



Leave Nothing to Chance



# Disease control

## Blackhead

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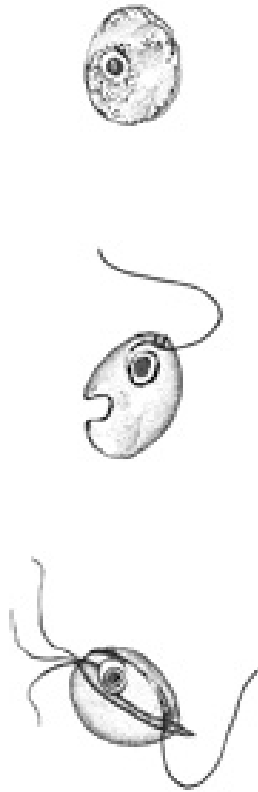
50 & 66 Antimony Street, Carole Park Qld 4300

PO BOX 475, Goodna Qld 4300



# Blackhead (Histomoniasis)

- *Caused by protozoan parasite Histomonas Meleagridis*



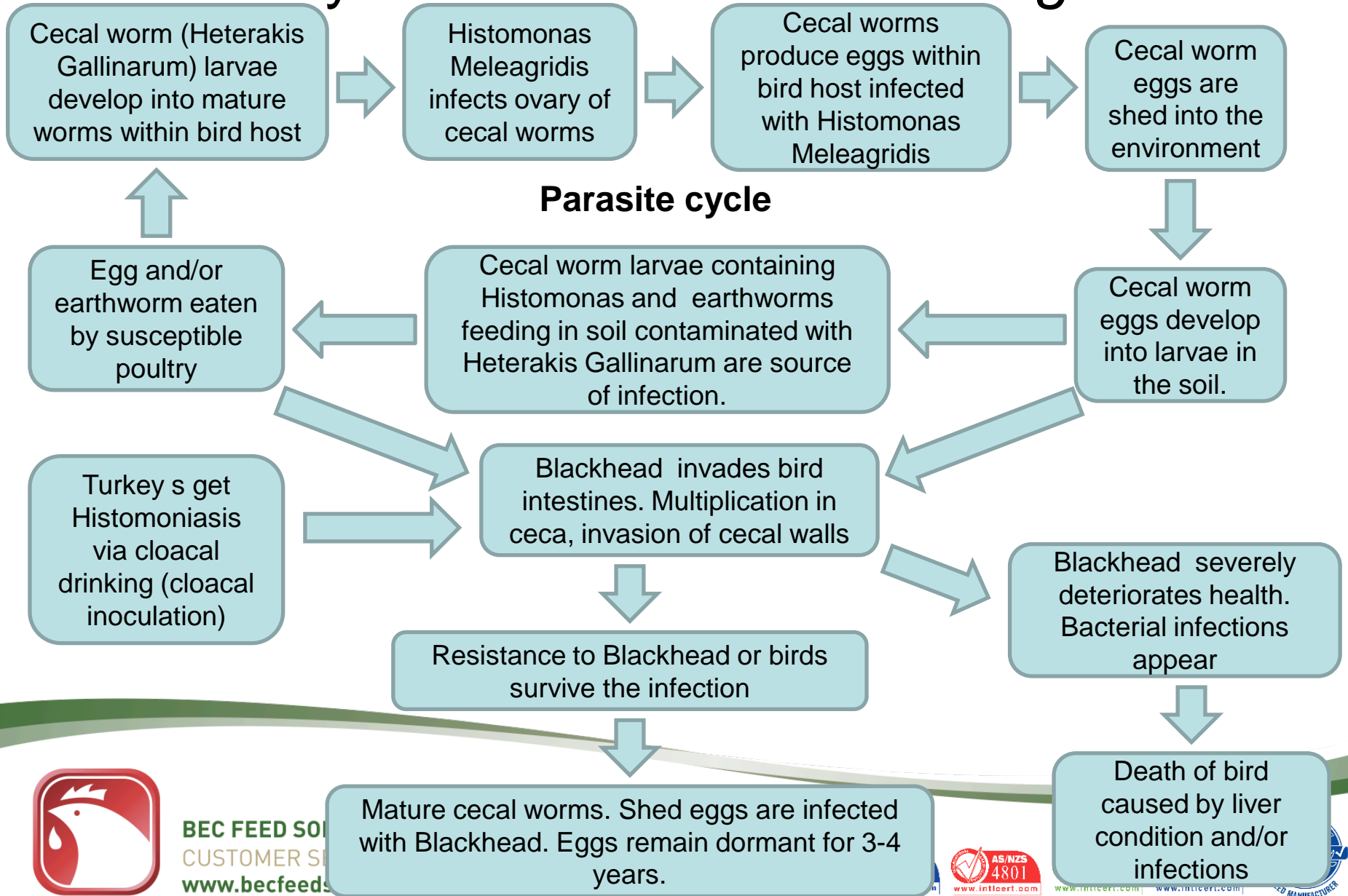
Source: pixshark.com



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# Life cycle of *Histomonas Meleagridis*



