The Challenge

Agribusiness operations like poultry farms have 3 basic requirements rodents need to thrive: food, water, and harborage. And because they can fit into half-inch openings, rats can access most any structure unless exclusion practices are strongly enforced. With just 2 rats growing into an infestation infrastructure and equipment, consumed or contaminated feed, and losses in egg and poultry production can be costly. Infrastructure and equipment damage due to nesting or gnawing can be expensive and poses a risk to both workers and …environ. Operational shutdown due to damage can cost thousands of dollars. Not only that, but rats also pose a major health concern as carriers of pathogens like Salmonella enteritidis. As a result, poultry farms are held to high quality assurance standards through strict inspections. Rodent sightings, evidence of rodents, or confirmed disease can lead to costly production interruptions and recalls. In fact, the U.S. Department of Agriculture (USDA) estimates the actual cost of rats to the poultry industry is about $300/ton,4 then the cost would be as high as $25 per rat per year.6

The Approach

An integrated pest management (IPM) approach evaluates the situation and deploys multiple tools to help control rodents, which is imperative in agricultural settings. ContraPest is a liquid rat contraceptive bait that inhibits fertility in both male and female Norway and roof rats, and it begins to affect fertility as soon as it’s consumed. Measurable results are seen over time as fewer pups are born over multiple breeding rounds. When implemented with other pest control tools, positive results can be achieved more quickly.

By Inhibiting Rat Fertility to Reduce Rodent Activity, Poultry Farms See Savings in Costs, Labor, and Resources

ContraPest was tested for a minimum of 12 months as part of an integrated pest management program on two US poultry farms. This report summarizes the efficacy and economic value from data collected at each site.

Conclusion

As these two cases demonstrate, including ContraPest as an integral part of any IPM strategy can result in cost, labor, and resource savings. Adding fertility control as a preventive treatment while continuing current removal practices can help to ensure a much-reduced rodent population. ContraPest successfully demonstrated efficacy and economic value by reducing rat populations to levels not previously achieved, resulting in fewer losses, less damage, and long-term savings for agribusiness operations.

References:
3. Loven J. Controlling rodents in commercial poultry facilities.
jdvar.2015.02.00040.
jdvar.2015.02.00040.
The Challenge

Agribusiness operations like poultry farms have 3 basic requirements that rodents need to thrive: food, water, and harborage. And because they can fit into half-inch openings, rats can access most any structure unless exclusion practices are strongly enforced. With just 2 rats growing into an infestation in months, the resulting damage to infrastructure and equipment, consumed or contaminated feed, and losses in egg and poultry production can be costly.

Infrastructures and equipment damage due to nesting or gnawing can be expensive and pose a risk to both workers and flock. Operational shutdown due to damage can cost thousands of dollars. Not only that, but rats also pose a major health concern as carriers of pathogens like Salmonella enteritidis. As a result, poultry farms are held to high-quality assurance standards through strict inspections. Foul odors, evidence of rodents, or confirmed disease can lead to costly production interruptions and recalls. In fact, the U.S. Department of Agriculture (USDA) estimates the actual cost of rats to be as high as $25 per rat per year.

The Approach

An integrated pest management (IPM) approach evaluates the situation and deploys multiple tools to help control rodents, which is imperative in agricultural settings. ContraPest is a liquid rat contraceptive that inhibits fertility in both male and female Norway and roof rats, and it begins to affect fertility as soon as it’s consumed. Measurable results are seen over time as fewer pups are born over multiple breeding rounds. When implemented with other pest control tools, positive results can be achieved more quickly.

"Within the first 3 months of deploying ContraPest, we saw a 50% reduction in rodent activity, fewer dead in traps, and steadily decreasing activity. Within 5 months, we had zero activity. I couldn’t recommend a better product than ContraPest for producers struggling with their rodent programs."

