

- **Conoscenze scientifiche**
- **Normativa europea e nazionale**
- **Obblighi in capo agli Enti gestori**
- **Diffusione delle mense con prodotti biologici in Italia: costi, risparmi e modelli organizzativi.**



Roberto Pinton, **AssoBio**, maggio 2012



*Fra ora!
Meno
prosciutto
e parmigiano,
tanta farina
in più!*

**Più budello,
meno carne!**



Kindler.
SORPRESA



**Più latte,
meno
cacao**



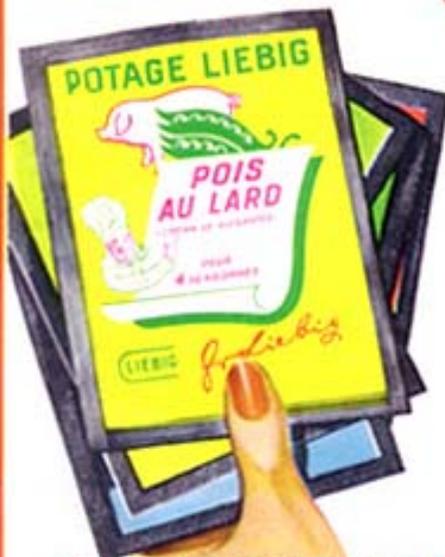
È più
pregiato
il latte
o il cacao?



1 T di cacao = 1750 €
1 T di latte = 350 €

Con
conocimiento
de causa
escojo
LIEBIG

*La mejor propaganda
es su calidad y
poder alimenticio*



Por esto YO ESCOJO

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PRIMERA EMPRESA NACIONAL DE LA ALIMENTACION

**Lemon in Water
keeps me regular!**



**NO HARSH
LAXATIVES
—JUST THIS!**

JUICE OF ONE
FRESH LEMON
IN A GLASS
OF WATER
FIRST THING
ON ARISING



Diet dodge:



Enjoy an ice cream cone shortly before lunch.

Sugar can be the willpower you need to undereat.

When you're hungry, it usually means your energy's down.

By eating something with sugar in it, you can get your energy up fast. In fact, sugar is the fastest energy food around.

And when your energy's up,

there's a good chance you'll have the willpower to undereat at mealtime.

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Sugar . . . only 18 calories per teaspoon, and it's all energy.



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ONE look at the modern hostess's silhouette and you can just about guess the kind of thing she keeps in that refrigerator.

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That's how they keep those slender waistlines. How they stay so young-looking year after year. Why they feel so good, so fit for all the activities, all the fun modern living has to offer.

And it is to suit their modern taste that today's Pepsi-Cola is reduced in calories. Never heavy, never too sweet, it refreshes without filling.

Have a Pepsi, the modern, the light refreshment.



Pepsi-Cola

The Light refreshment

4 BARS [®] _D

HAPPY BOY

margarine



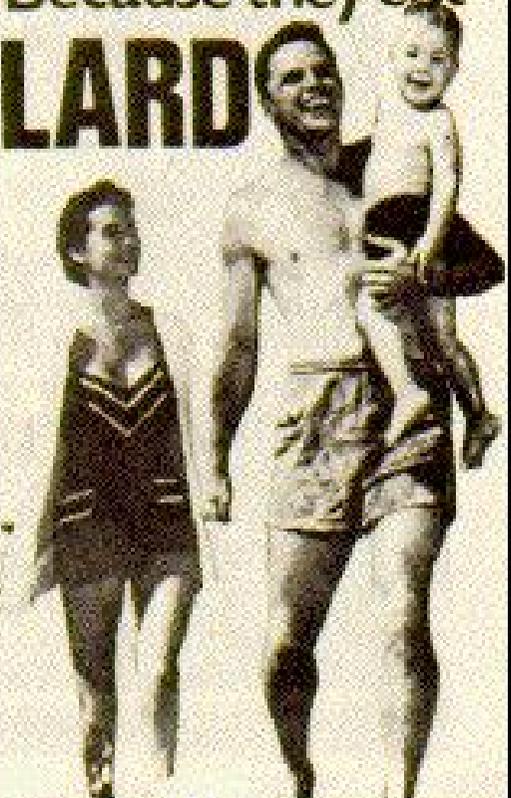
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THEY'RE HAPPY

Because they eat

LARD



Issued by the Lard Information Council

PROTECT YOUR CHILDREN

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WALLPAPER and Ceiling Paper

KILLS FLIES, MOSQUITOS, ANTS

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GUARANTEED effective against disease-carrying insects for 1 year. Actual tests have proven the insect-killing properties still effective after 2 years of use.