# Symptoms

- *After 1-2 weeks from infection:*
  - *birds stop eating,*
  - *become reluctant to move,*
  - *have ruffled feathers,*
  - *become very weak, therefore they stand with dropping head and wings and closed eyes,*
  - *liquid and yellow diarrhoeas occur*



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# Symptoms



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# Symptoms



Photo: Terrell Spencer, NCAT



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# Symptoms

- *Further from infection:*
  - *sometimes snood and caruncles become pale or dark blue almost black – it is the source of name of disease “Blackhead”, but it is not specific only for Histomoniasis.*
  - *birds stay in prostrate position,*
  - *mortality occurs within third week from infection (approx. day 17), in young birds it may be 100%.*



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# Symptoms

- *Caeca:*
  - *inflammation, ulceration,*
  - *greenish-white viscous exudates which turns into foul-smelling brown residue,*
  - *caecal lesions appear*
  - *caecal walls are weakened and may be perforated*
- *Liver:*
  - *lesions caused by protozoa*



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# Symptoms



Photo: GD Animal Health



Photo: GD Animal Health



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# Sources of infection

- *other birds in flock,*
- *chickens,*
- *buildings, grounds where Blackhead occurred before,*
- *contaminated feed and water,*
- *visitors,*
- *wild animals,*



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# Why turkeys?



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# Why turkeys?

- cloacal inoculation,
- specific digestive tract,
- caecum pH,
- susceptibility to stress, very sensitive to heat,
- specific nutritional requirements (fibre, B vitamins, tryptophan),



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# Why turkeys?

- quick growth,
- problems with legs,
- snood and caruncles creation,
- in natural conditions, turkeys diet includes insects and herbs,



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# Solution

- *Prevention:*
  - *biosecurity: visitors, equipment,*
  - *strict disinfection of buildings after each rearing,*
  - *separation of poultry by species and age, including used grounds,*
  - *proper stocking density,*



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# Solution

- *Prevention:*
  - *regular de-worming, including herbal products,*
  - *clean water access, acidification,*
  - *feed access,*
  - *using functional additives as blackhead prevention: water and feed acidifiers, herbal products,*



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# Solution

- *Protophyt*
  - *composed of plant extracts and essential oils,*
  - *based on studies conducted for 2 years, to select the most effective ones,*
  - *tested combinations of chosen components in search for the optimal composition (synergy effect),*
  - *EU banned Dimetridazole in May 2002, Nifurosol in April 2003,*



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# Solution

- *Protophyt*
  - *proved effective in high risk situations (turkey breeders, turkey free range, game),*
  - *used worldwide by turkey integrators and game producers,*
  - *tested in vitro on Histomonas Meleagridis – significant decrease of protozoa within 24h,*

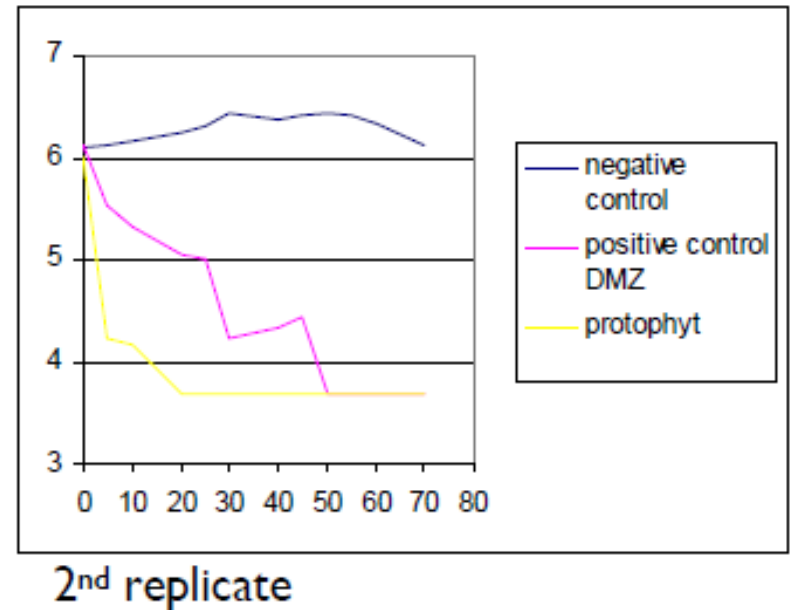
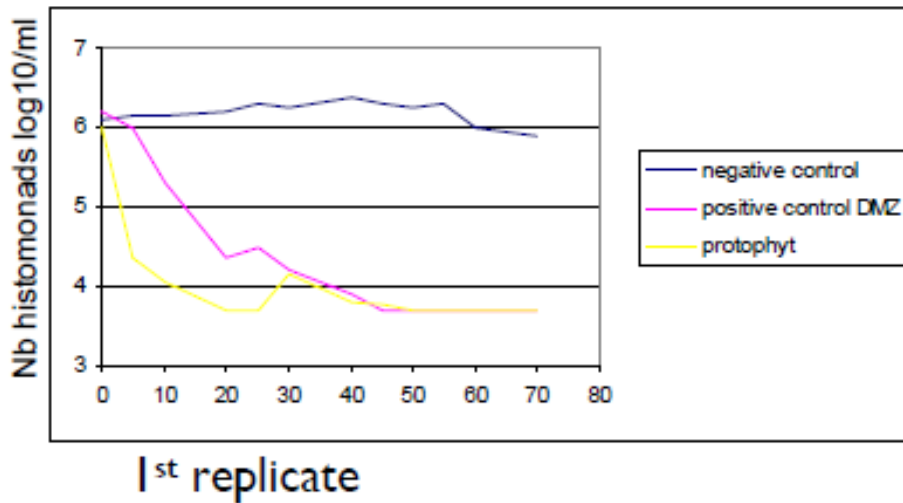


