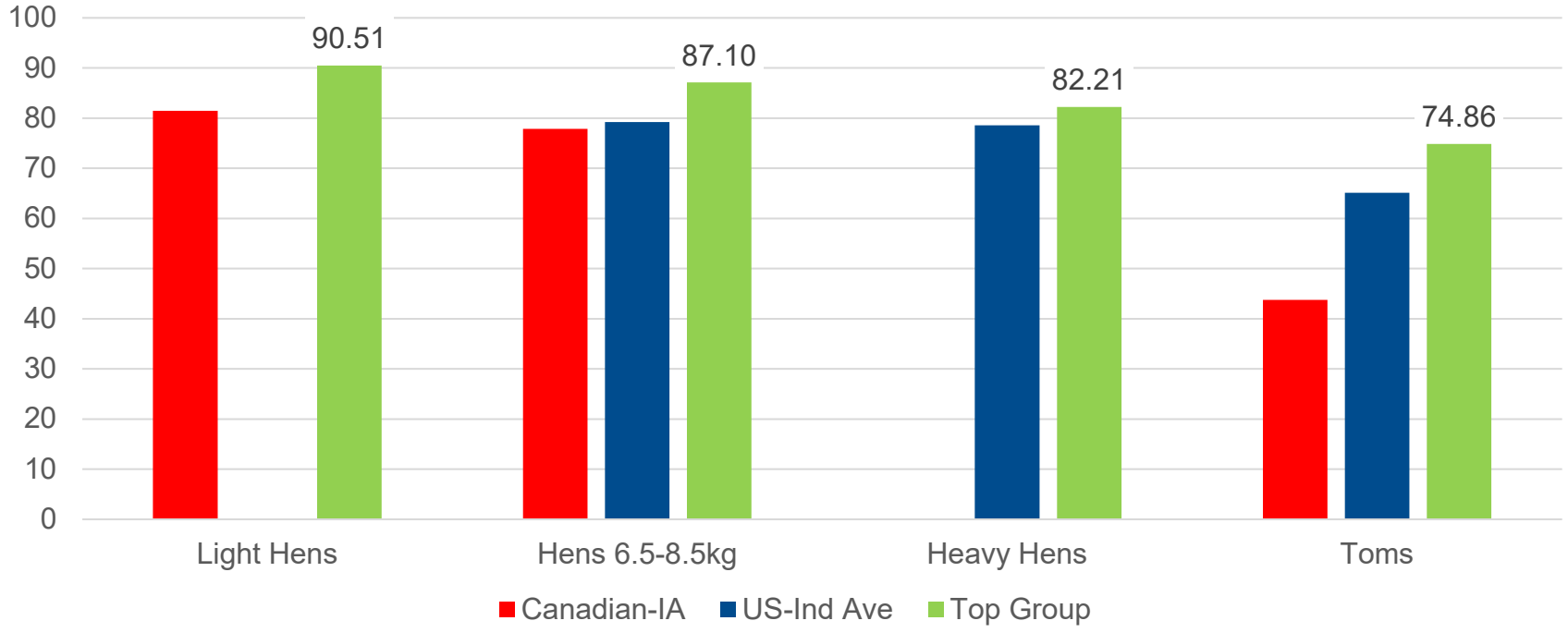
Tom % Grade A Trend – North America



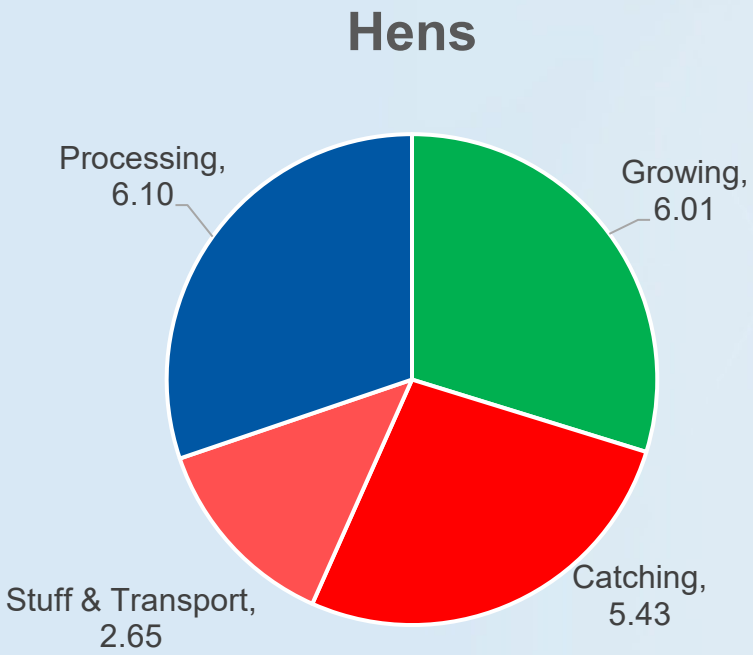
Increase in Tom % Grade A

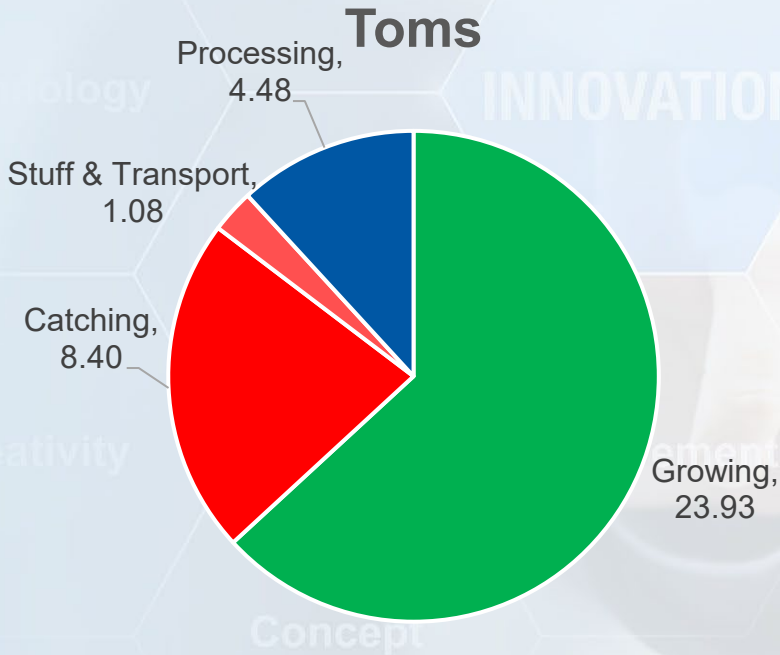
- Reduction in breast blister trim is the #1 reason for improved tom grades
  - Genetic improvements
  - Increased age at harvest
  - Less restrictive trim criteria
- Increased number of plants using CAS (controlled atmosphere stunning) reduces handling defects
- Improved picking capabilities to handle larger birds

