

Farming Practices and Chemically Safer Food /Cancer Disease Prevention

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Project genesis

Growing concern:

- linked to rising cancer mortality and morbidity rates in recent years, affecting mostly hormone target organs (most likely via endocrine disruption), and intestine in young individuals - in Portugal, as well as in the area of Torres Vedras (community of approximately 90 000 inhabitants);
- raised by environmental toxins, abundantly originated namely from agriculture, poultry - and stock-farming practices in our community, affecting food/water safety. We are aware of the use of synthetic chemicals to increase crop yields and animal/fish farming productivity, yet endangering the water supply quality and, ultimately, all aquatic life, as they become effluent released into the rivers.

Specific Mortality (%₀₀₀) – concelho de Torres Vedras

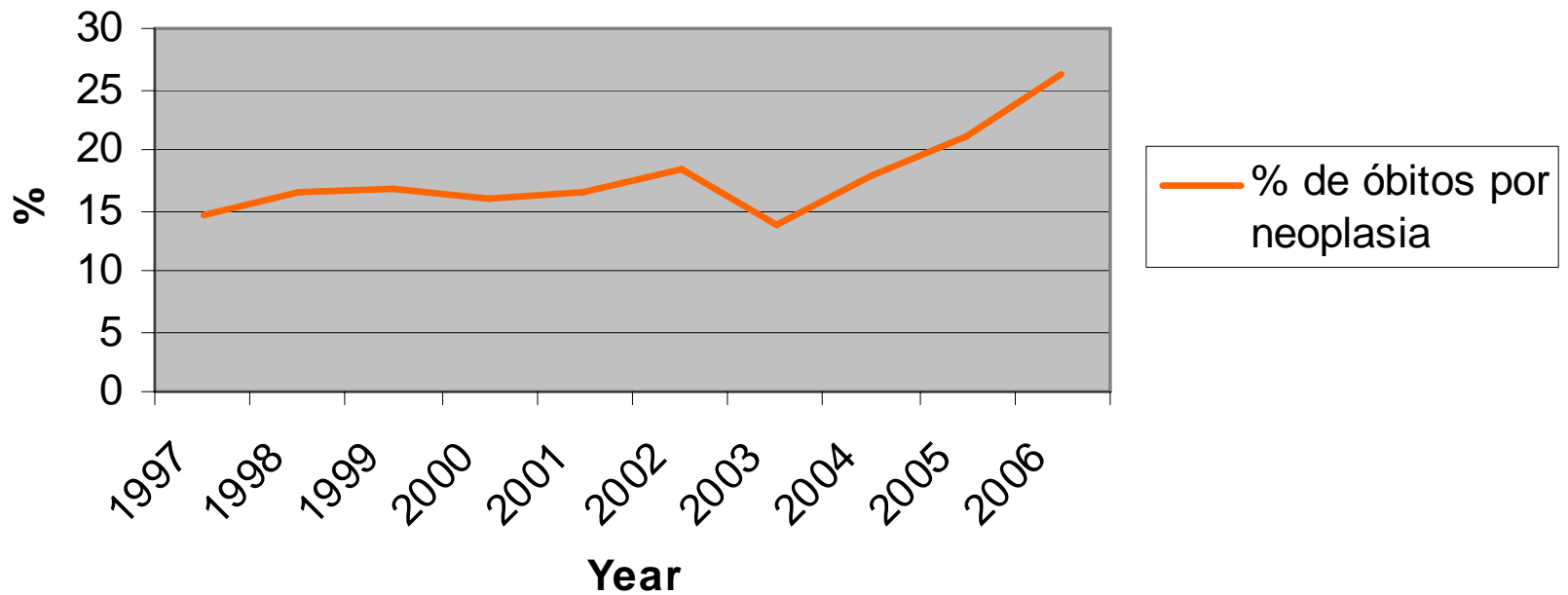
Two main death causes: 1992 - 2006

<u>Death Cause</u>	<u>Years</u>						
	<u>1992</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
Cancer	169,5	173,0	179,7	147,0	154,6	166,2	220,1
CVD	275,9	225,6	193,5	241,8	154,6	134,9	149,5