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# Solution

- *Protophyt - tested in vitro on Histomonas Meleagridis – significant decrease of protozoa,*



The comparison between Protophyt and DMZ shows a straight comparable decrease of the count of histomonads, and this effect can be repeated.



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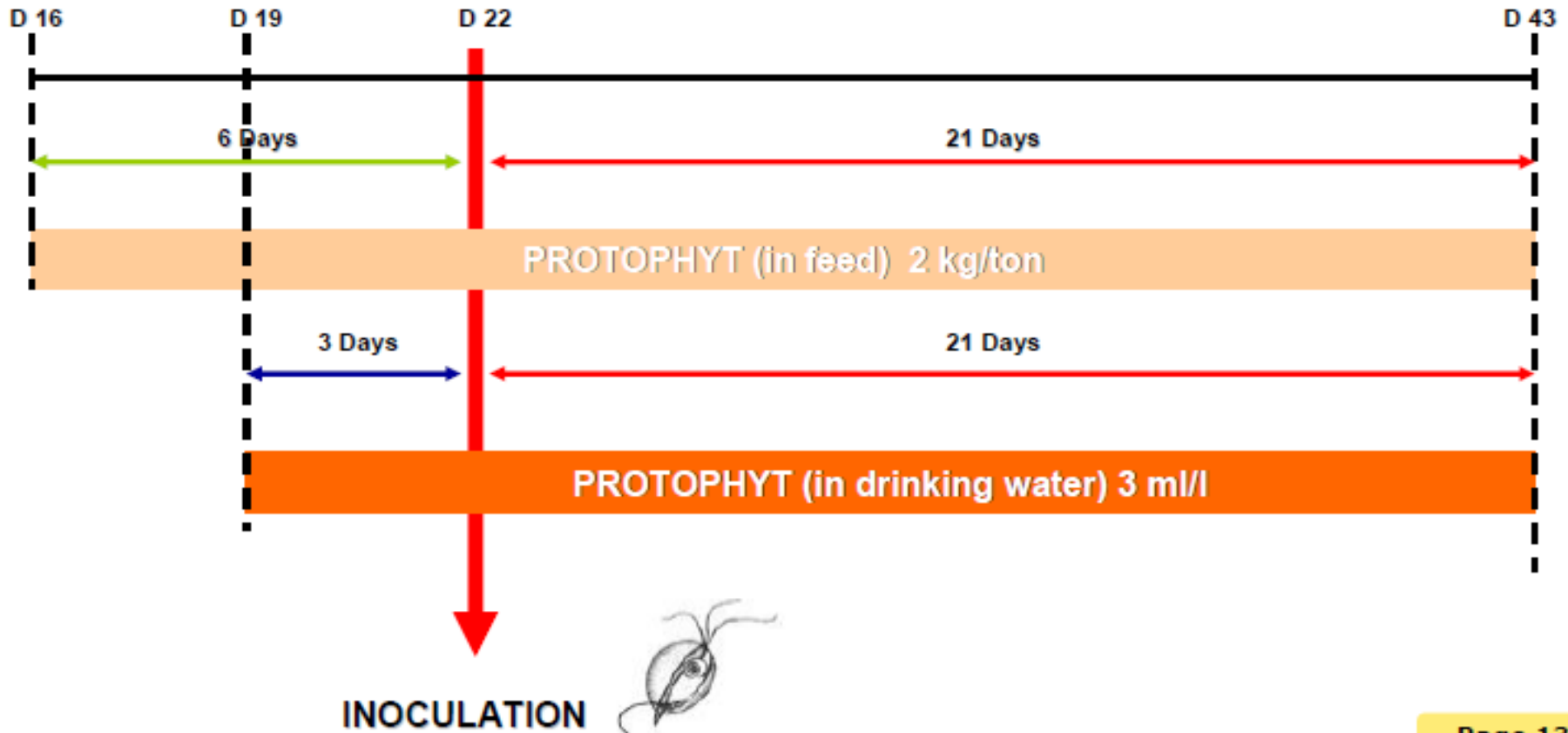


# Solution

- *ProtoPhyt* - tested on turkeys infected with protozoa (*H. Meleagridis* challenge)