—Operations Manager, Pullet Farm

Conclusion

As these two cases demonstrate, including ContraPest as an integral part of any IPM strategy can result in cost, labor, and resource savings. Adding fertility control as a preventative treatment while continuing current removal practices can help to ensure a much-reduced rodent population. ContraPest successfully demonstrated efficacy and economic value by reducing rat populations to levels not previously achieved, resulting in fewer losses, less damage, and long-term savings for agribusiness operations.

References:
3. Francis Group. Poultry farms have 3 basic requirements that rodents need to thrive: food, water, and harborage. 2010. West Lafayette, IN.
Results
Consumption varied by house depending on the degree of infestation and when treatment began to take effect. Devices were routinely relocated or removed if there was little to no activity decreased by 95% after 12 months. By year 2 of treatment, roughly 30-35% of the initial devices remained in place.

Methods
A total of 68 ContraPest dispenser stations were deployed in areas where rats traveled, including outside of enclosures, near conveyor machinery, and along the attic accessBELT. SenesTech personnel tracked consumption of lethal rodenticides and conducted population surveys via motion sensor cameras each month. Parameters were not altered.

Results
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to long-term success to ContraPest, labor costs associated with managing the rats, and pullet loss prior to and after the addition of ContraPest.

Methods
Chicken houses underwent clean-out periods between flocks, averaging 14 days, during which all chickens were removed and the houses disinfected. Rodenticides were removed and 6 tanks of ContraPest were deployed daily across houses. Lethal rodenticides were redeployed before the houses were repopulated with birds.

Overview
Four chicken houses (500' x 90') with egg-laying hens exhibited varying levels of infestation by roof rats. Lethal rodenticides had been actively used across all houses as part of standard operating procedures and practices were not altered.

Methods
A total of 68 ContraPest dispenser stations were deployed in areas where rats traveled, including outside of enclosures, near conveyor machinery, and along the attic perimeter. SenesTech personnel tracked consumption and conducted population surveys via motion sensor cameras each month. ContraPest devices were removed or relocated if there was little to no consumption (100 mL or less). Images were used to estimate population numbers and a reduction in juvenile rats over time. Camera use to estimate population numbers and a population was estimated to identify the best baiting locations and making adjustments to placement saved time to identify the best baiting locations and making adjustments to placement saved program costs and improved efficacy. From September 2019 to October 2020, the total number of rats decreased from 349 to 19; juvenile rats decreased by 91% (Figure 1). Rat activity decreased by 95% after 12 months. After 6 months, the number of devices was reduced by 50%. By year 2 of treatment, roughly 30-35% of the initial devices remained in place.

Results
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to and after the addition of ContraPest.

Results
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to long-term success to ContraPest, labor costs associated with managing the rats, and pullet loss prior to and after the addition of ContraPest.

Methods
Chicken houses underwent clean-out periods between flocks, averaging 14 days, during which all chickens were removed and the houses disinfected. Rodenticides were removed and 6 tanks of ContraPest were deployed daily across houses. Lethal rodenticides were redeployed before the houses were repopulated with birds.

Overview
Four chicken houses (500' x 90') with egg-laying hens exhibited varying levels of infestation by roof rats. Lethal rodenticides had been actively used across all houses as part of standard operating procedures and practices were not altered.
Overview
Four chicken houses (50’ x 90’) with egg-laying pens exhibited varying levels of infestation by roof rats. Lethal rodenticides had been actively used across all houses as part of standard operating procedures and practices were not altered.

Methods
A total of 68 ContraPest dispenser stations were deployed in areas where rats traveled, including outside of enclosures, near conveyor machinery, and along the attic perimeter. SenesTech personnel tracked consumption and conducted population surveys via motion sensor cameras each month. ContraPest devices were removed or relocated if there was little to no consumption for 30 days. Surveys were repeated every 30 days.