Performance Standards 2024

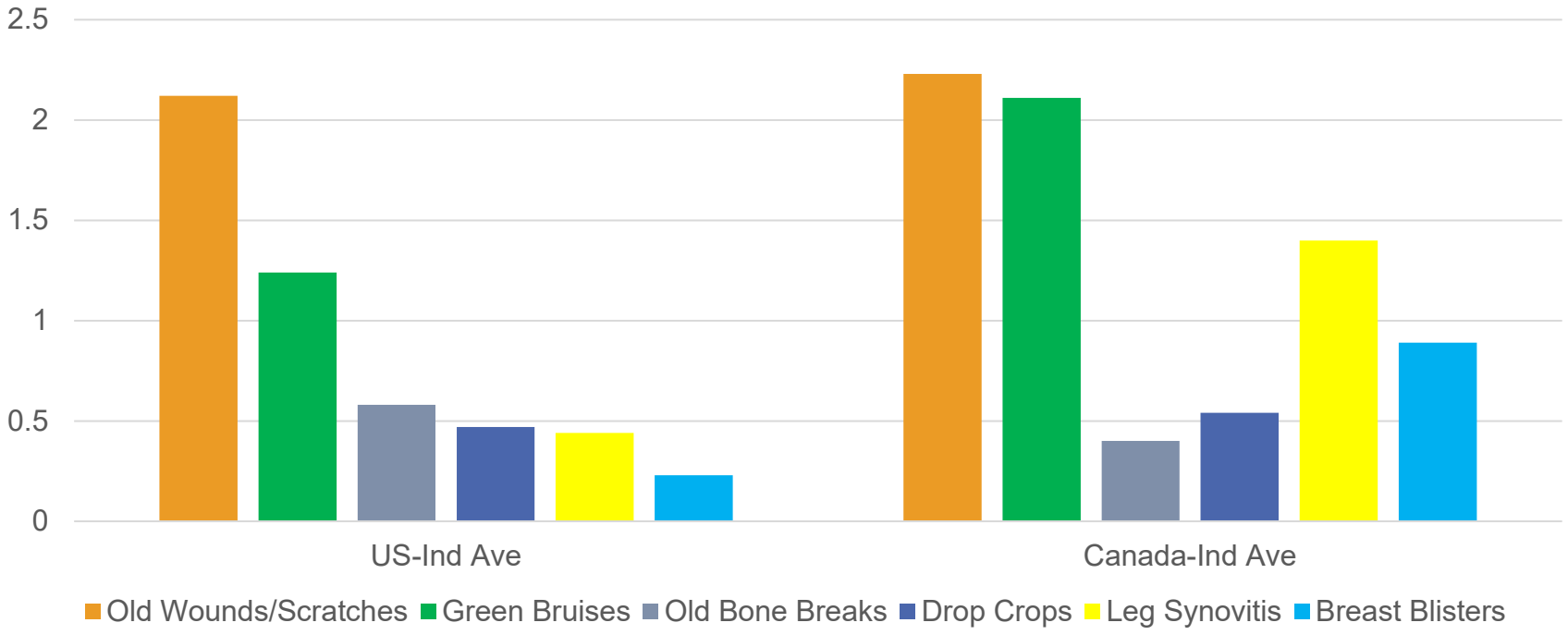


Downgrading Source

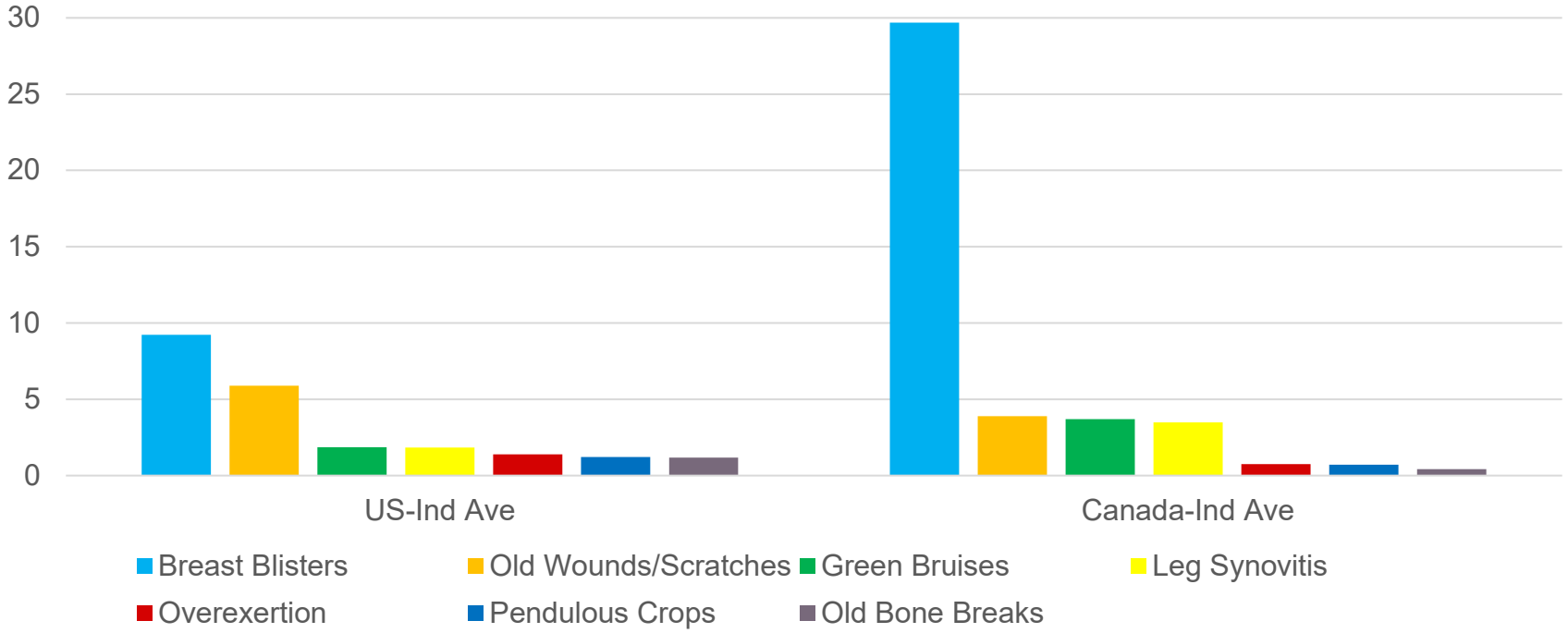




Hen Growing Downgrading



Tom Growing


30
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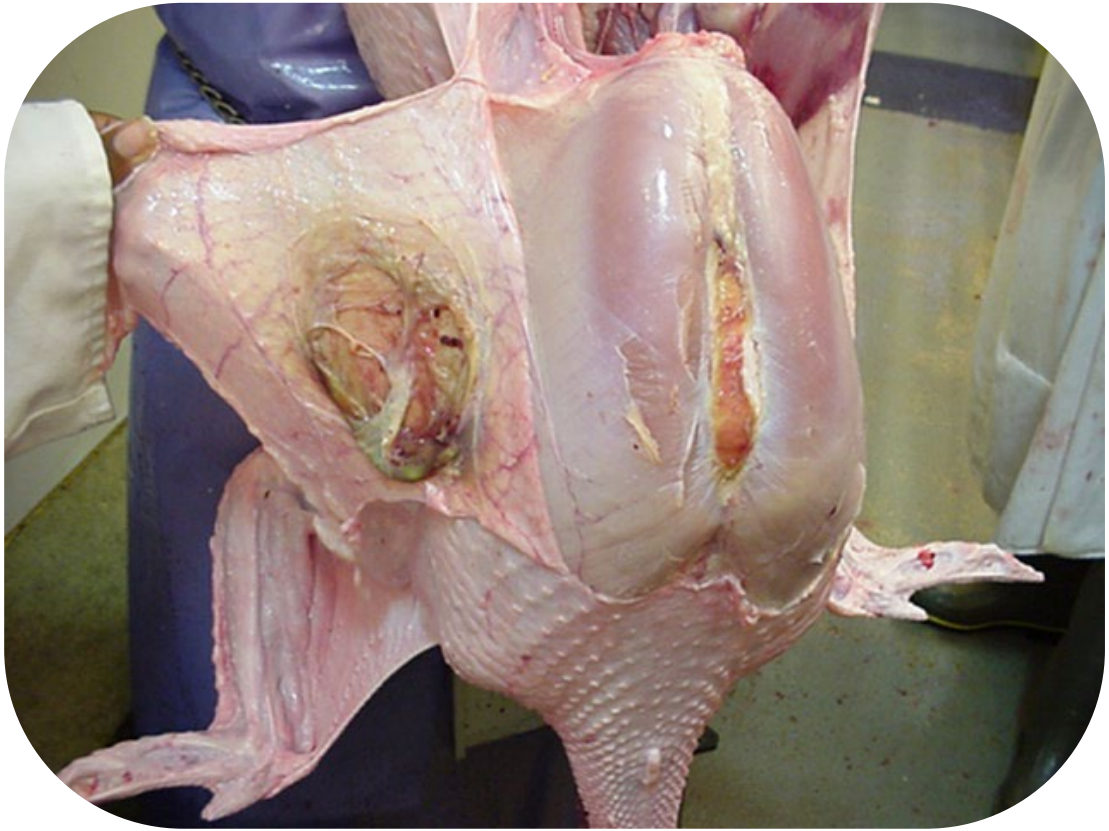
US-Ind Ave
Canada-Ind Ave
Breast Blisters
Old Wounds/Scratches
Green Bruises
Leg Synovitis
Overexertion
Pendulous Crops
Old Bone Breaks

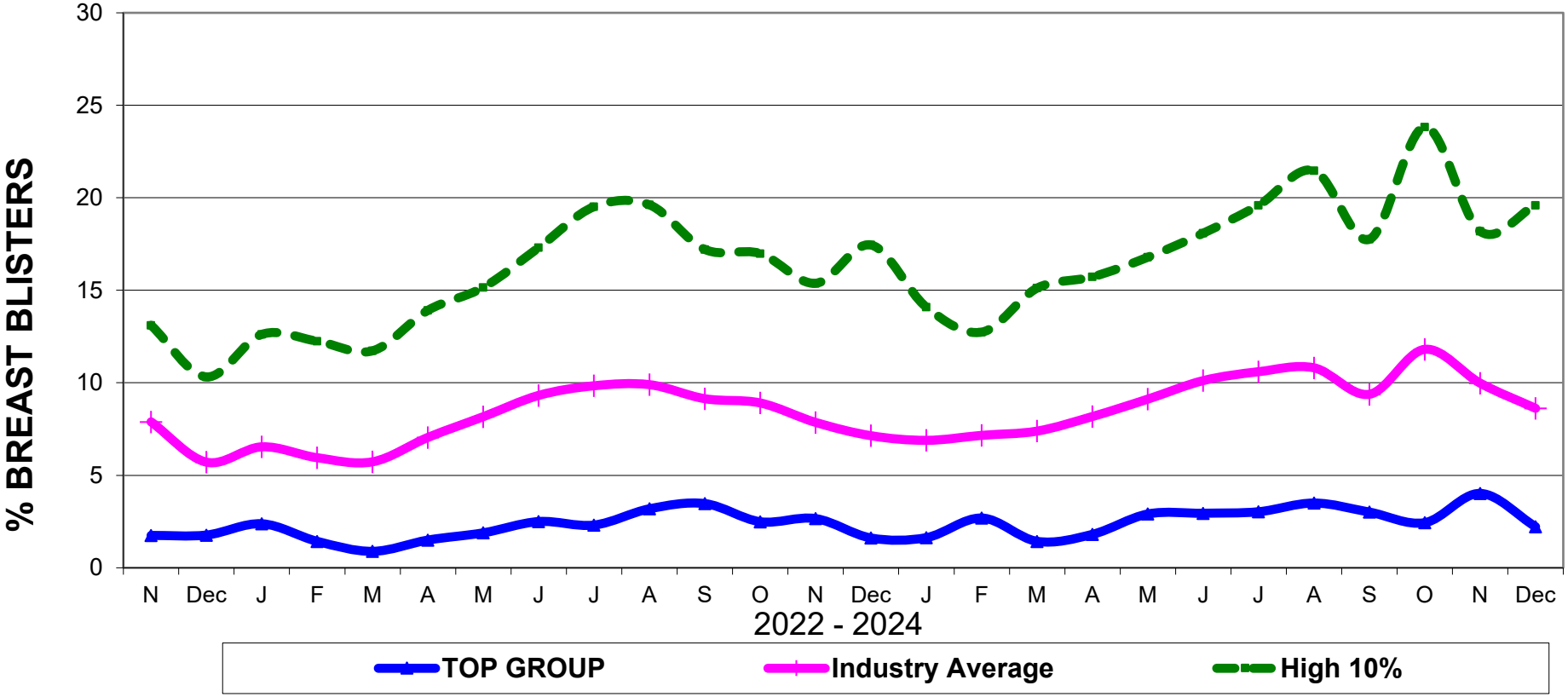
Breast Blister



Abscessed Breast Blisters are Expensive

- Abscessed breast blisters can lead to significant amounts of breast meat to be removed

HEAVY TOM BREAST BLISTERS



Breast Buttons – FUD's

- (FUD's) Focal ulcerative dermatitis also known as breast litter burn buttons
- Higher prevalence in eastern Canada than most other parts of North America
- More common on toms
- Are routinely shaved at most plants if no blister present and can pass as Grade A
- Strong correlation to foot pad dermatitis
- More common on straw than shavings

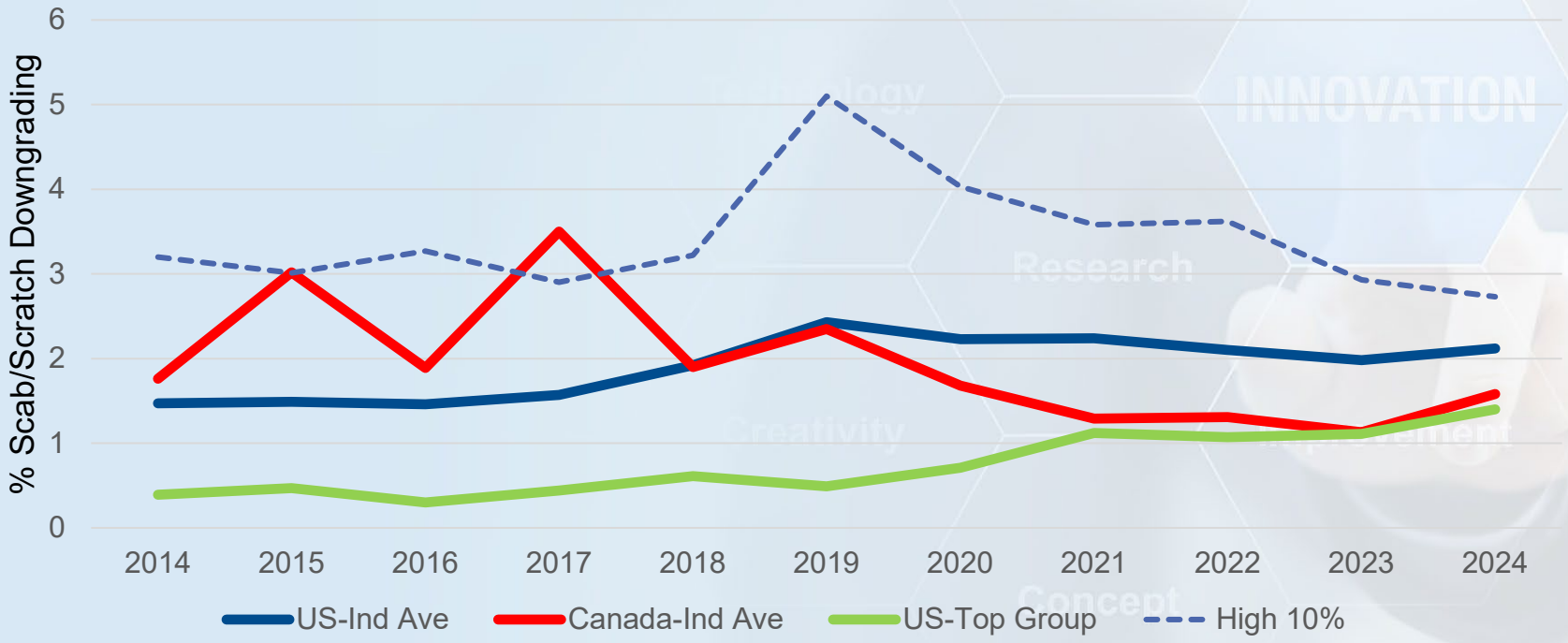
Breast Buttons

- Prevalence of breast buttons FUD's is much higher than actual downgrading as they are routinely shaved without cutting through the skin