3 groups of 19 turkeys BUT

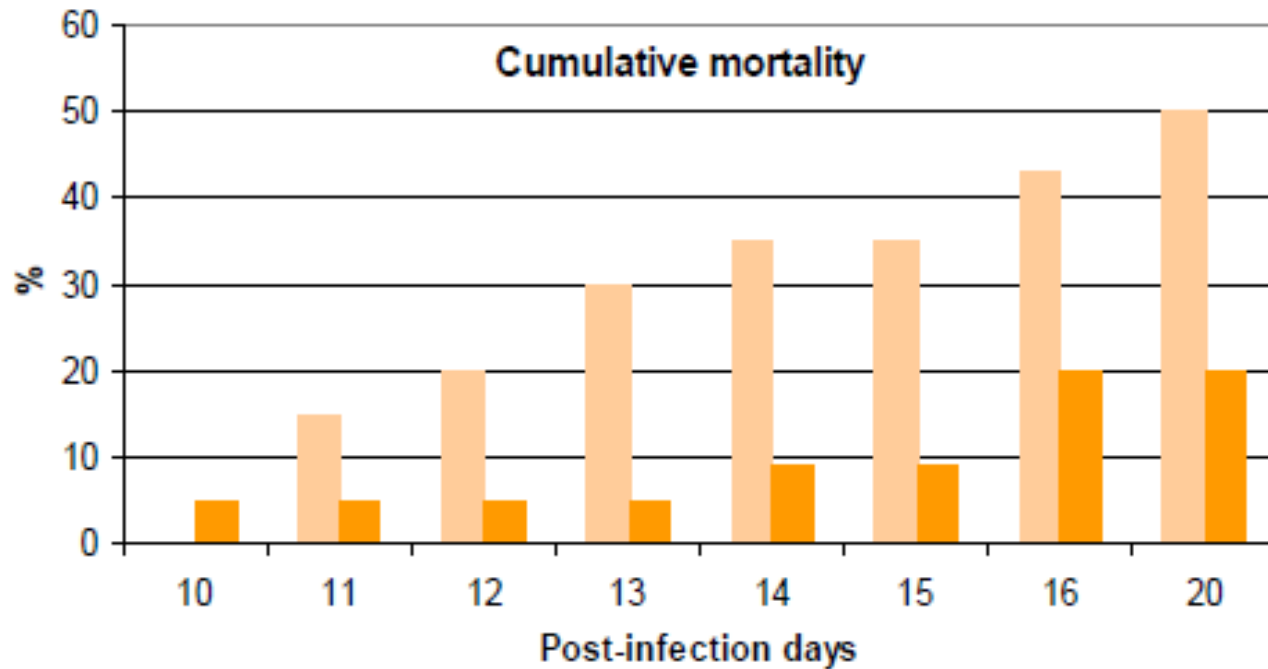
- Control group with no inoculation, no treatment
- Control group with inoculation, no treatment
- Group with inoculation and treatment



# Solution

- *ProtoPhyt* - tested on turkeys infected with protozoa (*H. Meleagridis* challenge)