NO SPRAYS! NO LIQUIDS! NO POWDERS! So convenient, so safe because the DDT is fixed to the paper. It can't rub off!

BEAUTIFUL! "Jack and Jill" or "Disney Favorites"—gay new patterns that protect as they beautify a child's room.

DOT CEILING PAPERS, TOO! Extra protection for your children's room—for every other room in the house. Choice of two tints.



READY-PASTED! Just Dip in Water and Hang!



Just Dip in Water and Apply

Anyone can put Trimz Wallpaper up without help or previous experience. Millions have done it—proved it's quick, clean, easy! Nothing to get ready—no tools, paste or mess. Just cut strips to fit, dip in water and hang. It's dry in 20 minutes! Guaranteed to stick—guaranteed to please or money back. And so inexpensive! You can protect your child for \$8 to \$12—depending on size of room.

Trimz DDT Children's Room Wallpaper, Trimz DDT Cedar Closet Wallpaper now available at Department, Chain, Hardware, Paint, and Wallpaper stores everywhere.

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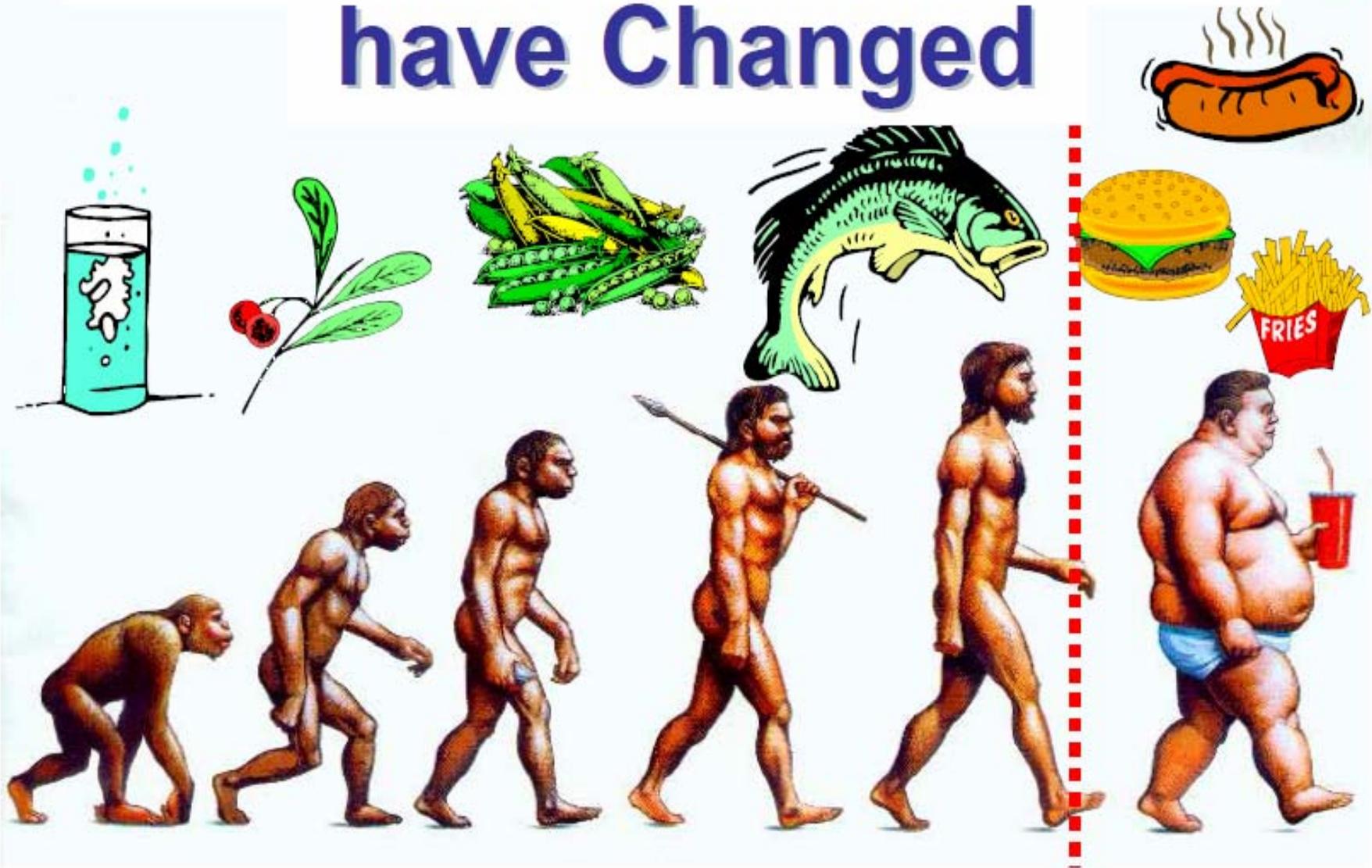
World's Leading Designer and Largest Manufacturer, Merchandise Mart, Chicago 54, Illinois