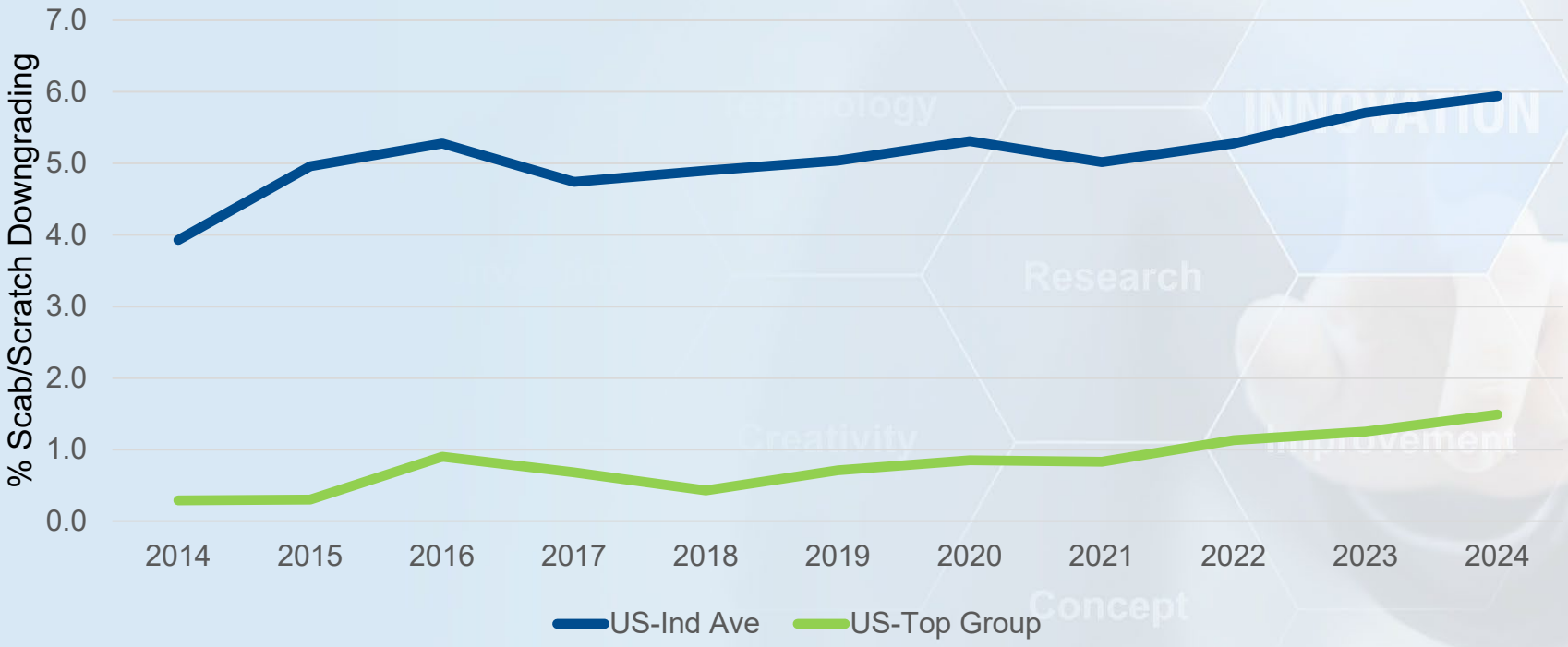
Scabs/Scratches

- Scabs due to toenail scratches directly accounts for downgrading but indirectly affects:
  - IP/cellulitis Condemnation
  - Picker Tears
  - Contamination condemnation

Hen Scratches– North America



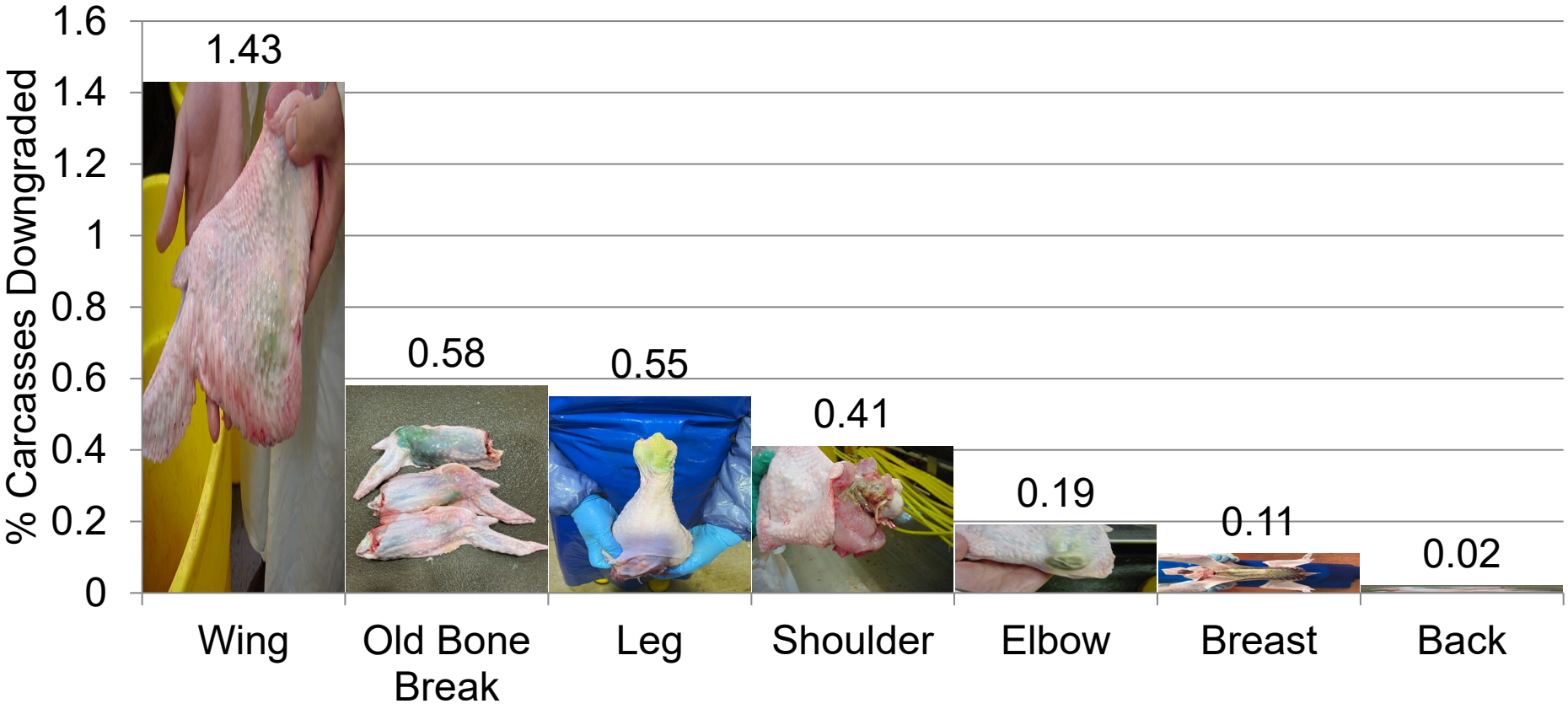
Tom Scratches– North America



Green Bruising

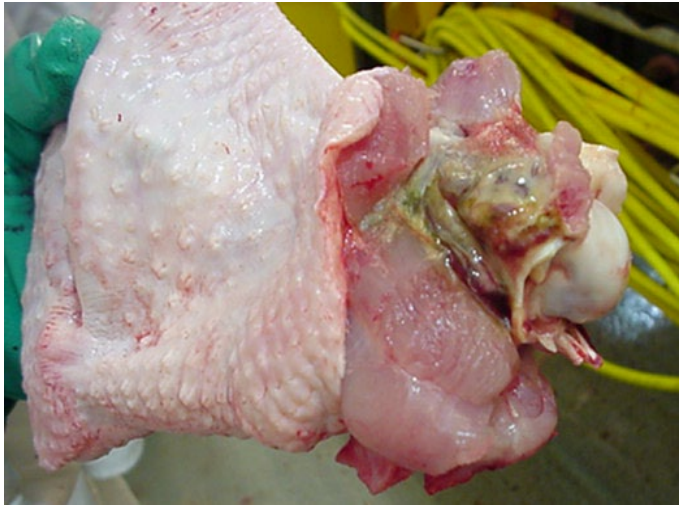
- Bruises which occurred at least 1 day before processing but usually within 2 weeks
- Associated with bird activity on farm
- Green may indicate another defect present (ruptured tendon, old bone break, etc.)
- Can be from internal or external injuries
- No green bruising allowed for Grade A quality; almost always trimmed or downgraded