Results
Consumption varied by house depending on the degree of infestation and when treatment began to take effect. Devices were routinely relocated or removed as preferred feeding locations were identified. After 6 months, the number of devices was reduced by 50%. By year 2 of treatment, roughly 30-35% of the initial devices remained to provide ongoing maintenance at reduced application costs. Taking the time to identify the best baiting locations and making adjustments to placement saved program costs and improved efficacy. From September 2019 to October 2020, the total number of rats decreased from 349 to 19; number of devices decreased from 349 to 19; juvenile rats decreased by 98% (Figure 1). Rat activity decreased by 95% after 12 months of treatment compared with activity using traditional control tools only (Figure 2).

Figure 1. Rat Population Demographics

Methods
Chicken houses underwent clean-out periods between flocks, averaging 14 days, during which all chickens were removed and the houses disinfected. Roodersticks were removed and 6 tanks of ContraPest were initially deployed daily across houses. ContraPest cost was estimated from consumption by rats was estimated from rodent-related activities. Feed consumption per 100 birds (pullet pounds per 100) decreased from 13 lbs to 11 lbs per flock. The number of personnel relegated to rodent-related activities was reduced to 1. Feed consumed per 100 birds (pullet pounds per 100) decreased from 13 lbs to 11 lbs improving the Feed Conversion Ratio. Rats were no longer observed eating spilled feed or out of troughs, resulting in an estimated 30% savings in feed loss. Adding ContraPest to the farm’s existing IPM program resulted in an estimated savings of more than $600,000 (Figure 3). By inhibiting fertility, the farm was able to maintain control over the rats with results sustained by maintenance baiting. They attribute their long-term success to ContraPest.
Overview
Four chicken houses (500’ x 90’) with egg-laying hens exhibited varying levels of infestation by roof rats. Lethal rodenticides had been actively used across all houses as part of standard operating procedures and practices were not altered.

Methods
A total of 68 ContraPest dispenser stations were deployed in areas where rats traveled, including outside of enclosures, near conveyor machinery, and along the attic perimeter. SenesTech personnel tracked rat activity, consumption (100 mL or less). Images were taken on the perimeter. SenesTech personnel tracked rat activity, consumption and conducted population surveys via motion sensor cameras each month. ContraPest devices were removed or relocated if there was little to no activity from the devices. After 6 months, the number of devices was reduced by 50%. By year 2 of treatment, roughly 30-35% of the initial devices remained to provide ongoing maintenance at reduced application costs. To identify the time to identify the best baiting locations and making adjustments to placement saved program costs and improved efficacy. From September 2019 to October 2020, the total number of rats decreased from 349 to 19; juvenile rats decreased by 91% (Figure 1). Rat activity decreased by 95% after 12 months of treatment compared with activity using lethal rodenticides. Lethal rodenticides were redeployed before the addition of ContraPest. Rat activity across all houses from September 2019 (pre-ContraPest treatment) through October 2020.

Results
Consumption varied by house depending on the degree of infestation and when treatment began to take effect. Devices were routinely relocated or removed if there was little to no activity from the devices. After 6 months, the number of devices was reduced by 50%. By year 2 of treatment, roughly 30-35% of the initial devices remained to provide ongoing maintenance at reduced application costs. To identify the best baiting locations and making adjustments to placement saved program costs and improved efficacy. From September 2019 to October 2020, the total number of rats decreased from 349 to 19; juvenile rats decreased by 91% (Figure 1). Rat activity decreased by 95% after 12 months of treatment compared with activity using lethal rodenticides. Lethal rodenticides were redeployed before the addition of ContraPest. Rat activity across all houses from September 2019 (pre-ContraPest treatment) through October 2020.

Farm 1

Overview
Four chicken houses (500’ x 90’) with egg-laying hens exhibited varying levels of infestation by roof rats. Lethal rodenticides had been actively used across all houses as part of standard operating procedures and practices were not altered.