© 1957, TRIMZ CO., INC.

"DDT is good for me-e-e!" ♪♪



The Things We Eat have Changed



Cause delle malattie croniche



Fonte: Oms

Alla base delle principali malattie croniche ci sono fattori di rischio comuni e modificabili, come alimentazione poco sana, consumo di tabacco, abuso di alcol, mancanza di attività fisica.



E LA DIETA MEDITERRANEA?



AMBIENTE E SALUTE: LA PIRAMIDE AMBIENTALE (ROVESCIAIA)

- **Piramide alimentare** (che suggerisce uno stile alimentare orientato alla promozione e alla conservazione della salute) e **piramide ambientale** (che indica gli alimenti a maggiore e minore impatto ambientale) sono allineate



Prevenzione e dieta mediterranea

VINO
polifenoli e resveratrolo



OLIO D'OLIVA
acidi grassi
monoinsaturi



Neutralizzazione
di radicali liberi

DIETA MEDITERRANEA

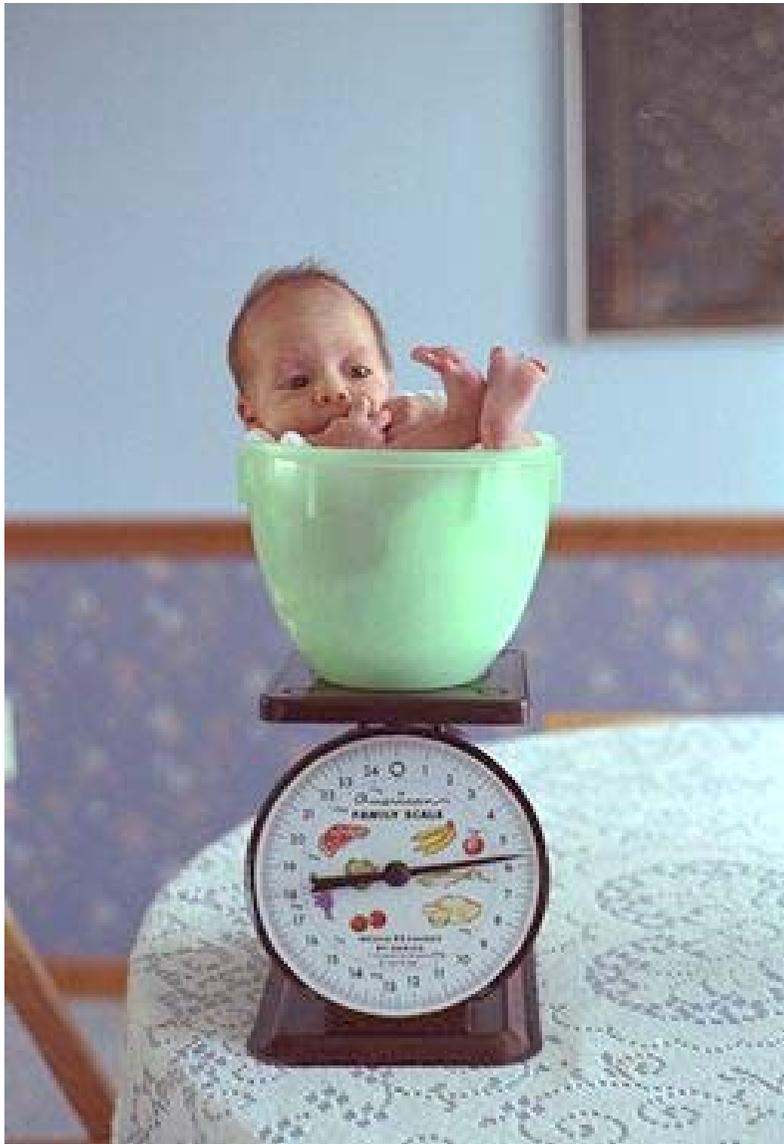
Prevenzione
della formazione di
radicali liberi