Green Bruises Hens

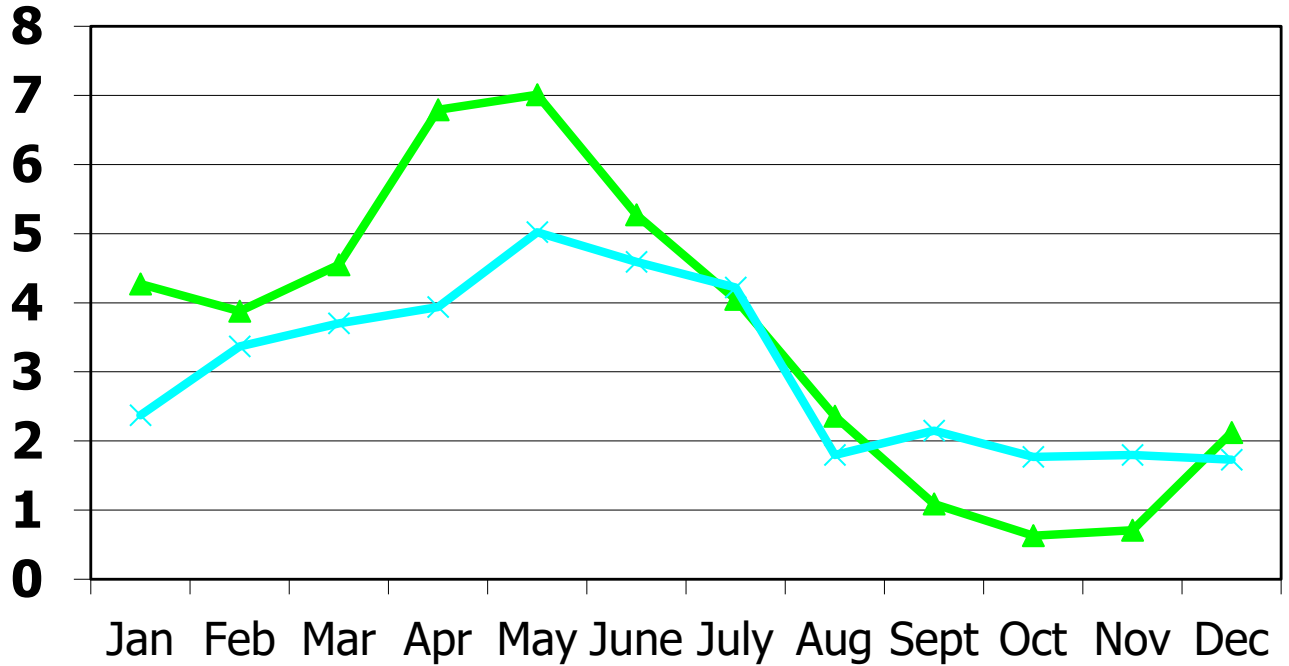


Avulsions

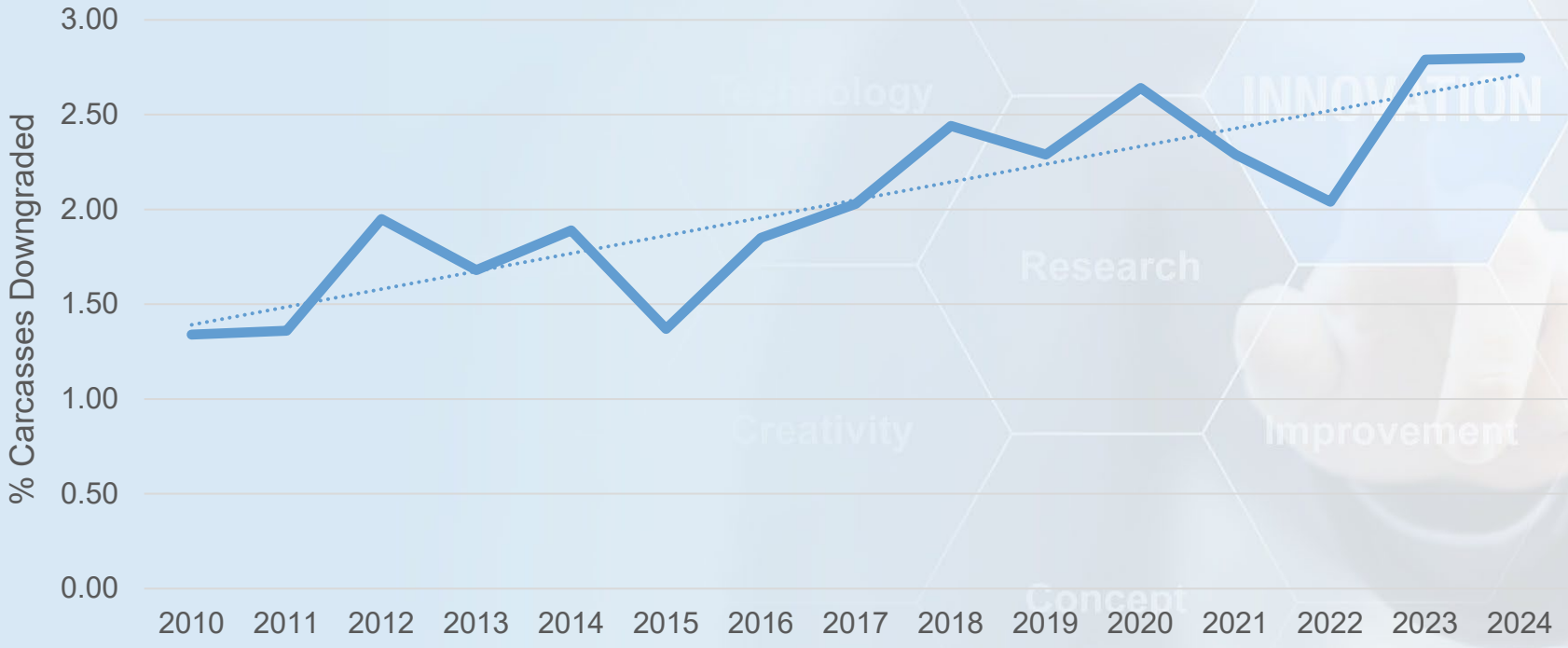
- As birds are becoming heavier, there are many athletic or over-exertion types of injuries that commonly occur
- The most common locations:
  - Elbows
  - Green Shoulders
  - Leg - Peroneus



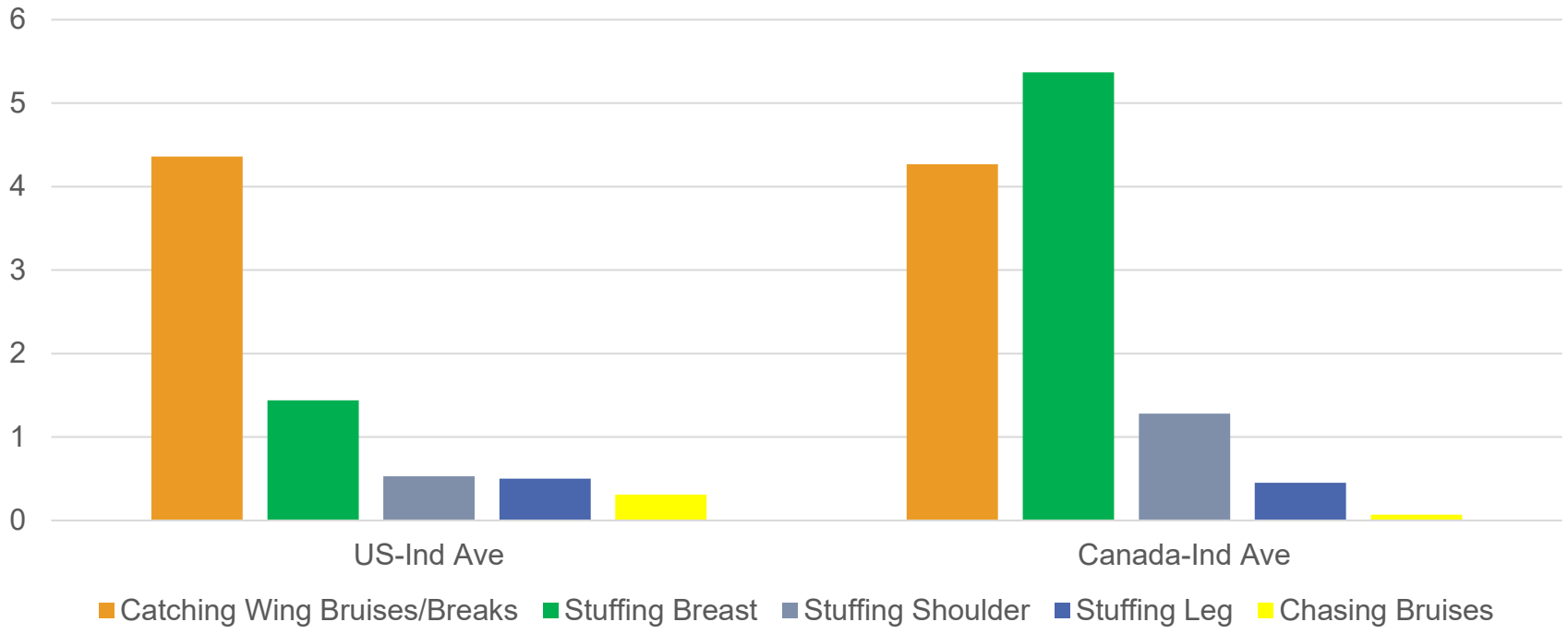
Ruptured Leg Tendons
Heavy Hens by Month



