

Cevac IBird[®]: infectious bronchitis under control from the hatchery.



Ceva Santé Animale S.A. - 10, av. de la Ballastière - 33500 Libourne - France Phone : +33 (0) 5 57 55 40 40 / Fax : +33 (0) 5 57 55 42 37 www.ceva.com - contact@ceva.com

Bird® *INFECTIOUS BRONCHITIS*

Infectious bronchitis is caused by a chicken coronavirus. This virus is highly contagious and is present all over the world. It has the ability to replicate in the respiratory tract, the kidney and the oviduct of the birds. It causes severe economic losses in either broilers or laying hens. Infectious bronchitis is characterized by its capacity to mutate. Therefore multiple antigenic variants are generated and circulate with different, pathotype and immunotype characteristics.⁽¹⁾⁽²⁾⁽³⁾

Infectious bronchitis vaccines.

Numerous live or inactivated monovalent or polyvalent vaccines are available globally.

Vaccination programs are commonly based on the use of live attenuated Massachusetts's vaccines via spray or drinking water.

According to the specific epidemiological situation it is common to combine this strain with a variant strain administered simultaneously at the hatchery or as a booster in the field.

As new variants appear in the field frequently, vaccination schedules have to be adjusted accordingly to the protection they give to the birds exposed and challenged by new viruses.

Cevac IBird® THE VACCINE

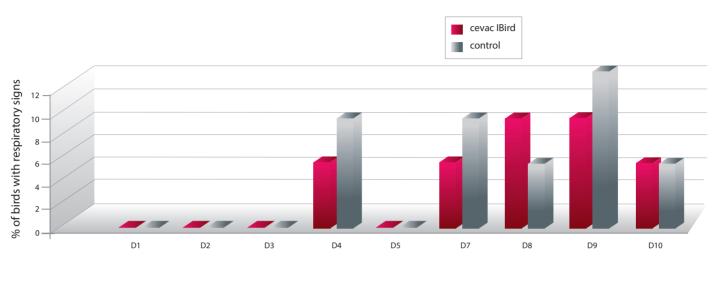


Cevac IBird[®] is a live attenuated vaccine (strain 1/96) belonging to 793 B group.

Cevac IBird[®] is a freeze-dried vaccine, available in glass vials of 1000, 2500 and 5000 dose presentations.

Safety

In a field trial, commercial broilers have been vaccinated by coarse spray at the hatchery either with Cevac IBird[®] + H120 and an apathogenic ND vaccine or with a commercial live IBV variant + H120 + ND apathogenic vaccine program.

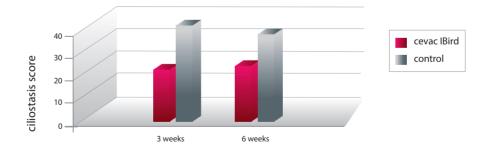


Comparison of respiratory signs post-vaccination (Reg 222-2011)

Cevac IBird® has proved to be safe when sprayed at one day of age on commercial broilers.

Onset and duration of immunity

Challenge laboratory trials in commercial broilers have been conducted at 3 weeks and 6 weeks of age after spray vaccination with Cevac IBird[®] at day of age.



Ciliostasis score post-challenge after 793 B virus challenge (080 2011 R1 & 158 2010 R1)

Day one application to commercial broilers demonstrated onset of immunity for 793 B challenge at 3 weeks. The latest challenge age run was at 6 weeks of age with evident protection.

Efficacy

Cevac IBird[®] has been tested in several challenge studies to evaluate its efficacy either standing alone or combined with a Massachusetts vaccine in providing protection against several serotypes.

Challenge strain	Vaccination program
	IBird® + Mass @ day 1
793 B	YES
Mass	YES
QX	YES
Q1	YES
J-2	YES

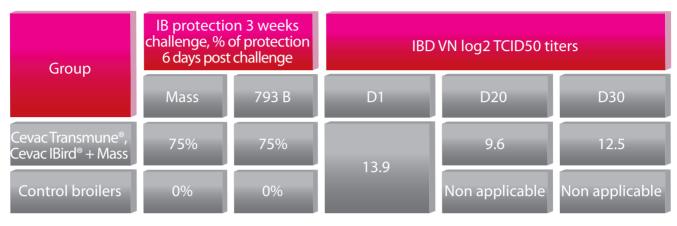
QX: from Asia or Europe - Q1: from Latin America - J-2: from Middle East (4)

Cevac IBird[®] induces strong protection against 793 B virus strain. Cevac IBird[®] in combination with a Massachusetts vaccine strain is able to offer a wider protection for QX, Q1 or J2 infectious bronchitis virus strains isolated from different parts of the world.