Source: Death Certificates, Registo Civil de Torres Vedras

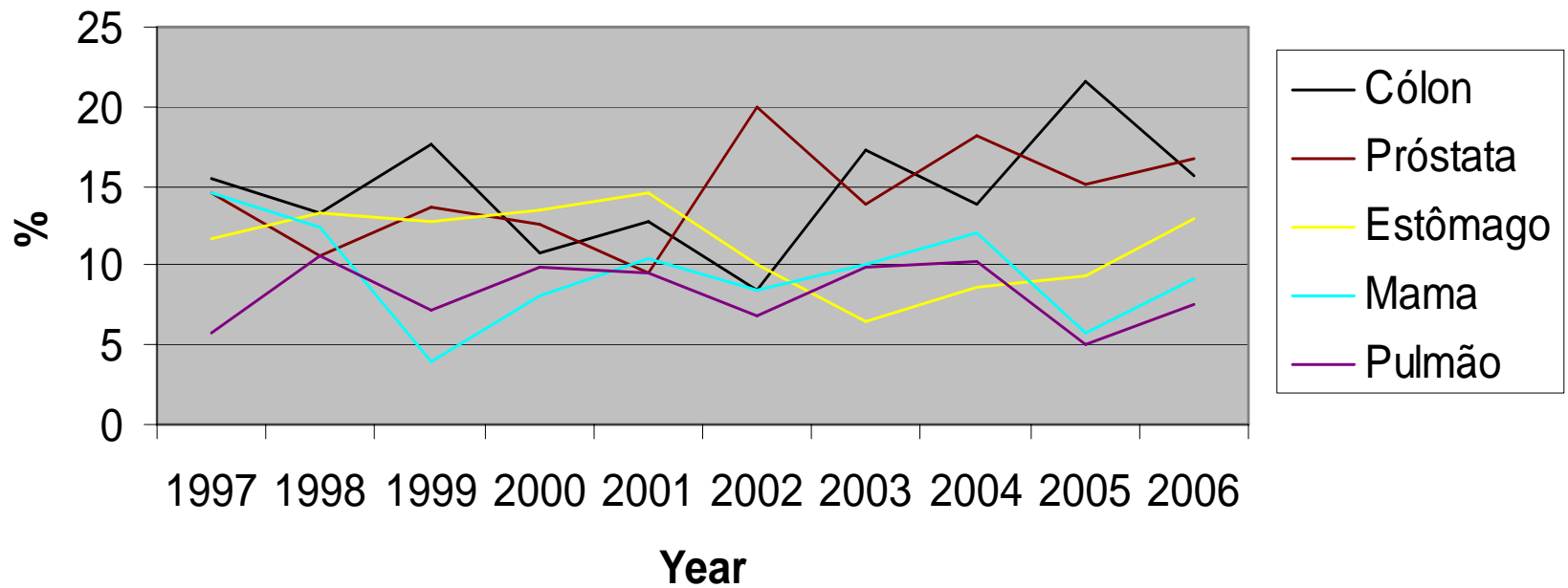
CVD – cerebro-vascular disease

% Cancer Mortality Concelho de Torres Vedras



Source: Death Certificates, Registo Civil de Torres Vedras

Cancer Mortality Main causes Concelho de Torres Vedras



Source: Death Certificates, Registo Civil de Torres Vedras

Endocrine Disruption

Natural hormones

Artificial chemicals: e.g. agro-industry (some pesticides)

Synthetic hormones

1999

Synthetic hormones :

- risk – direct or indirect exposure
residues contaminating food and water

30.04.99: Veterinary Scientific Committee (EU) – concern about public health – potential risk to human health - hormone residues
in beef and meat products

Six hormones analysis: possibility of endocrine disruption –
affecting development, immunity, neurobiology, eventually causing
immunotoxicity, genotoxicity and cancer.

17 B stradyol – cancerigenous action

- growth promoting action

Thousands of new or already existing artificial chemicals:
still used in industry, agriculture, ...

- may have unpredictable adverse or synergical effects

- insufficient scientific information available about their
biochemical action on humans as on ecosystems

04.03.99: Scientific Committee for Toxicity, Ecotoxicity and Environment: analysed literature and scientific reports on evidence of chemically induced endocrine disruption

- as for effects on humans: there are associations between *chemicals inducing endocrine disruption studied up to now and disordered human health*", cancer of testis, breast and prostate, decreased spermatozoon rate, reproduction organs disorders, thyroid and neurological disfunction, and intelligence detriment. Yet, no causal connection was ever established

N.B.

In several species, a causal connection between reproduction plus development disorders and endocrine disruption is well established

Urgent: new epidemiological studies (*)

international coordination

public information

political measures: surveillance programmes

(development + validation of adequate means of environment surveillance)

(*) also on colon cancer and pesticide residues action on the mucosa)

1999

Public information

Concern derived from:

- news on epidemiological data about environmental effects
- lack of clear and understandable information on endocrine disruption caused by exogenous agents, as well as on current action to solve it

Portugal - Political issues:

- Legislation postpones the application of urgent measures leading, eventually, to chemically safer food in the country;
- Law enforcement: so far, there is scarce inspection and control activities in the fields/vegetable gardens/orchards; nevertheless, recent news indicate that they are now starting to yield some positive results in stock-farming industry.

Torres Vedras - What we have done, so far

- Articulated with the municipality: municipal veterinary doctor and social affairs department technicians (coordinating the “Torres Vedras - Healthy City” Project) and promoted the participation of organic food farmers in Torres Vedras Annual Health Fair, with two stands (for the first time in 2007);

+ What we have done, so far

- co-participated at local Farming School debate with students and teachers, along with an organic food farmer and a retailer of this kind of food;
 - systematically sensibilized farmers and professionals linked with food transport and commercialization (whenever they contact the Public Health Service) to the need of changing noxious practices, and so obtain chemically safer food;
- monitored, annually, mortality and morbidity rates by cancer disease;
- articulated with Food and Economic Safety Authority (special police force).

What we intend to do in 2008

To identify projects within the European Union aiming at farmers' sensibilization and consumers' empowerment in this field, and assess with the local population the will and the viability of implementing a project yet to build, possibly in articulation with the Food and Agriculture Ministry and farmers' associations, as well as with teachers, children of primary school level and their parents, so as to promote organic food production, commercialization (create a shop) and consumption.



Thank you