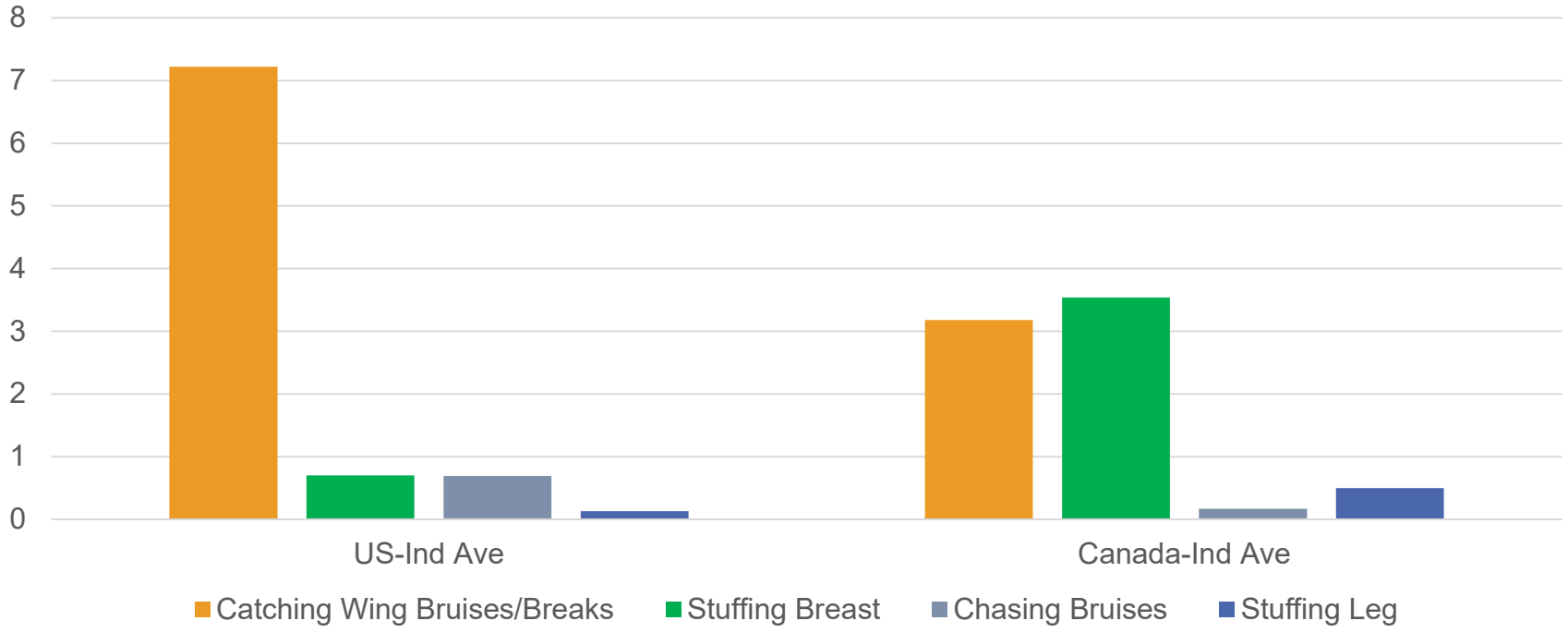
Heavy Hen Overexertion Downgrading



Hen Catching & Transport

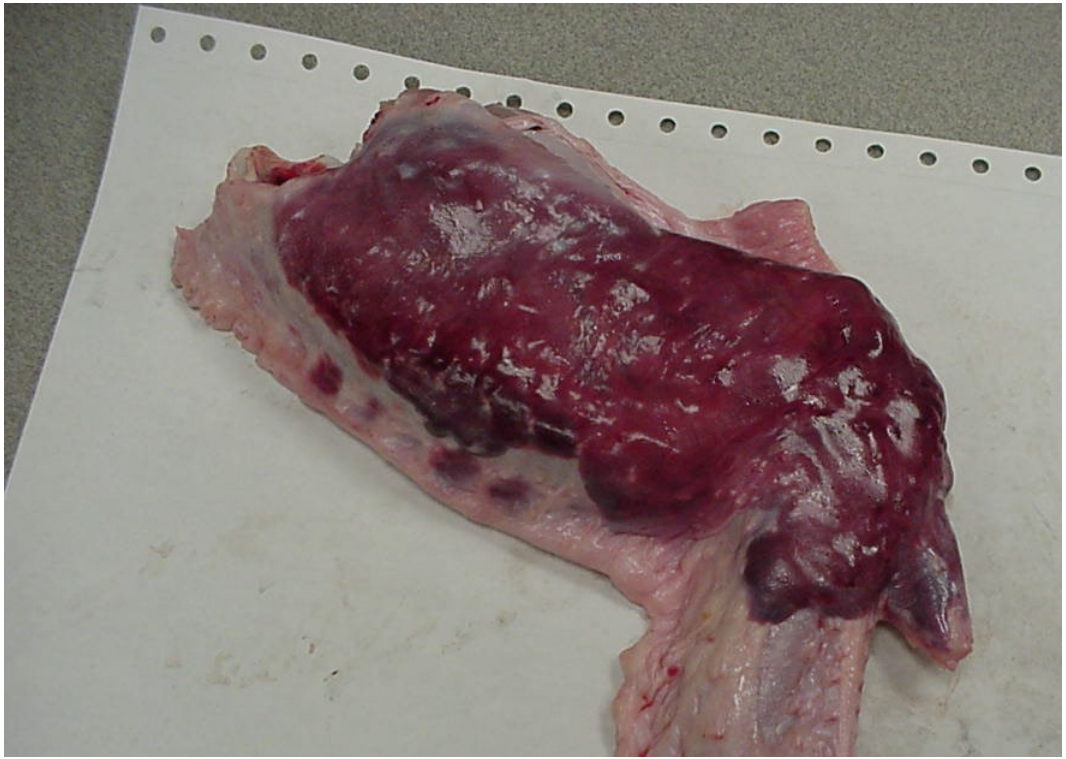


Tom Catching & Transport

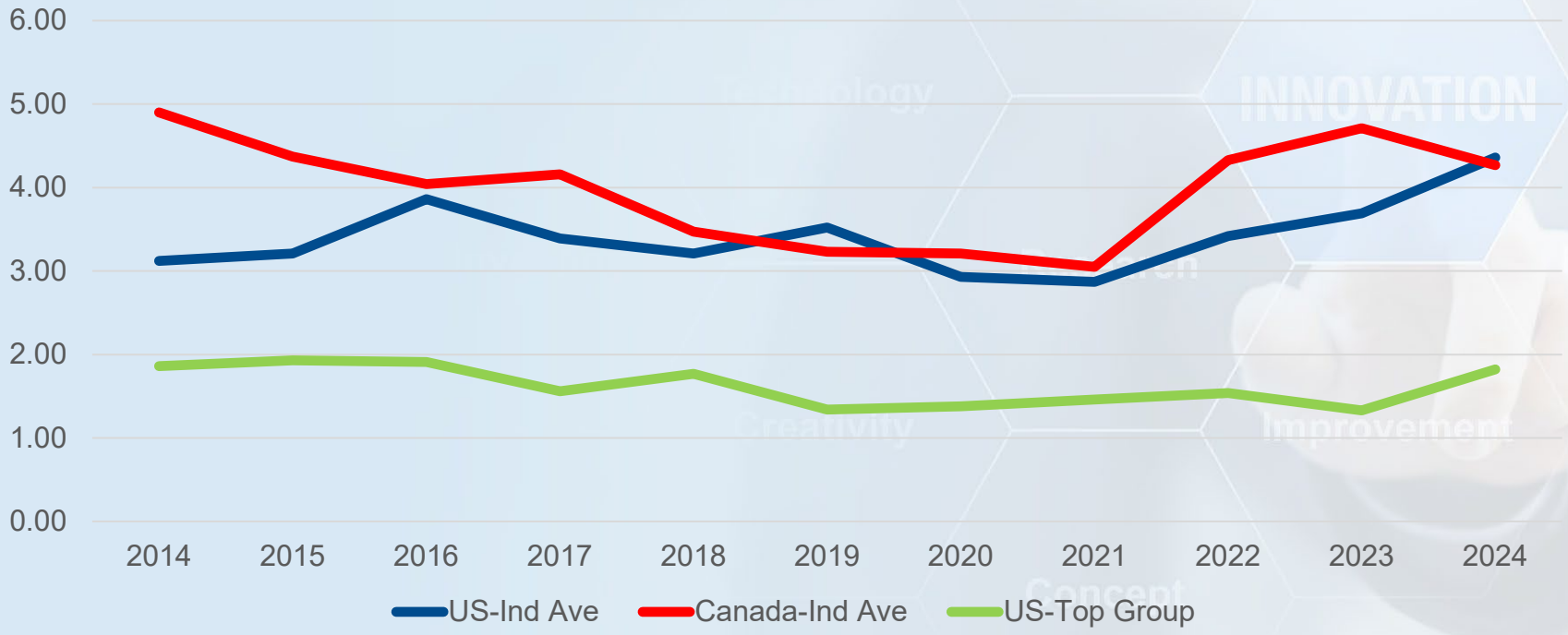


Catching Wing Bruises/Breaks

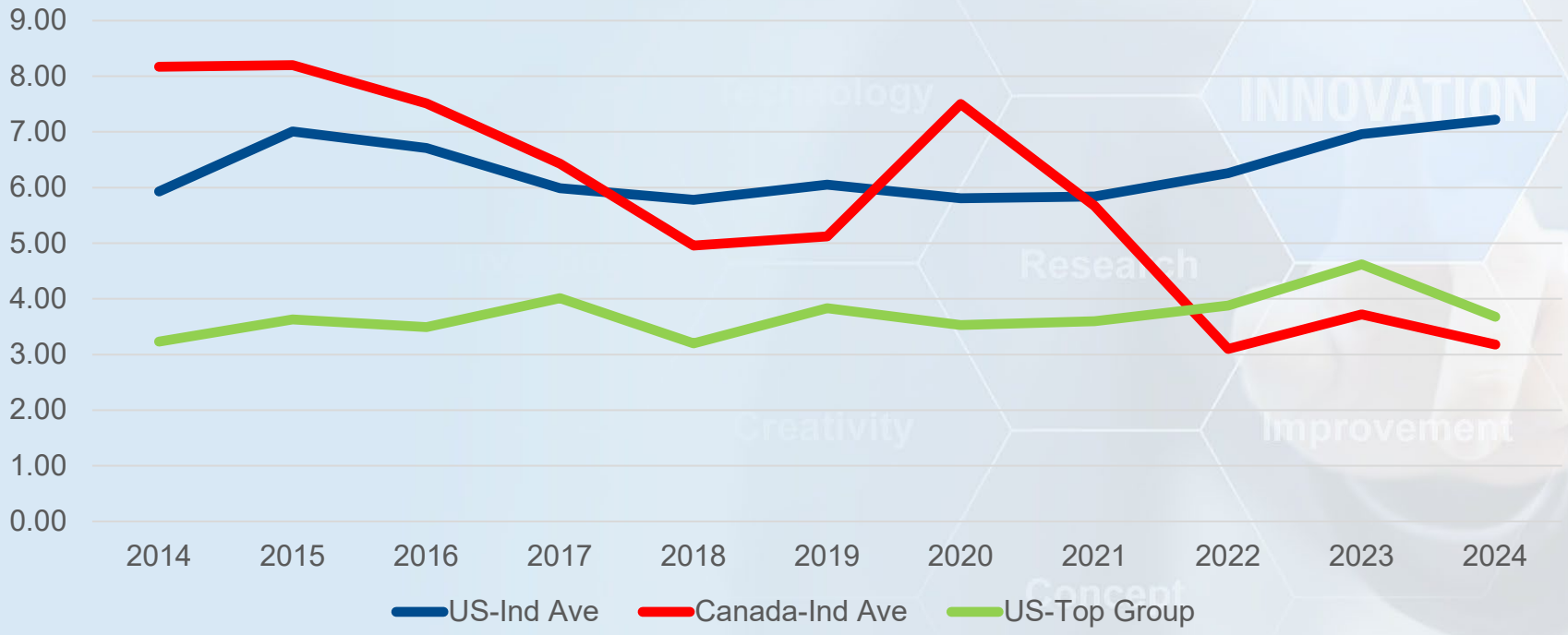
- The #1 reason for trim on hens and #2 for toms
- Significant contributor to overall parts condemnation
- Frequently entire wing is involved so parts salvage is difficult



