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Dane Bernard

Keystone Foods LLC

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- Know why you are testing.
- Test to find.
- Do something with the results.

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- Beef patties
- Poultry slaughter
- Poultry further processing
- Frozen, raw breaded fish
- Fully cooked products

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- Pre operational swabs*
- Products and ingredient specifications
- Customer specifications
- Generic *E. coli*

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- Feed mill, hatchery, on farm
- *Salmonella* performance standards for ground beef and for poultry slaughter*
- *E. coli* O157:H7 testing on beef trimmings and ground beef
- *L. monocytogenes* control program

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- Must have validated methods and procedures (people too!)

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- Important part of our sanitation program as a verification step (gold standard is still visual inspection)
- Variability in implementation
  - ✓ Resulted in data that was not as useful as desired
  - ✓ Could not compare within plants not to mention across plants

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- What we did
  - ✓Develop training materials
  - ✓Distribute and train
  - ✓Reinforce through visits and audits

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- What we did
  - ✓ Studied optimal method and target
  - ✓ Compared Q-tip type swab (4x4 area) with sponges (4x4 and 12x12)
  - ✓ Swabbed in both beef and poultry plants
  - ✓ Statistical analysis demonstrated that sponge 4x4 area was best and no benefit to E.c. or Coliforms.

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- Select minimum of 50 candidate sites (contact and non-contact)
- Swab minimum of 5 sites per day (APC)
- OOS sites are targeted for extra attention and re-swabbing at next opportunity
- Track individual results
- Trend % OOS over a specific time frame as a tool for plants to see if something has changed.

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- ✓Set A – 8/53
- ✓Set B – 6/53
- ✓Set C – 0/53 **No fun zone!**
- ✓Most recent A set – 0/53

Supplier selection [But how?]

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- Lean content drives the whole process – It's a legal/labeling/customer issue
- Beef does not come off the animal with the target lean
- We must blend beef of different lean points to achieve target

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- To get the meat we need, we must use several suppliers
- Some suppliers have multiple plants

How do we find out who was contributing to our problem?

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- Develop a data base on each establishment that supplied our plant and base purchase decisions on performance.
- Each load tested for *Salmonella* and tracking done by establishment number.

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- Preparing graphs of data by establishment
- Calculating % of all *Salmonella* positive loads relative to the % of total loads from an est.