Methods
A total of 68 ContraPest dispenser stations were deployed in areas where rats traveled, including outside of enclosures, near conveyor machinery, and along the attic perimeter. SenesTech personnel tracked rat activity, consumption (100 mL or less). Images were taken on the perimeter. SenesTech personnel tracked rat activity, consumption and conducted population surveys via motion sensor cameras each month. ContraPest devices were removed or relocated if there was little to no activity from the devices. After 6 months, the number of devices was reduced by 50%. By year 2 of treatment, roughly 30-35% of the initial devices remained to provide ongoing maintenance at reduced application costs. To identify the best baiting locations and making adjustments to placement saved program costs and improved efficacy. From September 2019 to October 2020, the total number of rats decreased from 349 to 19; juvenile rats decreased by 91% (Figure 1). Rat activity decreased by 95% after 12 months of treatment compared with activity using lethal rodenticides. Lethal rodenticides were redeployed before the addition of ContraPest. Rat activity across all houses from September 2019 (pre-ContraPest treatment) through October 2020.

Results
Consumption varied by house depending on the degree of infestation and when treatment began to take effect. Devices were routinely relocated or removed if there was little to no activity from the devices. After 6 months, the number of devices was reduced by 50%. By year 2 of treatment, roughly 30-35% of the initial devices remained to provide ongoing maintenance at reduced application costs. To identify the best baiting locations and making adjustments to placement saved program costs and improved efficacy. From September 2019 to October 2020, the total number of rats decreased from 349 to 19; juvenile rats decreased by 91% (Figure 1). Rat activity decreased by 95% after 12 months of treatment compared with activity using lethal rodenticides. Lethal rodenticides were redeployed before the addition of ContraPest. Rat activity across all houses from September 2019 (pre-ContraPest treatment) through October 2020.

Farm 2

Overview
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to 2018, the farm managers reported significantly fewer rat sightings and an 88% reduction in pullet shrinkage with losses falling to 200 per flock. The number of personnel relegated to rodent-related activities was reduced to 1. Feed consumed per 100 birds (pullet pounds per 100) decreased from 11 lbs to 13 lbs improving the Feed Conversion Ratio. Rats were no longer observed eating spilled feed or out of troughs, resulting in an estimated 50% savings in feed loss. Adding ContraPest to the farm’s existing IPM program resulted in an estimated savings of more than $600,000 (Figure 3). By inhibiting fertility, the farm was able to maintain control over the rats with results sustained by maintenance baiting. They attribute their long-term success to ContraPest.

Methods
Chicken houses underwent clean-out periods between flocks, averaging 14 days, during which all chickens were removed and the houses disinfected. Rodenticides were removed and 6 tanks of ContraPest were initially deployed daily across houses. Lethal rodenticides were redeployed before the addition of ContraPest. Rat activity across all houses from September 2019 (pre-ContraPest treatment) through October 2020.

Results
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to 2018, the farm managers reported significantly fewer rat sightings and an 88% reduction in pullet shrinkage with losses falling to 200 per flock. The number of personnel relegated to rodent-related activities was reduced to 1. Feed consumed per 100 birds (pullet pounds per 100) decreased from 11 lbs to 13 lbs improving the Feed Conversion Ratio. Rats were no longer observed eating spilled feed or out of troughs, resulting in an estimated 50% savings in feed loss. Adding ContraPest to the farm’s existing IPM program resulted in an estimated savings of more than $600,000 (Figure 3). By inhibiting fertility, the farm was able to maintain control over the rats with results sustained by maintenance baiting. They attribute their long-term success to ContraPest.

Methods
Chicken houses underwent clean-out periods between flocks, averaging 14 days, during which all chickens were removed and the houses disinfected. Rodenticides were removed and 6 tanks of ContraPest were initially deployed daily across houses. Lethal rodenticides were redeployed before the addition of ContraPest. Rat activity across all houses from September 2019 (pre-ContraPest treatment) through October 2020.

Results
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to 2018, the farm managers reported significantly fewer rat sightings and an 88% reduction in pullet shrinkage with losses falling to 200 per flock. The number of personnel relegated to rodent-related activities was reduced to 1. Feed consumed per 100 birds (pullet pounds per 100) decreased from 11 lbs to 13 lbs improving the Feed Conversion Ratio. Rats were no longer observed eating spilled feed or out of troughs, resulting in an estimated 50% savings in feed loss. Adding ContraPest to the farm’s existing IPM program resulted in an estimated savings of more than $600,000 (Figure 3). By inhibiting fertility, the farm was able to maintain control over the rats with results sustained by maintenance baiting. They attribute their long-term success to ContraPest.