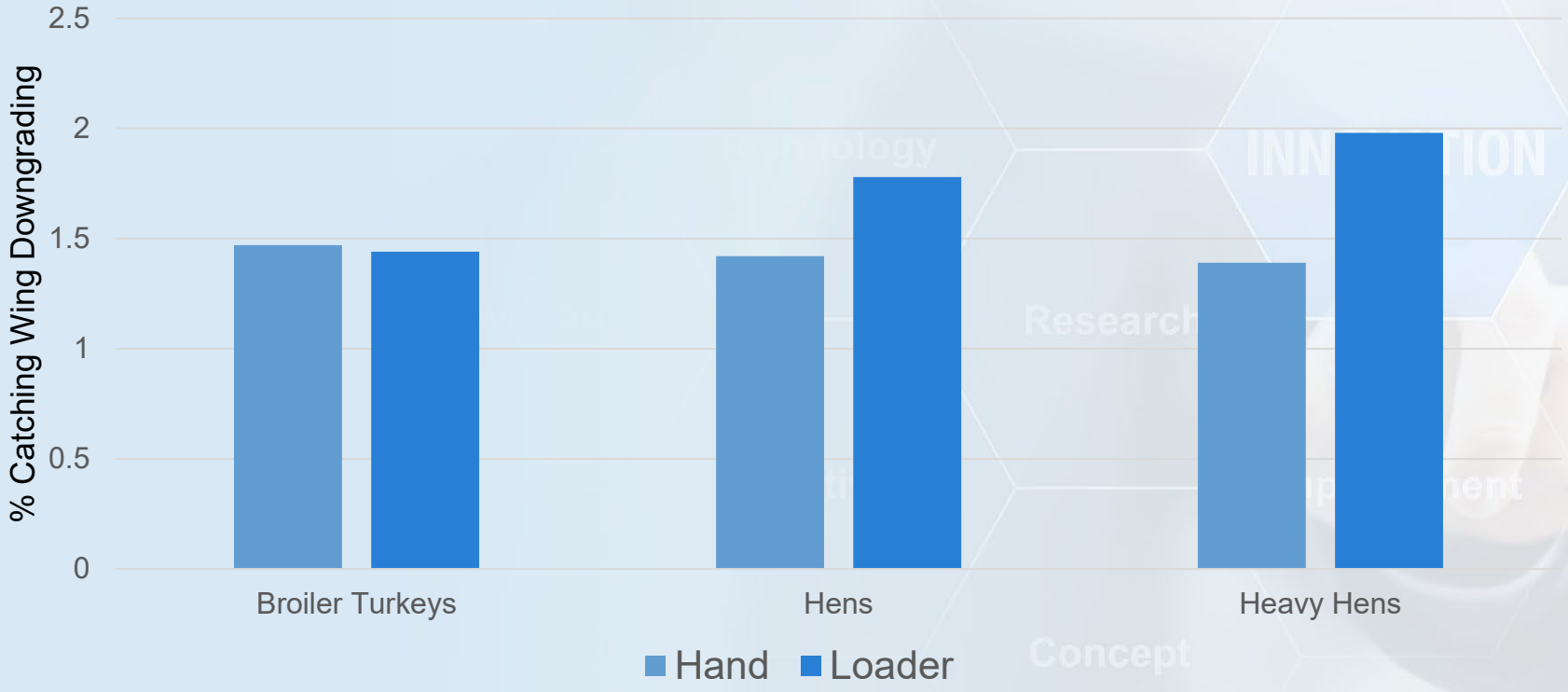
Hen Catching Wing Downgrading Trend



Tom Catching Wing Downgrading Trend

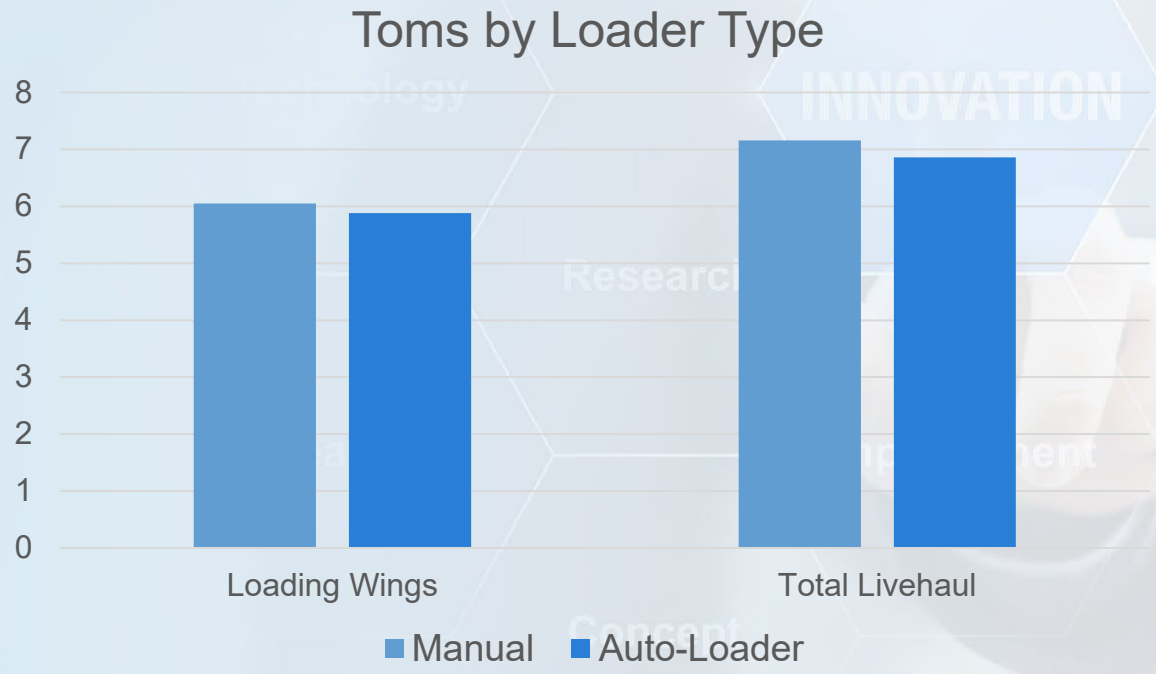


Catching Wing Damage Hand vs Loader



Automatic Loaders

- Auto-loaders generally result in less downgrading/defects than manual loaders
- Largely dependent on the chasing crew's ability to adapt to the speed the flock can walk and not the speed of the loader
- Auto-loaders can reduce stuffing bruises on hens



Stuffing/Cooping Bruises

- Stuffing bruises are primarily identified based on location
  - Shoulder, wing, and back bruises can reflect velocity as birds enter cages
  - Leg and breast bruises often reflect aim or improper coop height

Stuffing/Caging Bruises

Loading Differences

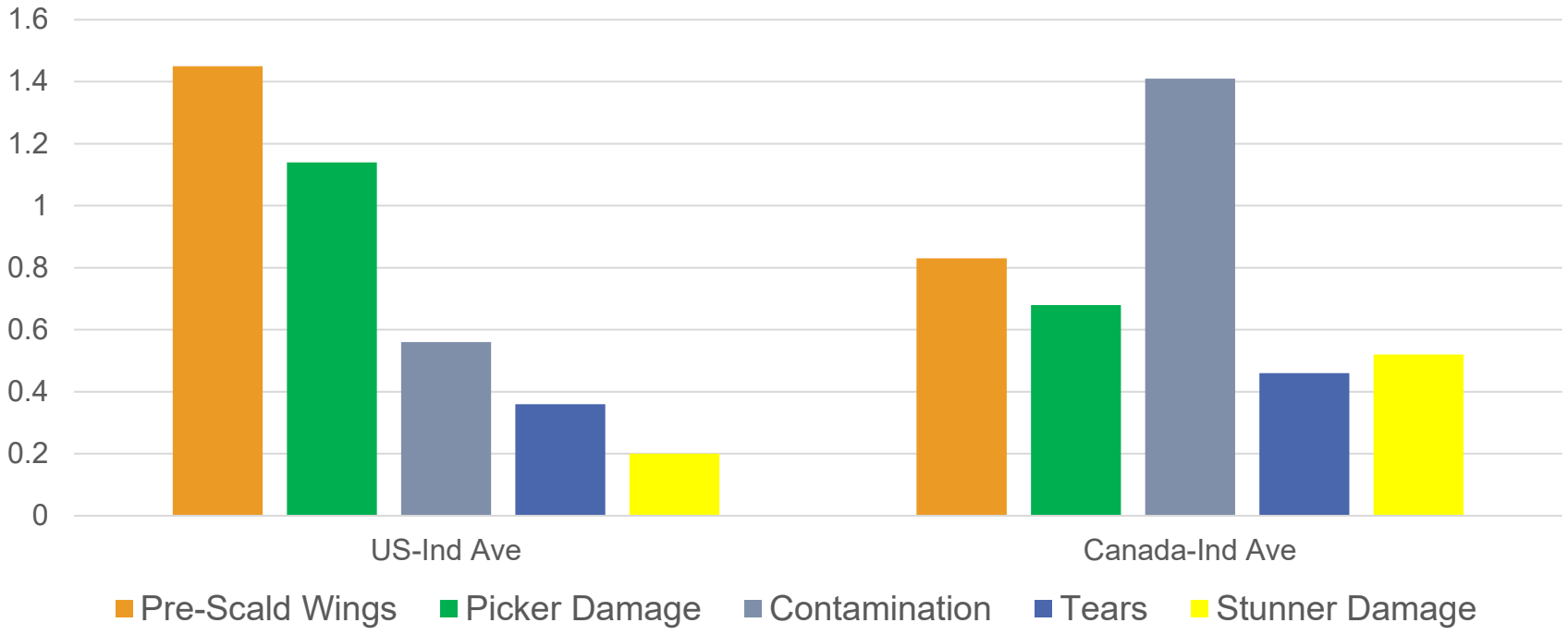
Manual Loader

- Almost all hens are loaded with this type of loader
- Birds move into cages manually with the crew maintaining 2 points of contact
- Majority of toms automatically loaded
- Few multi-story barns in US
- Some Canadian companies will use loaders from 2-story barns

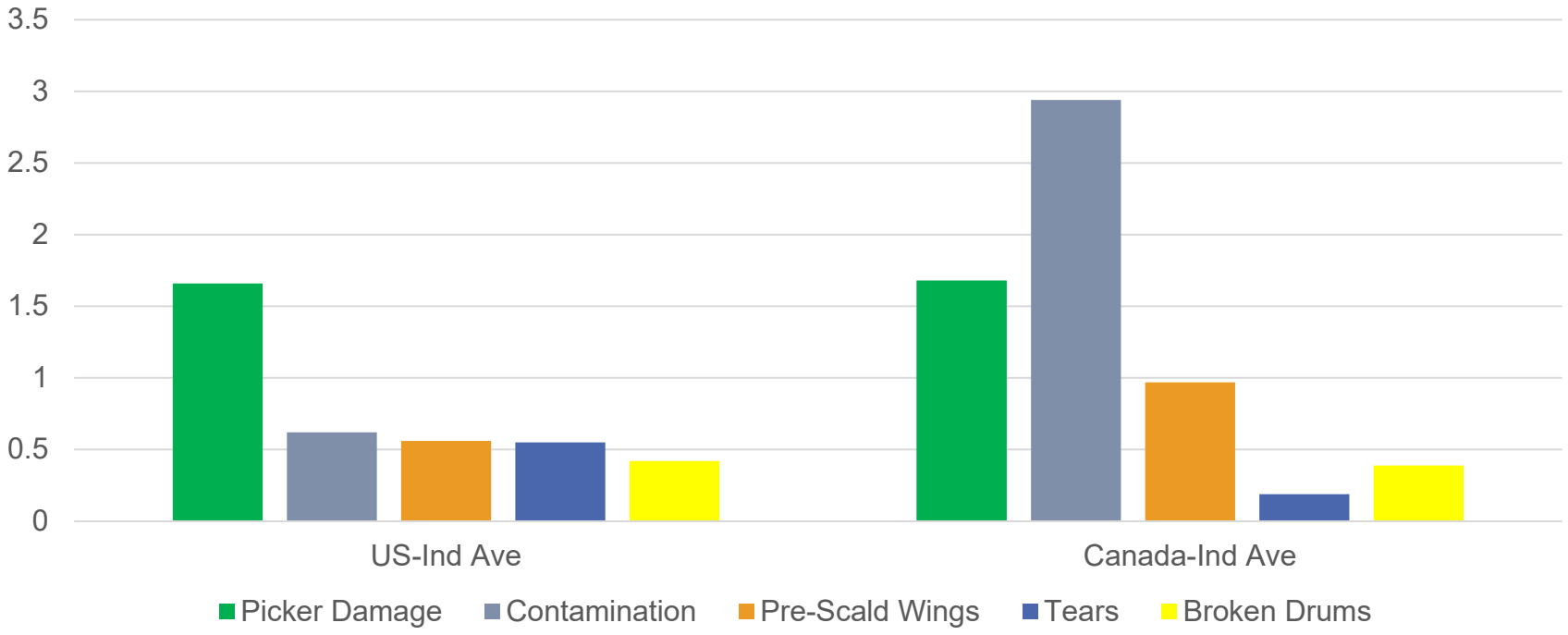
Hand Catching

- Gap between the loader and trailer causes more stuffing bruises
- Video to right is loading across the trailer (no partition)
- Some plants use crates/modules similar to chickens, which lowers bruising