## Results



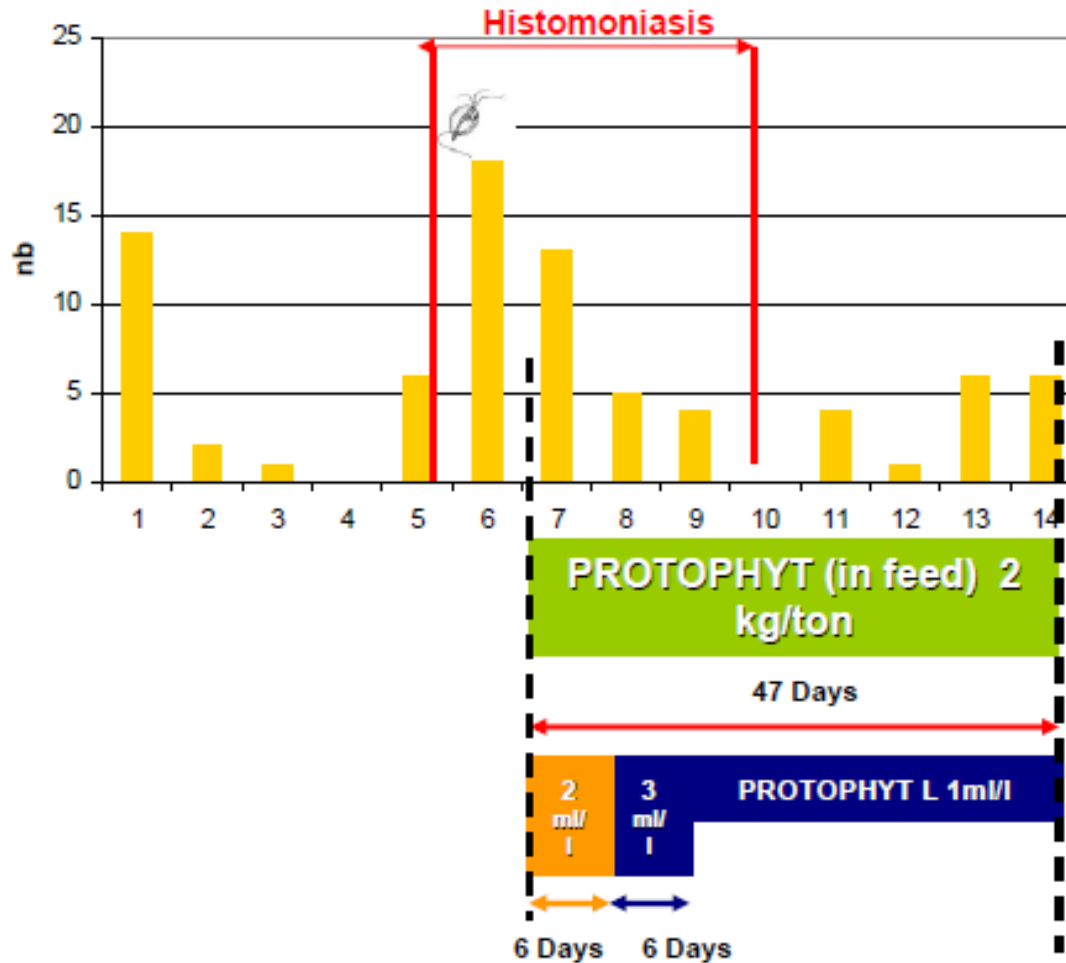
Incubated

Incubated + PROTOPHYT

Mortality of the control group with no treatment = 0

# Solution

- *Protophyt* - tested on turkey farm struggling with 21<sup>st</sup> outbreak of *histomoniasis*



Evolution of female mortalities

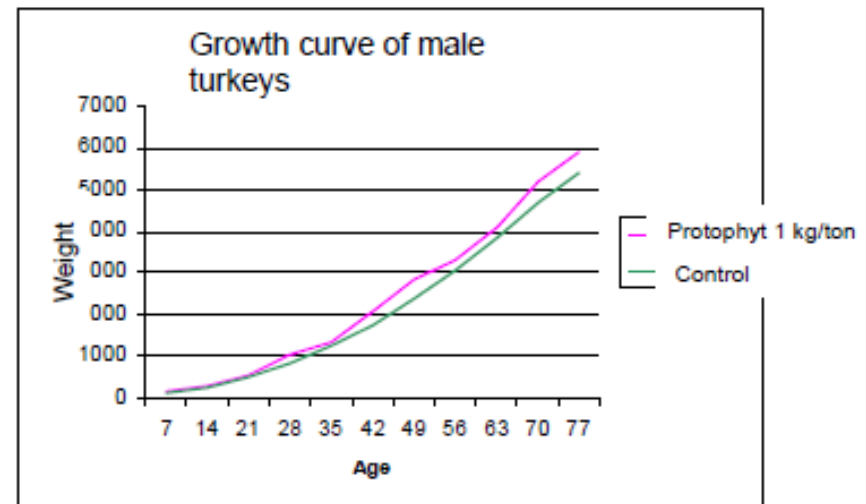
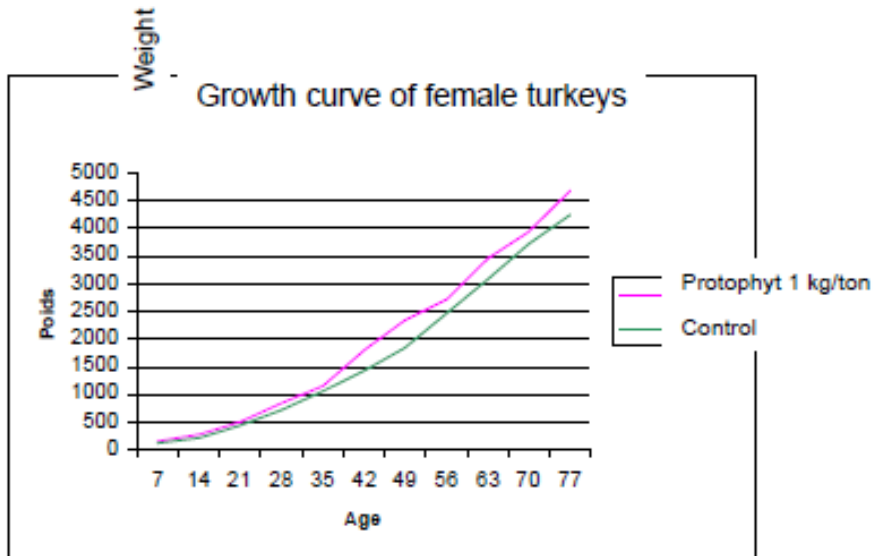