Results
A large pullet (chickens under age 1) farm with a high rat infestation that was unable to be controlled by traditional tools. Prior to 2018, the farm managers reported significantly fewer rat sightings and an 88% reduction in pullet shrinkage with losses falling to 200 per flock. The number of personnel relegated to rodent-related activities was reduced to 1. Feed consumed per 100 birds (pullet pounds per 100) decreased from 11 lbs to 13 lbs improving the Feed Conversion Ratio. Rats were no longer observed eating spilled feed or out of troughs, resulting in an estimated 50% savings in feed loss. Adding ContraPest to the farm’s existing IPM program resulted in an estimated savings of more than $600,000 (Figure 3). By inhibiting fertility, the farm was able to maintain control over the rats with results sustained by maintenance baiting. They attribute their long-term success to ContraPest.
The Challenge

Agribusiness operations like poultry farms have 3 basic requirements: 

1. Rodents need to thrive, feed, water, and harborage. And because they can fit into half-inch openings, rats can access most any structure unless exclusion practices are strongly enforced. With just 2 rats growing into an infestation in months, the resulting damage to infrastructure and equipment, consumed or contaminated feed, and losses in egg and poultry production can be costly. Additionally, rats can spread pathogens like Salmonella enteritidis.

2. Rats are prolific breeders, which is imperative in agricultural settings. Rodents need to thrive: food, water, and harborage. And because they can fit into half-inch openings, rats can access most any structure unless exclusion practices are strongly enforced. With just 2 rats growing into an infestation in months, the resulting damage to infrastructure and equipment, consumed or contaminated feed, and losses in egg and poultry production can be costly. Additionally, rats can spread pathogens like Salmonella enteritidis.

3. Feeding practices are strongly enforced. With just 2 rats growing into an infestation in months, the resulting damage to infrastructure and equipment, consumed or contaminated feed, and losses in egg and poultry production can be costly. Additionally, rats can spread pathogens like Salmonella enteritidis.

4. Rat populations to levels not previously achieved.

Infrastructure and equipment damage due to nesting or gnawing can be expensive and poses a risk to both welfare and trade. Operational shutdown due to damage can cost thousands of dollars. Not only that, but rats also pose a major health concern as carriers of pathogens like Salmonella enteritidis. As a result, poultry farms are held to high quality assurance standards through strict inspections. Fiduciary sightings, evidence of rodents, or confirmed disease can lead to costly production interruptions and recalls. In fact, the U.S. Department of Agriculture (USDA) estimates the actual cost of rats to be as high as $25 per rat per year.

The Approach

An integrated pest management (IPM) approach evaluates the situation and deploys multiple tools to help control rodents, which is imperative in agricultural settings. ContraPest is a liquid rat contraceptive bait that inhibits fertility in both male and female rats. In multiple studies, ContraPest has been shown to reduce rat populations to levels not previously achieved, as these two cases demonstrate, including a better product than ContraPest for producers struggling with their rodent programs.

The Benefits

1. 1 feeding ~25 g feed/day = 20 lbs lost annually

2. 250 = 2.5 tons of feed lost annually

3. If the current feed-grain commodity cost is about $300/ton, then the cost would be about $750/ton, or $3 PER RAT.

Conclusion

As these two cases demonstrate, including ContraPest as an integral part of any IPM strategy can result in cost, labor, and resource savings. Adding fertility control as a preventive treatment while continuing current removal practices can help to ensure a much-reduced rodent population. ContraPest successfully demonstrated efficacy and economic value by reducing rat populations to levels not previously achieved, resulting in fewer losses, less damage, and long-term savings for agribusiness operations.