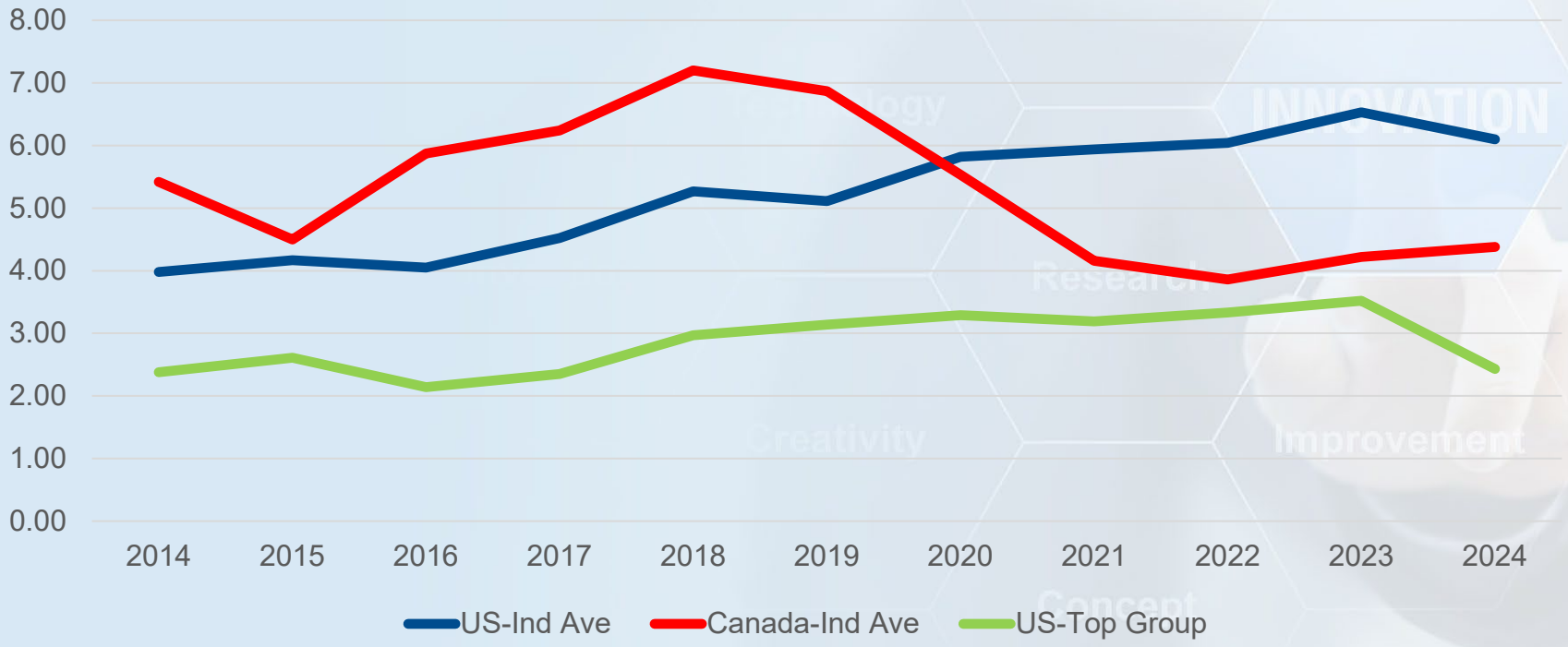
Hen Processing Downgrading



Tom Processing Downgrading



Hen Processing Downgrading Trend



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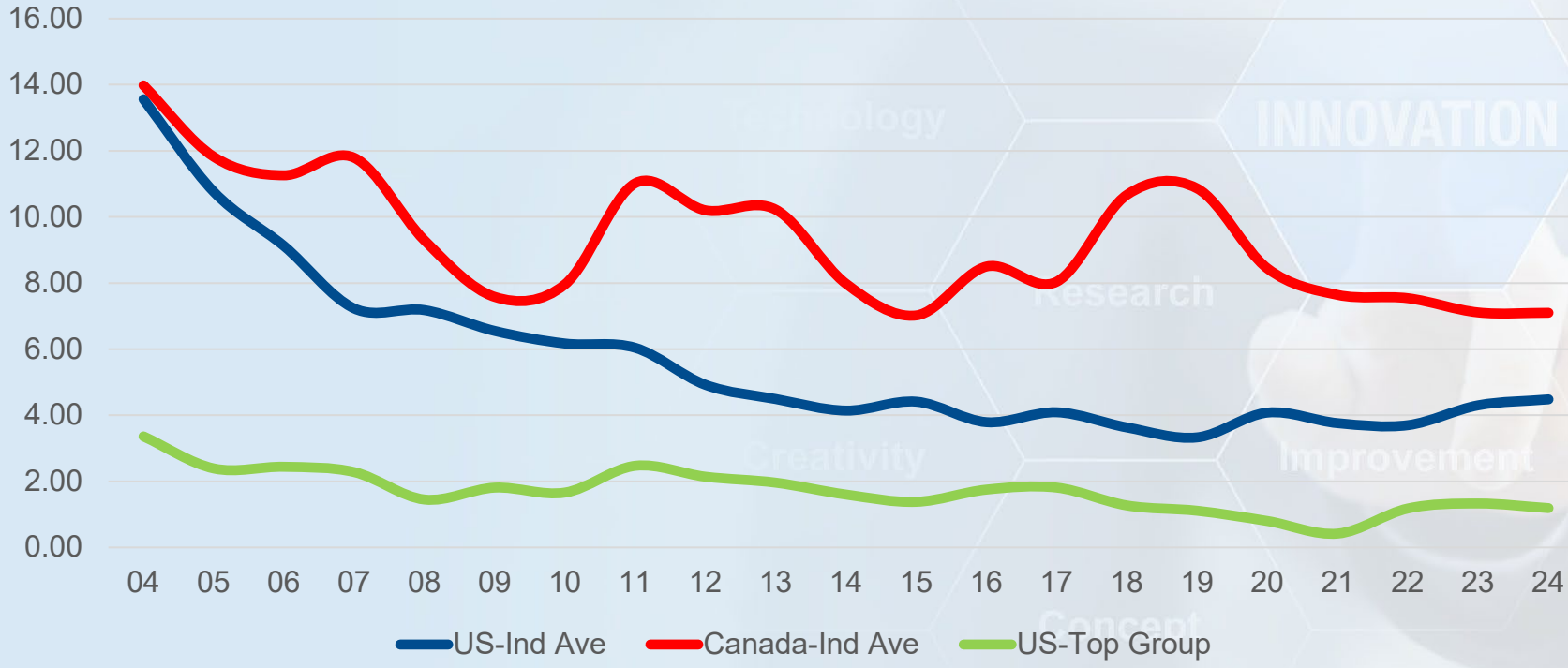
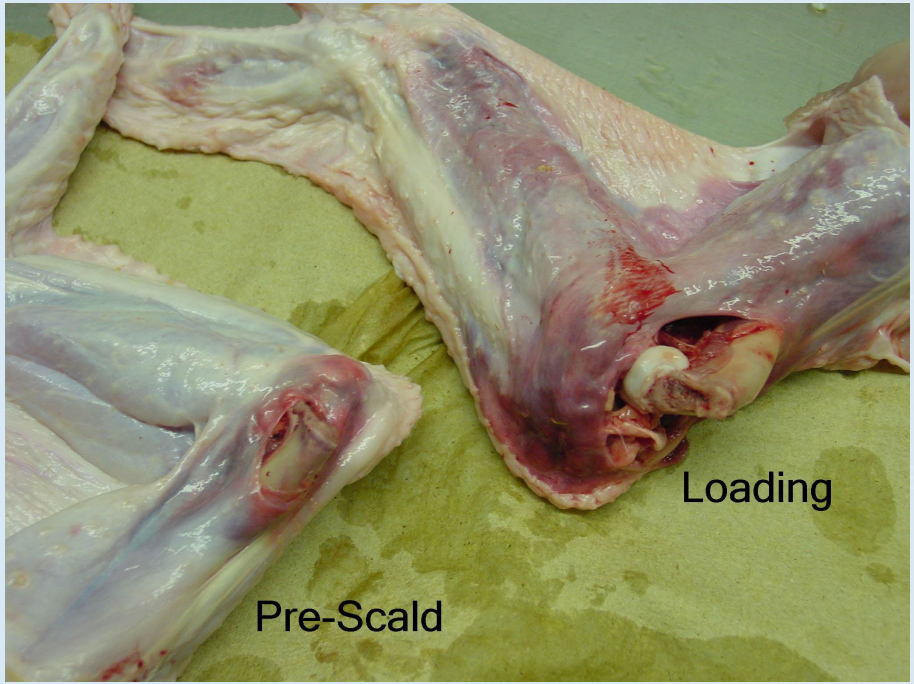
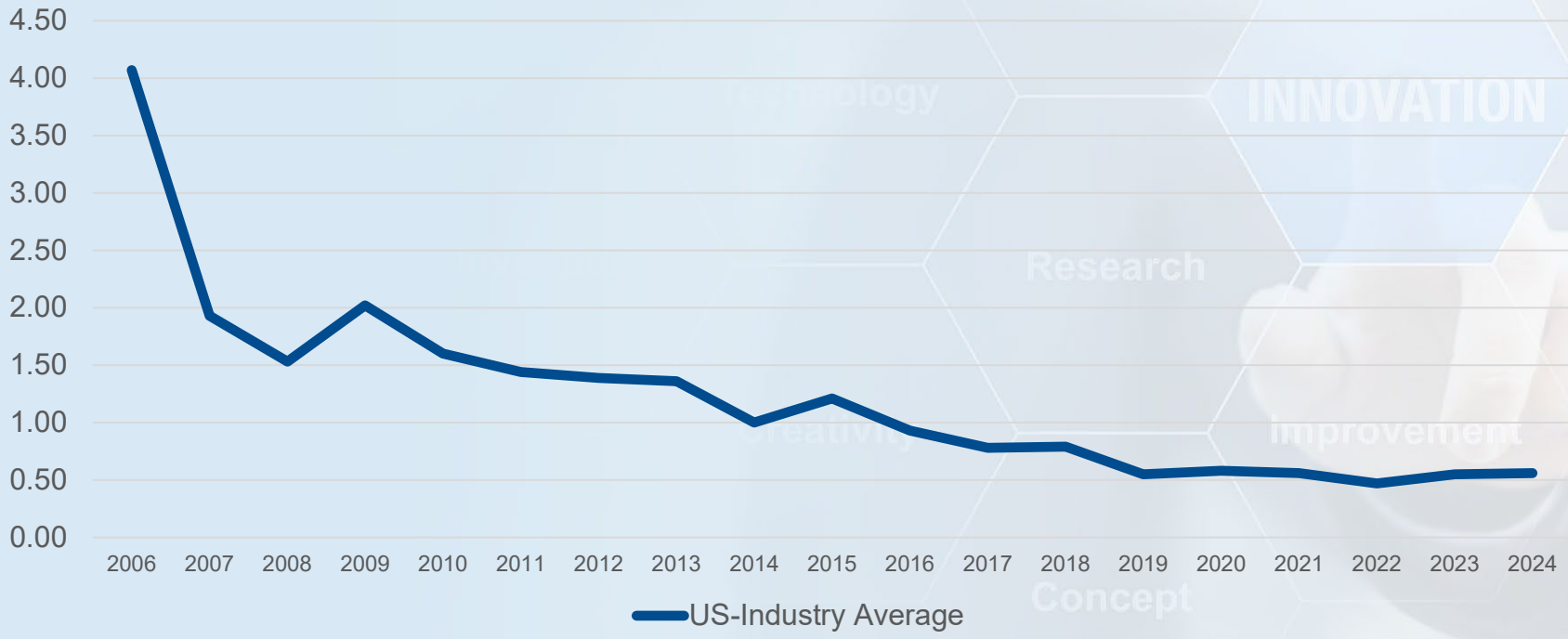


Pre-Scald Wing Bruises/Breaks

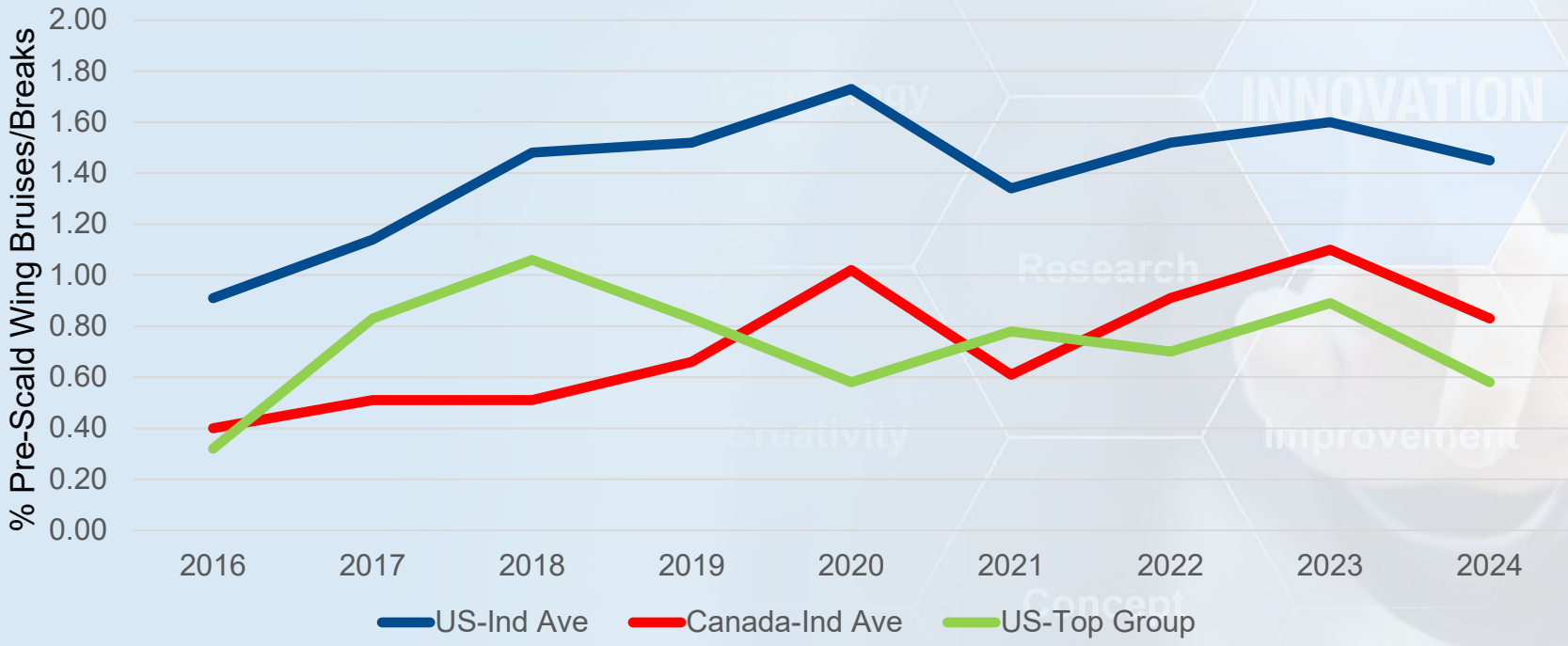


- Caused by flapping as birds are removed from the coops, on the shackling line and through bleeding
- Hanging techniques and operation of the stunner are critical to successfully control pre-scald wings