BE  
CU  
WW



# Solution

- *Protophyt's side effect – improved growth*

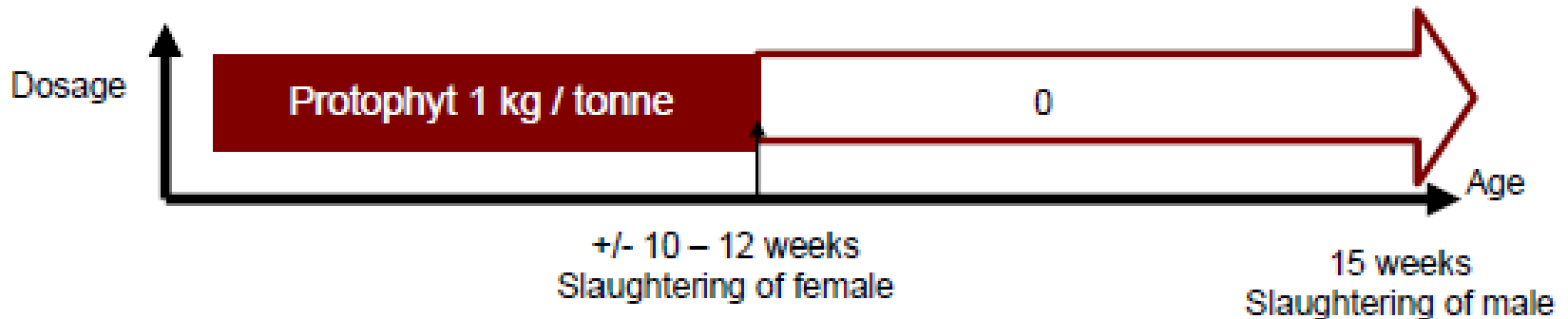


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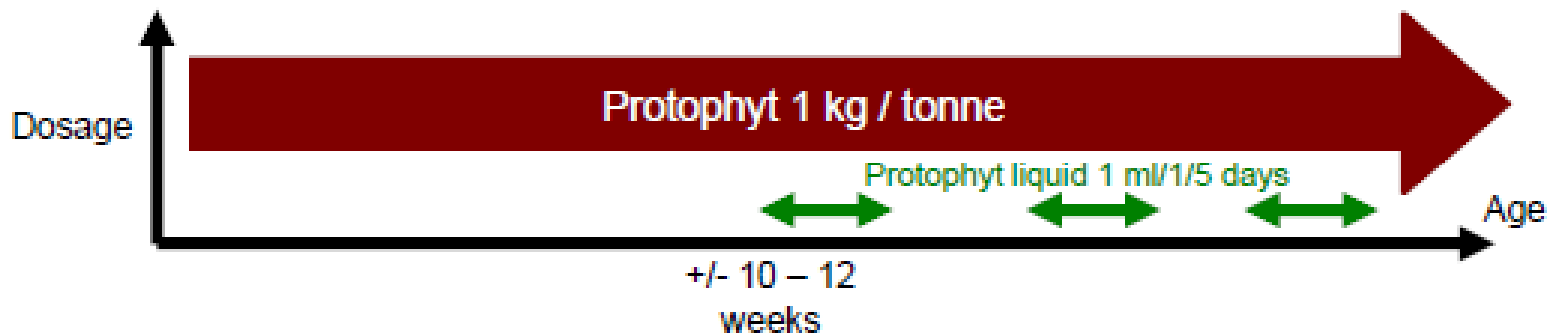


# Solution

- *Protophyt as prevention – use rate:*
  - *in normal sanitary conditions*



- *in poor sanitary conditions*

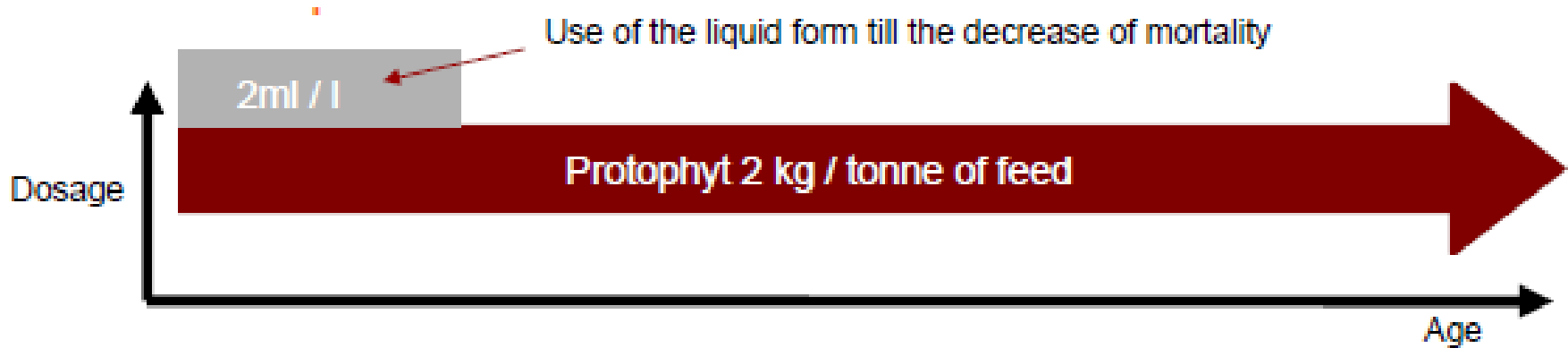


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# Solution

- *Protophyt as therapeutic – use rate:*



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# Solution

- *Worms prevention: Vermistop*
  - *herbal product effective against:*
    - *round worms (Nematodes), Heterakis,*
    - *flat worms (Cestodes),*
  - *should be used regularly, especially in free range birds,*
  - *mode of action:*
    - *damage of worms cuticle (change of protein structure),*
    - *paralysis of worms (allowing for expulsion from gastrointestinal tract)*
  - *use rate: 5kg/tonne of feed for 7-10 days every 6 weeks*



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# Why herbs?