ICompatibility

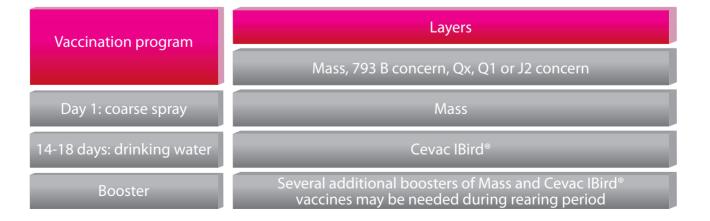
Cevac IBird[®] has been tested in field conditions after the application of Cevac Transmune[®] by in ovo route⁽⁵⁾.



Cevac Transmune[®] administered via in ovo route and Cevac IBird[®] + a live Massachusetts spray at day 1 have been tested and proved to have good vaccine take for Gumboro and excellent protection for IB 793 B & Mass strain challenges.

VACCINATION SCHEDULE & APPLICATION

Vaccination program	Broilers
Day 1: coarse spray	Mass, 793 B, Qx, Q1 or J2 concern
	Cevac IBird® + Mass strain



Cevac IBird[®] can be administered by coarse spray at the hatchery. Desvac specific equipment have been set to apply Cevac IBird[®] at the hatchery.

Desvac In-Line Spray



Desvac Hatchspray in & out



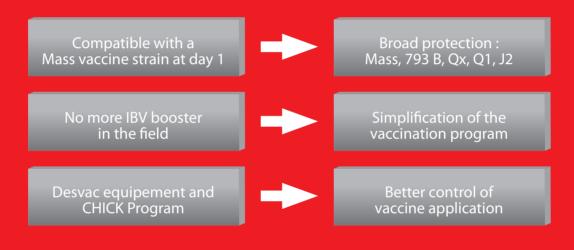
Cevac IBird® can also be administered in the field by spray, with Desvac kit 1 or Desvac Spray Fan for exemple.

Cevac IBird[®] can also be administered by drinking water from 10 days of age.



Cevoc IBird®

INFECTIOUS BRONCHITIS UNDER CONTROL FROM THE HATCHERY



References

1. Cavanagh D and Naqui S,A. Infectious Bronchitis. IN saif YM editor. Disease of poultry 11th edition IA: Iowa State Press;2003. P. 63-87.

2. Cook, J.K;A., Jackwood M. And Jones R.C.. The long view : 40 years of infectious bronchitis research. Avian Pathology june 2012, 41(3), 239-250.

3. De Witt J.J., CookJ. K. A. and Van der Heijden Harold M. J. F. Infectious bronchitis virus variants: a review of the history, current situation and control measures. Avian Pathology june 2011, 40 (3), 223-235.

4. T Tatar-Kis, Walkone Kovacs E., Felfoldi A., Nagy Z, Kiss I, Mato T, Palya V. Portection achieved by a vaccination programme comprising Mass and 793 B type vaccines against recent variant IBV strains circulating in the Middle East.VII Symposium on avian corona-& pneumovirus. Rauischholzhausen, Germany, june 2012, 194-203.

5. TJ Herczeg, M Papp, L Makranszki, K Varga, Z Penzes. Evaluation the compatibility efficacy of variant infectious bronchitis live vaccine with conventional bronchitis and immune complex IBD vaccine in broilers. XXIV World's poultry congress Bahia 2012.

Summary Product Characteristic

Composition Cevac IBird[®] contains a Live, attenuated infectious bronchitis (IB) virus, strain 1/96. **Indications** For the active immunization of broiler chickens, and future layer chickens in order to reduce the detrimental effect on ciliary activity resulting from the infection, which may be manifested by respiratory clinical signs. Protection was demonstrated by challenge with the 793/B strain, which is a representative strain of the 793/B group. Onset of immunity is 3 weeks after one administration of the vaccine. Duration of immunity is 6 weeks after the first vaccination. **Administration** <u>Broilers:</u> One dose of the vaccine should be administered by nebulisation with coarse spray from 1 day of age. Older chickens can also be vaccinated by coarse spray. <u>Pullets:</u> One dose of the vaccine should be administered by drinking water from 10 days of age. In order to maintain immunity, chickens may be revaccinated every 3 weeks. However, do not use for birds in lay nor 4 weeks before the onset of the laying period. **Special precautions for use** Vaccinate healthy susceptible birds only.

CEVA SANTE ANIMALE - www.ceva.com

10, Avenue de la Ballastière - BP 126 - 33500 LIBOURNE Cedex (France)

Tel : + 33 5 5 7 55 40 40 - Fax : + 33 5 57 55 41 92