FRUTTA, VERDURA, LEGUMI
Vitamine antiossidanti, fibra, licopene,
flavonoidi



PANE INTEGRALE E PASTA:
minore iperglicemia post-prandiale,
con minore ossidazione di zuccheri
e iperinsulinemia



OMS, 2005

"In quanto soggetti in via di sviluppo i bambini sono particolarmente vulnerabili all'impatto dell'inquinamento: la loro capacità di respirare, mangiare e bere più degli adulti rispetto alla loro massa corporea, fa sì che ingeriscano in maggior misura sostanze potenzialmente tossiche"

Rapporto "***Pesticides in the Diets of Infants and Children***" del National research council Usa (1993):

i residui tollerati per legge negli alimenti erano (e sono) calcolati sulla base di un "*adulto medio*" teorico di 60 kg, **senza valutazioni in termini di sicurezza per l'età e per le specifiche caratteristiche metaboliche dei bambini**, per il fatto che assumono molto più cibo di un adulto (in proporzione al peso corporeo) e sono a maggior rischio di accumulo di contaminanti tossici.



"Chemical trespass: pesticides in our bodies and accountability", Center for disease control, 2004

Maggior presenza di antiparassitari in donne e bambini.

"I bambini sono i più vulnerabili, e sono esposti ai maggiori livelli di organofosfati, deleteri per il sistema nervoso"; nella fascia d'età **tra i 6 e gli 11 anni** l'esposizione agli organofosforati è **4 volte superiore a quella ritenuta "accettabile"** dall'Agenzia statunitense per la protezione ambientale.



They would still be here if they hadn't caught a cold



WITH A COLD



ANALISI UFFICIALI DEI PRODOTTI ORTOFRUTTICOLI CONDOTTE DALLE ARPA, 2011

Residui di fitofarmaci

matrice	campioni	(a) irregolari	%	(b) con residui	%	% a+b
frutta	2962	21	0.7	1674	56,5	57,2
ortaggi	2916	26	0.9	631	21,6	22.5
totale	5878	47	0.8	2305	39,2	40,0



CENTRO CULTURALE "CASTEL IVANO INCONTRI"

*Short and Long Term Effects of
Maternal-Fetal and Infant Nutrition*
Castel Ivano, Trento, Italy
September 16-18, 1988

I livelli di assunzione di determinati nutrienti programmano l'organismo a una serie di risposte metaboliche non evidenti al momento, ma identificabili a distanza di tempo.

Un'alimentazione inappropriata da un punto di vista quantitativo e/o qualitativo porta allo sviluppo di patologie cronico-degenerative a distanza di decenni.

L'ecologia “va di moda”

Tutti
(proprio tutti)
i prodotti
alimentari
si propongono
ai consumatori
come
un “ritorno
alla natura”



IN REALTÀ

A yellow tractor is shown in a field of green crops, spraying a mist of pesticides. The tractor is moving from left to right, and the spray is visible as a fine mist. The background shows a line of trees and a clear sky.

In Italia vengono
utilizzati
75.891.005 kg
di anticrittogamici
l'anno

fa 1,29 kg
a testa

A green Great Plains 705NG tractor is shown from a rear perspective, pulling a planter through a field. The field has patches of snow on the left side. The tractor has a red triangular warning sign on the back. The sky is blue with some clouds.