- *no bacteria resistance,*
- *no withdrawal period,*
- *better growth until the end of rearing,*
- *market advantage – meat without antibiotics,*



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# Why herbs?

- *World Health Organization*

The screenshot shows a web browser window with the WHO website. The address bar displays [www.who.int/drugresistance/documents/situationanalysis/en/](http://www.who.int/drugresistance/documents/situationanalysis/en/). The page title is "Worldwide country situation analysis: response to antimicrobial resistance". The WHO logo is at the top center, with navigation links for Health topics, Data, Media centre, Publications, Countries, Programmes, Governance, and About WHO. A sidebar on the left lists various topics under "Antimicrobial resistance". The main content area includes the title, authors (World Health Organization), publication details (42 pages, 29 April 2015), and download links for the full report and summaries in English and French. A circular graphic with a globe and text "Worldwide country situation analysis: response to antimicrobial resistance" is also present, dated April 2015.

Sign up for WHO updates

World Health Organization

English Français Русский Español

Health topics Data Media centre Publications Countries **Programmes** Governance About WHO

Drug resistance

Antimicrobial resistance  
Global action plan  
Surveillance of resistance  
Antimicrobial use  
Surveillance of use  
Infection prevention  
Activities  
Document centre

**Worldwide country situation analysis: response to antimicrobial resistance**

Authors:  
World Health Organization

Share Print

Publication details  
Number of pages: 42  
Publication date: 29 April 2015  
Languages: English  
ISBN: 978 92 4 156494 6  
WHO reference number:  
WHO/HSE/PED/AIP/2015.1

Downloads  
– Full report  
– Summary report - English  
– Summary report - French

April 2015

Over a 2-year period, from 2013 to 2014, WHO undertook an initial "country situation analysis" in order to determine the extent to which effective practices and structures to address antimicrobial resistance have been put in place and where gaps remain.

A survey was conducted in countries in all six WHO regions and focused on the building blocks that are considered prerequisites to combat antimicrobial resistance: a comprehensive national plan, laboratory capacity to undertake surveillance for resistant

WHO Report World....pdf

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7:35 AM  
20/05/2015

# Why herbs?

- *EU*

www.allaboutfeed.net/Nutrition/Feed-Additives/2015/5/2-Sisters-removes-more-antibiotics-from-poultry-production-1756125W/

HOME

## 2 Sisters removes more antibiotics from poultry production

NUTRITION 331 0

**2 Sisters Food Group is removing all antibiotics considered “critically important to human health” by the World Health Organisation from its poultry production, to help counter the risk of antibiotics resistance in humans.**



The decision will see macrolides removed from use in broilers, in addition to the industry's voluntary ban on the prophylactic use of fluoroquinolones in day-old chicks, and third- and fourth-generation cephalosporins, which are no longer licensed.

Macrolides include the active ingredients Tylosin and Tilmicosin, which may be prescribed by poultry vets to treat infections such as mycoplasma in parent flocks and day-old chicks.

The new policy, which incorporates the "replace, reduce, refine" framework launched by the Antimicrobial Resistance Roundtable in May 2014, also extends to the Hook 2 Sisters partnership and PD Hook hatcheries and breeder farms.

"As a responsible and forward-thinking organisation, we are keen to lead on this increasingly important issue and take a stand which we feel is pragmatic and sensible," said 2 Sisters chief executive Ranjit Singh.

As such, 2 Sisters is also establishing two trial farms, to help develop on-farm techniques that will reduce the industry's need for antibiotics.

"Our plan is about replacing antibiotics use with other interventions wherever possible," said 2 Sisters agriculture director Michelle Waterman.

Price of soyameal falls in Europe's animal feed market

Multi-carbohydase effective for pigs and poultry

Cargill: Avoid heat stress in cows through feed



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latest feed news

ASF leads Russia to refuse Belarusian feed additives

Alltech Medal of Excellence for Gen. Colin Powell

WHO Report World....pdf

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20/05/2015

# Why herbs?

- USA

The screenshot shows a web browser window with several tabs open. The active tab is titled "www.allaboutfeed.net/Nutrition/Feed-Additives/2015/4/Tyson-Foods-to-eliminate-antibiotic-use-in-broilers-1754138W/". The page content includes a news article with the following details:

- Article Title:** Tyson Foods to eliminate antibiotic use in broilers
- Category:** NUTRITION
- Author/Date:** 813 0
- Summary:** US food producer Tyson Foods has announced that it will strive to eliminate the use of human antibiotics from its US broiler chicken flocks by the end of September 2017.
- Image:** A close-up of a Tyson chicken drumstick.
- Text:** The company will report annually on its progress, beginning with its fiscal 2015 Sustainability Report. Tyson Foods has already stopped using all antibiotics in its 35 broiler hatcheries, requires a veterinary prescription for antibiotics used on broiler farms and has reduced human antibiotics used to treat broiler chickens by more than 80% since 2011.
- Section Header:** Aiming for zero antibiotics in broilers by 2017
- Quote:** "Antibiotic resistant infections are a global health concern," said Donnie Smith, president and CEO of Tyson Foods. "We're confident our meat and poultry products are safe, but want to do our part to responsibly reduce human antibiotics on the farm so these medicines can continue working when they're needed to treat illness."
- Text:** "Given the progress we've already made reducing antibiotics in our broilers, we believe it's realistic to shoot for zero by the end of our 2017 fiscal year. But we won't jeopardise animal well-being just to get there. We'll use the best available treatments to keep our chickens healthy, under veterinary supervision," Smith said.
- Section Header:** International plans to reduce antibiotics in livestock
- Text:** Tyson Foods is also forming working groups with independent farmers and others in the company's beef, pork and turkey supply chains to discuss ways to reduce the