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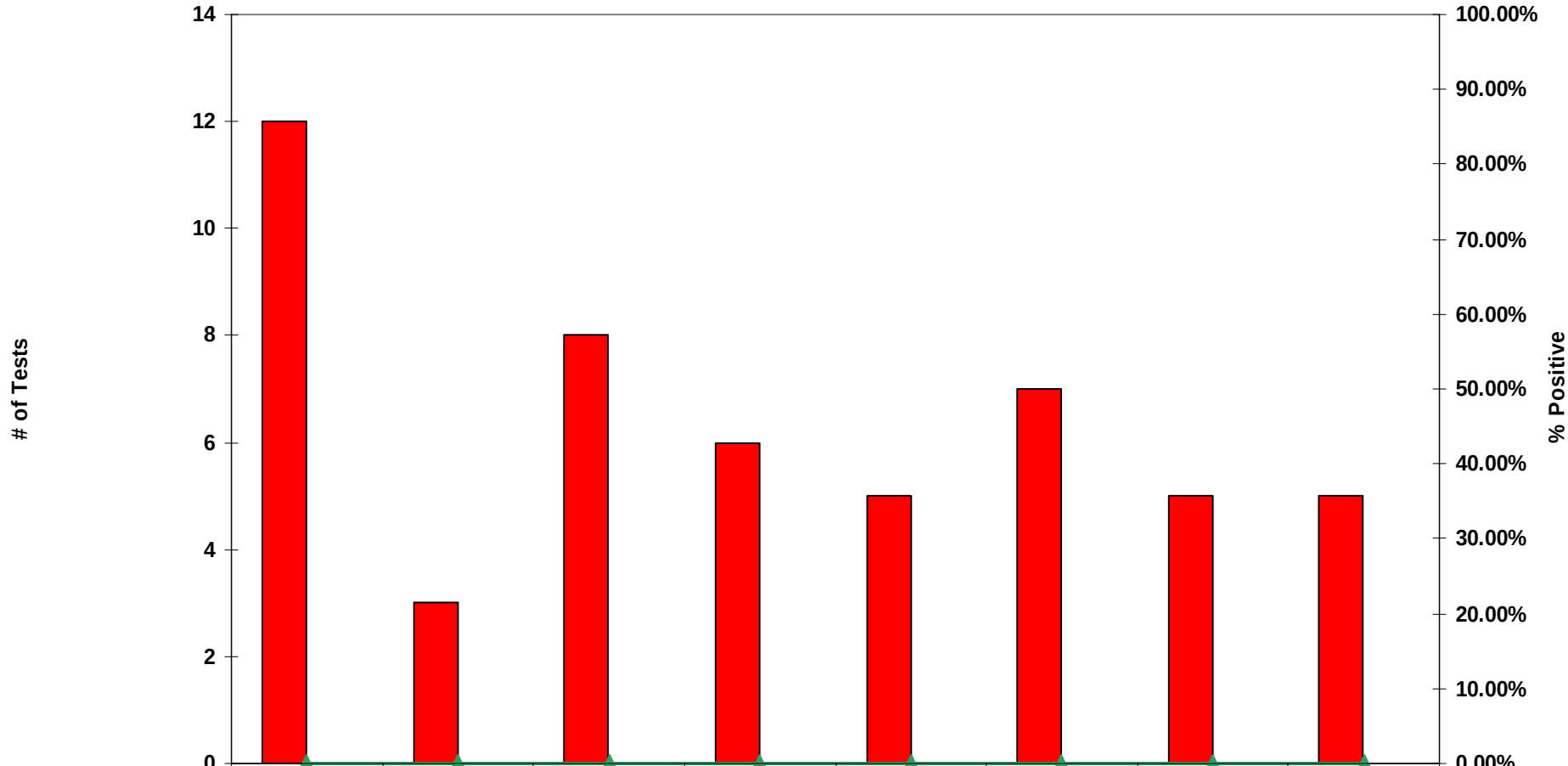
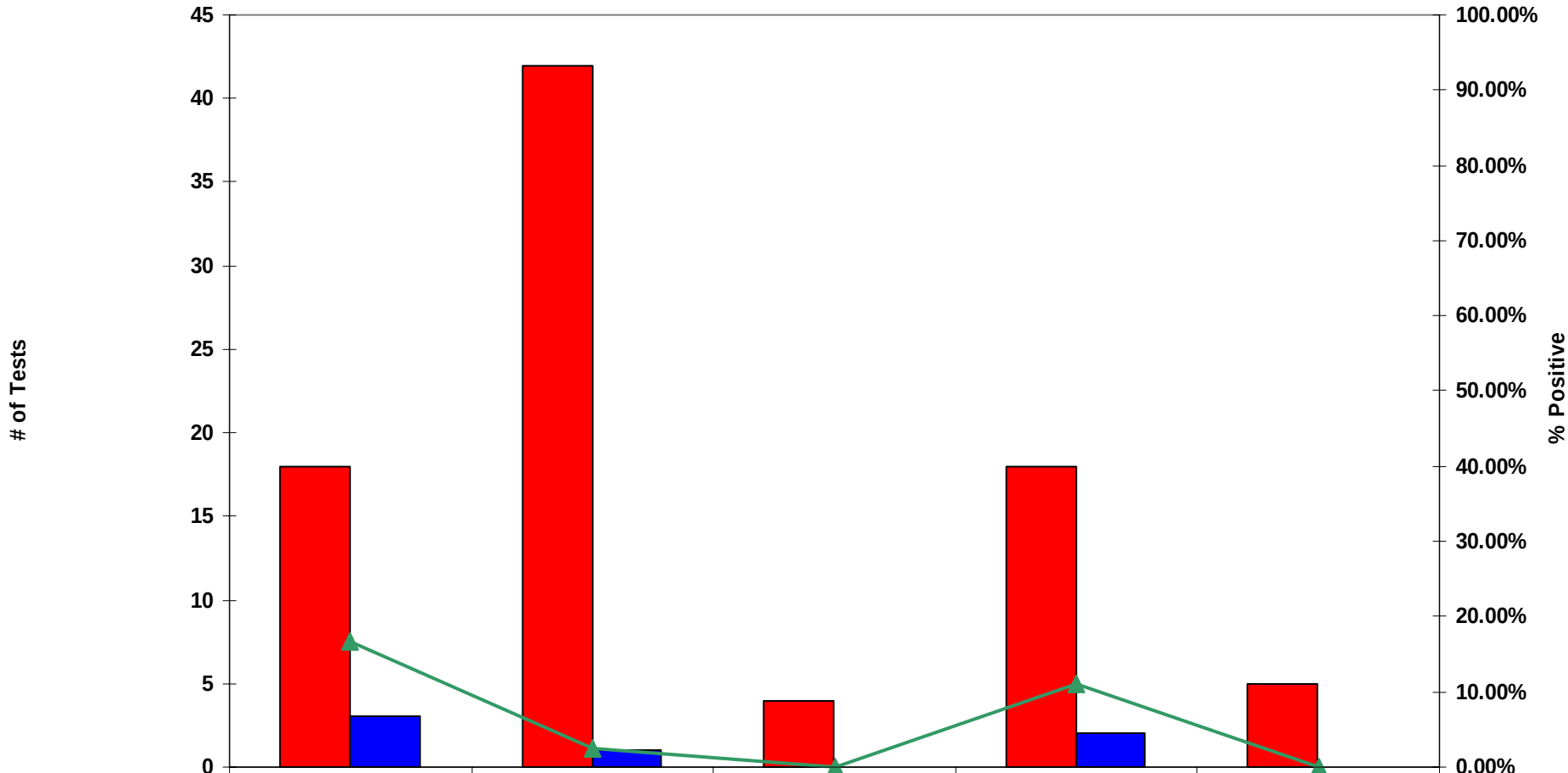
Weekly Salmonella Results for Est# efgh



	09-Feb-03	16-Feb-03	23-Feb-03	02-Mar-03	09-Mar-03	16-Mar-03	23-Mar-03	30-Mar-03
Total Tests	12	3	8	6	5	7	5	5
Total Positive	0	0	0	0	0	0	0	0
Percent	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Weekly Salmonella Results for Est# abcd



	09-Feb-03	16-Feb-03	23-Feb-03	09-Mar-03	16-Mar-03
Total Tests	18	42	4	18	5
Total Positive	3	1	0	2	0
Percent	16.67%	2.38%	0.00%	11.11%	0.00%

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- For a grinder, nothing works but supplier selection.
- Test ~ each 5th load per est. # in normal mode. When in a “set”, all loads are tested.
- If exceed 2 in 20, go to enhanced sampling and contact supplier.
- If trend continues!!!!!!!!!!
- When in a USDA set, sample every load.

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- When prevalence is low, microbiological testing is not an effective means to sort “good” lots from “bad” and ensure consumer protection.
- Microbiological testing, however, can be used to detect lots of unusually high prevalence rates. (and to verify ongoing performance of interventions-db)

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- We can’t test our way to food safety but we can have food safety issues as a result of inadequate sampling and testing programs.

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