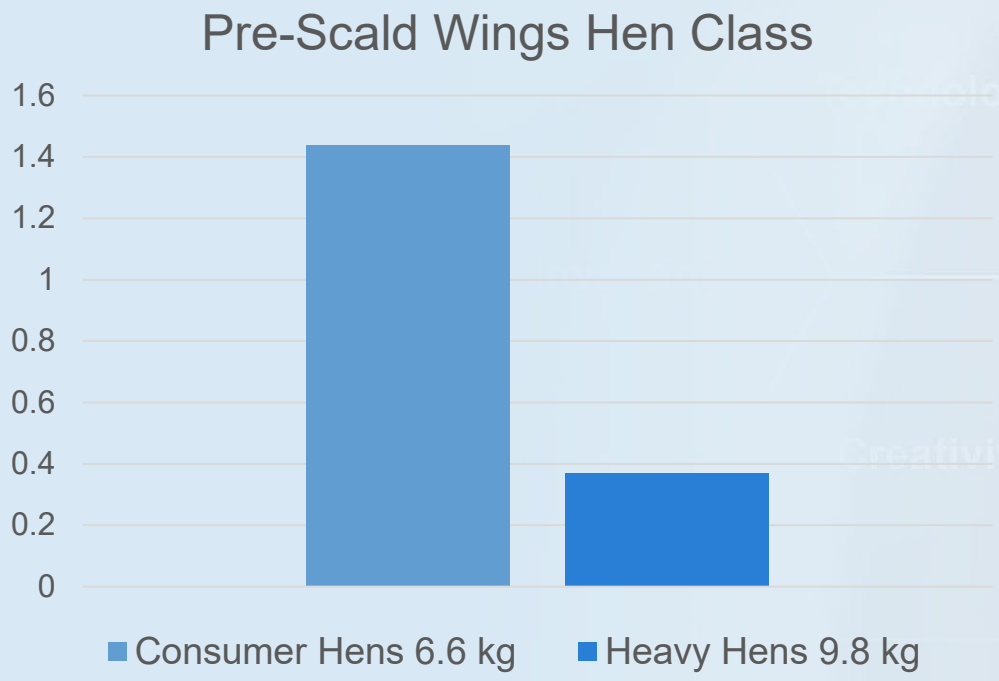
Tom Pre-Scald (Plant) Wing Trend



Hen Pre-Scald (Plant) Wing Downgrading



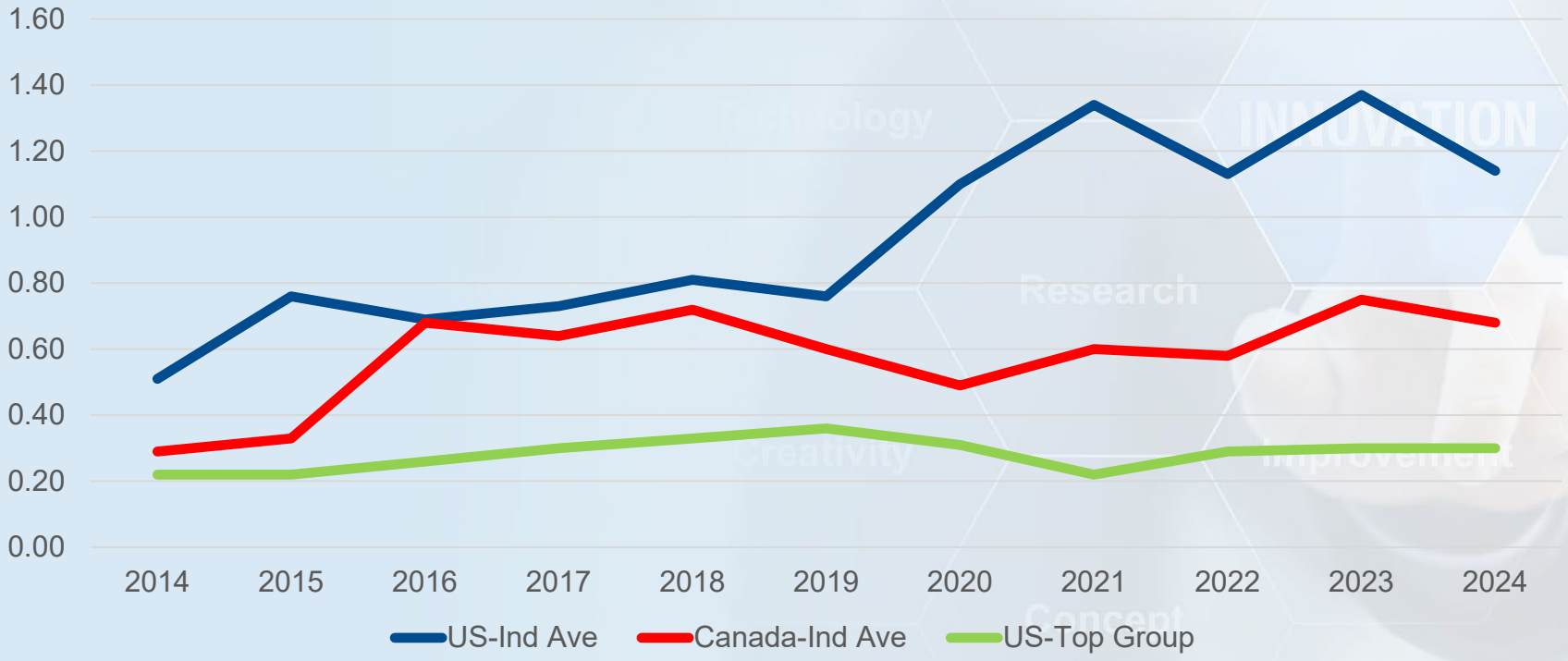
Pre-Scald Wing Bruise/Breaks



- Smaller bird sizes at harvest has impacted pre-scald wing damage
- Workmanship and lack of tenured hangers is also a major component
- Only 2 plants in US and Canada use CAS systems for hens, while 67% of toms are stunned with CAS

Picker Damage

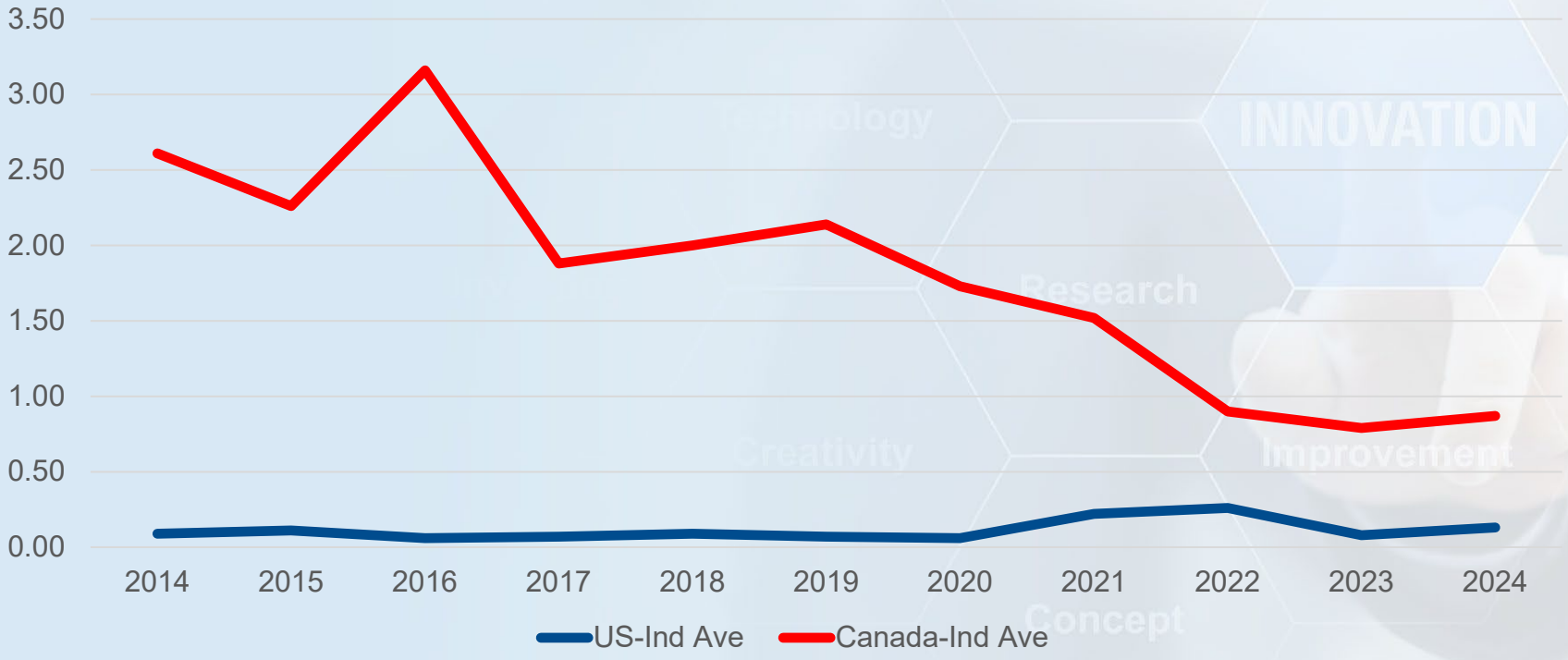
Hen Picker Damage Trend



Contamination

- New automation eviscerating carcasses in a 2-point position has renewed focus on feed and water withdrawal practices
- Most US plants have aggressive on-line re-processing programs to eliminate visible contamination prior to chilling
- Some differences in contamination calls between countries
- Use of PAA in wet chillers has reduced staining and downgrading

Hen Skin Contamination Trend



Automation

- More automation, especially coming out of COVID, has eased the labor challenges but has negatively affected grade
- More torn or mutilated carcasses and more whole carcass condemnation as they fall out of the shackles

Conclusions

- Producing Grade A poultry is an immense group project with innumerable ways for birds to become downgrades and an equal number of small details that must be managed
- It is almost impossible to predict the grade of a flock in the barn while the feathers are still on, so everyone on the team is encouraged to go into the plant and watch their birds process
- In many cases for hens only 1/3 of all downgrading has occurred at the start of catching/loading, but for toms most defects occur on the farm
- Hen Grade A has been on a negative trend in recent years in part due to reduced focus on downgrading/whole bird Grade A, the labor shortage, increased automation, and reaction of bruises to chiller anti-microbials
- Tom Grade A has been improving with a reduction in breast blisters combined with more CAS systems

Questions or comments are welcome!

Thank you Aviagen