On the right side of the page, there are three news snippets:

- Price of soyameal falls in Europe's animal feed market
- Multi-carbohydrase effective for pigs and poultry
- Cargill: Avoid heat stress in cows through feed

At the bottom of the page, there are two promotional banners:

- Attech Revelation:** WORLD-CHANGING IDEAS, May 17-20, 2015 // Lexington Convention Center // Lexington, KY
- CAHE 2015:** China Animal Husbandry Expo, Join us in Chongqing 2015!

The browser's taskbar at the bottom shows a "WHO Report World....pdf" file, and the system tray displays the time as 7:47 AM on 20/05/2015.

# Why herbs?

- USA

www.allaboutfeed.net/Nutrition/Feed-Additives/2015/3/McDonalds-wants-clean-chicken-1722802W/

HOME

Katarzyna Kropielnicka-Kruk

## McDonalds wants 'clean' chicken

**NUTRITION** 353 0

McDonalds USA had announced that it will only source chicken raised without antibiotics that are important to human medicine. All of the chicken served at McDonald's approximately 14,000 US restaurants comes from US farms which are working closely with McDonald's to implement the new antibiotics policy to the supply chain within the next two years.




Photo: Bart Nijs

The fastfood chain will also offer its customers milk from cows that are not treated with growth hormones. The so-called new menu sourcing initiatives are meant to lure back customers from chains that put more emphasis on healthy products. "Our customers want food that they feel great about eating – all the way from the farm to the restaurant – and these moves take a step toward better delivering on those expectations," said McDonald's US President Mike Andres.


### Reduce use of antibiotics in poultry supply

McDonald's has been working closely with farmers for years to reduce the use of antibiotics in its poultry supply, the company said in a press release. This new policy supports the company's new **Global Vision for Antimicrobial Stewardship in Food Animals** introduced this week, which builds on the company's 2003 global antibiotics policy and includes supplier guidance on the thoughtful use of antibiotics in all food animals. "McDonald's believes that any animals that become ill deserve appropriate veterinary care and our suppliers will continue to treat poultry with prescribed antibiotics, and then they will no longer be included in our food supply," said Marion Gross, senior vice president of McDonald's North America Supply Chain.

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### latest feed news

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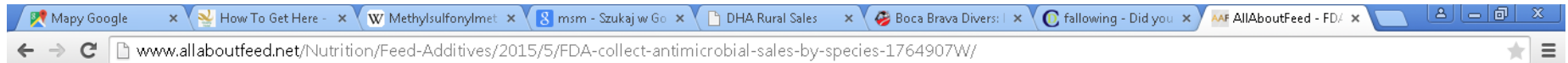
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# Why herbs?

- **USA**



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news

21 May 2015

## FDA: collect antimicrobial sales by species

NUTRITION

43 0

The US Food and Drug Administration is proposing revisions to its annual reporting requirements for drug sponsors of all antimicrobials sold or distributed for use in food-producing animals in order to obtain estimates of sales by major food-producing species (cattle, swine, chickens, and turkeys).



Photo: Bert Jansen

The additional data would improve understanding about how antimicrobials are sold or distributed for use in major food-producing species and help the FDA further target its efforts to ensure judicious use of medically important antimicrobials. The proposal includes a provision to improve the timeliness of the report by requiring the FDA publish its annual sales

report of antimicrobial sales and distribution information by December 31 of the following year.

### Prepare summary reports of sales and distribution

Section 105 of the Animal Drug User Fee Amendments of 2008 (ADUFA 105) requires antimicrobial drug sponsors to report to the FDA on an annual basis the amount of all antimicrobial drugs they sell or distribute for use in food-producing animals, including those antibiotics not used in human medicine. ADUFA 105 also requires the FDA to prepare summary reports of sales and distribution information received from drug sponsors each year, by antimicrobial class for classes with three or more distinct sponsors, and to provide those summaries to the

More detailed information is needed about on-farm use practices

most read items

Potential of short chain fatty acids in animal diets

Price of soyameal falls in Europe's animal feed market

Multi-carbohydrase effective for pigs and poultry

More milk.  
More milk fat.  
More milk protein.  
Better fertility.  
Less nitrogen.

WHY HESITATE?

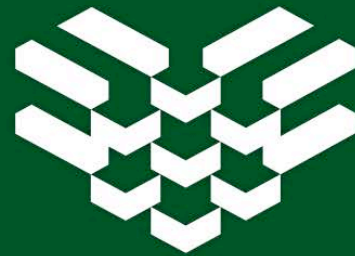


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