IN REALTÀ

27.036.332
kg di
insetticidi
e acaricidi
all'anno

fa 460 grammi
a testa

A photograph of a vast agricultural field, likely a wheat or corn field, with a central path of weeds and soil. The sky is blue with scattered white clouds. The text "IN REALTÀ" is overlaid in the upper center.

IN REALTÀ

25.541.731 kg
di diserbanti

fa 452 grammi
a testa

IN REALTÀ

19.182.335 kg

di altri
fitofarmaci

fa 327 grammi
a testa

A red and white helicopter is shown in flight against a blue sky with light clouds. It is spraying a smaller red and white biplane with a fine mist of pesticides. The helicopter's main rotor blades are blurred due to motion. The biplane is suspended by red lines, suggesting it is being carried or sprayed by the helicopter. The overall scene illustrates the use of chemical pesticides in agriculture.

IN REALTÀ

Per un totale di
148.651.423 kg
di fitofarmaci
chimici di sintesi

fa 2,5 kg a
testa

IN REALTÀ



5.443.730.700 kg
di fertilizzanti

fa 92,7 kg
a testa

IN REALTÀ



Per un totale di
5.592.382.123
kg di fitofarmaci
e fertilizzanti

fa 95,2 kg
a testa

Il Fondo delle Nazioni unite per l'alimentazione e l'agricoltura rivela che sono a rischio un quarto delle specie vegetali

Allarme della Fao, così la Terra morirà

Persino il V

Bruxelles, battaglia sui nuovi vincoli per la chimica. La Wallstrom rende pubbliche le sue analisi contro le industrie

Clamoroso A Roma frutta

ROMA — Su 5.210 camp di frutta e ortaggi esami nel corso del 1992 da 35 p di multinazionali dei prevenz in tutta Italia, più di 300 ce nevano residui di pesticidi concentrazioni superiori quelle massime ammesse legge, e più di 2.000 risulti no contaminati da residu prodotti più «a rischio», base delle stesse analisi, le fragole e l'insalata, risp vamente con il 16,1% 14,4% di campioni «fuor gea», seguite dall'uva e mele. Sono alcuni risultat significativi dei prelievi e tuati in Italia dagli oltre presidi multinazionali di pre zione preposti al controllo gli alimenti. Alla richiest Legambiente hanno risp 61 presidi: 35 hanno forn dati, 21 hanno dichiarat non avere eseguito i controlli, 5 si sono trincerati dietro osta coli burocratici ed amministrati vi. I dati raccolti da Legambiente riguardano Bologna, Torino, Trento, Sondrio, tutta la Liguria tranne Genova, Mo

“Nel mio sangue c'è il Ddt”

Denuncia provocazione del commissario Ue all'ar

ANTONIO CIANCULLO

ROMA — E' bionda, ha gli azzurri e il Ddt nel sangue. Got Wallstrom, 49 anni, commissario europeo all'Ambi si presenterà oggi in confes stampa con una cartella c la sua. Dentro ci sono le a del sangue che document presenza di un lungo ele sostanze chimiche indes te, comprese quelle me bando da decenni.

La Wallstrom, come og tadino europeo, è un archi mobile dell'inquinamen cumulado nella fase ram della chimica, quando i p ti venivano immessi sul m lasciando alle cronache i di misurare gli eventuali o. Dalla metà degli anni Nov cose sono cambiate e i sist valutazione sono divent attenti. Ma, secondo la missione europea, non Delle 80 mila sostanze im dall'uomo nell'ambiente 14 per cento vanta dati suffi ti a una valutazione di riso che vuol dire che la gran parte delle 300 sostanze chimiche artificiali che si muovono nei

stampa con una cartella clinica, la sua. Dentro ci sono le analisi del sangue che documentano la presenza di un lungo elenco di sostanze chimiche indesiderate, comprese quelle messe al bando da decenni.

