IZSTO
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Probability of introduction of Avian Influenza in Piedmont (IT): a risk map

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INTRODUCTION & AIM

During the last years several Avian Influenza (AI) outbreaks were recorded in northern Italy (1). The epidemiological situation required an enhanced surveillance at regional level. The aim of our work was to develop a map of the AI introduction risk to be used in order to allow both a fast activation and an early identification of the disease circulation in the frame of a risk based surveillance scheme.

MATERIAL AND METHODS

A)Definition of a geographical grid superimposed on the Piedmont surface (75 20x20 Kilometers cells).

B)Deterministic conceptual model starting from 3 different and independent knots:

- At least 1 poultry farm (National and Regional databases)
- An habitat known as favourable for wildfowls (Corine Land Cover and hydrographic regional map)
- Presence of wildfowls (Regional official migratory pattern data)

C)Assessment of the risk for each cell

RESULTS

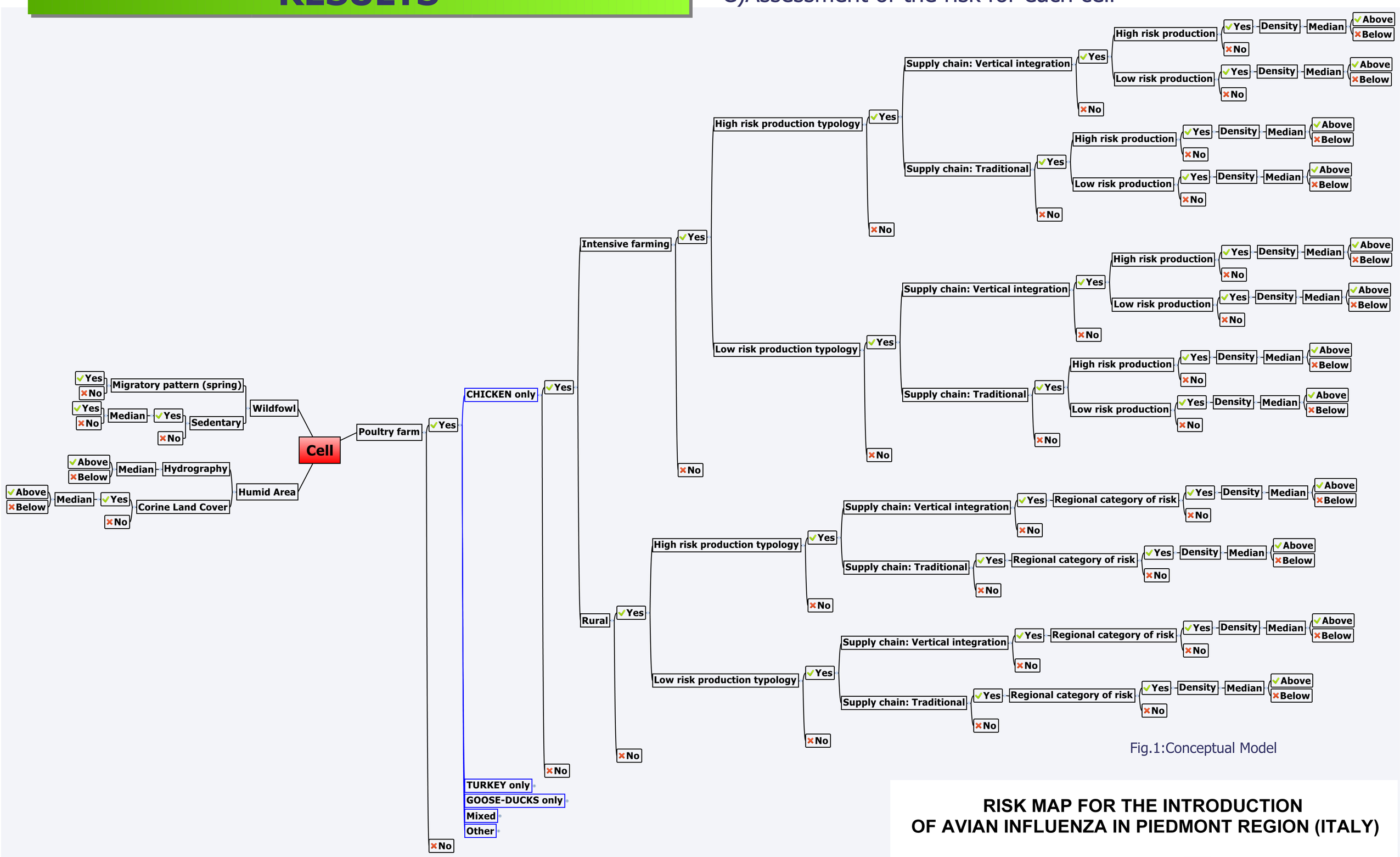

Fig.1:Conceptual Model

CONCLUSION AND DISCUSSION

Starting from a deterministic bernoullian conceptual model a risk map for the introduction of Avian Influenza virus was obtained. This map is to be employed when a risk based surveillance system has to be set up to allow an early detection of viral circulation in poultry, for example in non infected areas sharing borders and commercial practices with infected areas.

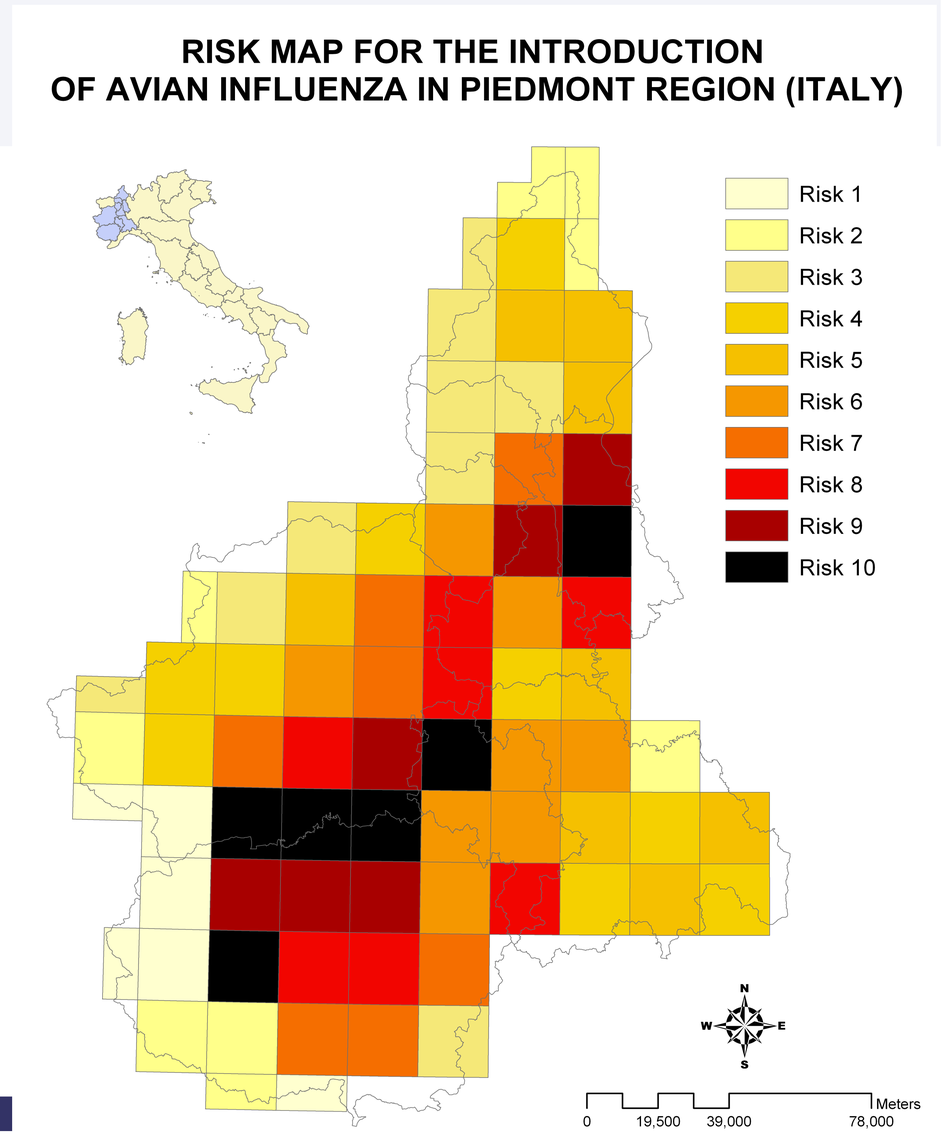

Fig.2: Risk Map

Bibliography

1)http://www.izsvenezie.it/temi/malattie-patogeni/influenza-aviaria/situazione-epidemiologica-lpai/archivio/

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