La Wallstrom, come ogni cittadino europeo, è un archivio mobile dell'inquinamento accumulato nella fase rampante della chimica, quando i prodotti venivano immessi sul mercato lasciando alle cronache l'onere di misurare gli eventuali danni.

stria il testo è però troppo radicale: si tratta di una «proposta che aprirà le porte a situazioni di



ambienta nomeni di ne che per e in gioco e piccole Le stime o di 11 an lutazione e i 70 mi il Wwf ri sponde citando uno studio di due economisti, David Pearce e Phoebe Koundouri, secondo i



I NUMERI

80.000

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più «a rischio», risulta Rovi go, con il 64,8% di campioni con residui e il 28% fuorilegge; seguono Torino (62% di campioni con residui e il 13% fuorilegge) e Bologna (55% con residui, 13% fuorilegge).

fallimento del referendum di 3 anni fa. La mancata approvazione da parte del Parlamento di una più severa normativa continua ad esporre i consumatori italiani ad un rischio drammatico».

ACQUA

L'Apat
ha trovato
119 pesticidi
diversi
nelle falde
di acqua
potabile



ACQUA

Nitrati e fosfati causano uno sviluppo eccessivo delle alghe e di altre piante acquatiche, che esauriscono le riserve di ossigeno dell'acqua e uccidono i pesci



ACQUA

Gli antiparassitari sono nocivi per gli animali presenti nell'acqua, per tutte le piante e per gli esseri umani





INQUINAMENTO NELL'USO,
MA ANCHE INQUINAMENTO
IN PRODUZIONE
DI FERTILIZZANTI E
ANTIPARASSITARI



ATRAZINA

Bassa tossicità acuta,
ma alta tossicità
cronica (necrosi
cutanee, insufficienza
renale ecc.)



Nel **1986** l'atrazina aveva inquinato **150** pozzi dell'acquedotto su **500** nell'area di Milano.

Si rese necessario chiudere **5** acquedotti su **34**.













Il 25 giugno 1986 un decreto del ministero della Sanità **decuplicava** dall'indomani il residuo massimo di atrazina ammesso nell'acqua: da **0,1 microgrammi** al litro a **1 microgrammo** al litro.

Milano poteva bere.

Per decreto, ma poteva bere

Adobe Acrobat Professional - [OP Pesticides in children bodies.pdf]

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Envionews | Science Selections

VOLUME 114 | NUMBER 2 | February 2006 • Environmental Health Perspectives

OP Pesticides in Children's Bodies

The Effects of a Conventional versus Organic Diet

Conventional agriculture includes the use of pesticides to control insects in vegetable, fruit, wheat, and other crops, so it's no surprise that foods derived from these crops can therefore contain pesticide residues. What's in question, though, is what these exposures amount to in terms of body burden. Risk-defining data are lacking, and scant data exist on diet-derived pesticides levels in children's bodies. Now researchers from Seattle and Atlanta characterize the relationship between eating a diet of conventionally grown food products and the amount of organophosphorus (OP) pesticide residues that make it into children's bodies [EHP 114:260–263].

According to a 1993 National Research Council report titled *Pesticides in the Diets of Infants and Children*, diet delivers the bulk of children's exposure to pesticides. This exposure poses a greater health risk to children as compared to adults, because not only do children consume more food on a per-weight basis than adults and consequently have higher exposure, they also may be more vulnerable to the effects of toxicants because they are still developing.

The researchers employed a longitudinal design in which 23 children aged 3 to 11 years accustomed to eating a conventional diet switched to organic foods and back again during a 15-day study period. For the first three days, the children consumed their regular conventional diets. During the next five days, they substituted organic equivalents of their usual plant-derived food items (including fresh produce, juice, processed fruits and vegeta-

period, parents collected a urine sample in the morning when the children woke and again at bedtime.

The urine samples were analyzed for metabolites of several OP pesticides. The most commonly detected metabolites were MDA (a metabolite of malathion) and TCPY (a metabolite of chlorpyrifos). During both conventional phases, 60% of samples contained MDA, and 78% of samples contained TCPY. When children switched to organic foods, the percentage of samples containing MDA dropped to 22% and the proportion with TCPY fell to 50%.

Average concentrations of MDA and TCPY also were significantly lower during the organic phase compared to the conventional phases. During the two conventional phases, mean urinary MDA concentrations were 2.9 and 4.4 micrograms per liter ($\mu\text{g/L}$) compared with 0.3 $\mu\text{g/L}$ in the organic phase. The mean TCPY level decreased from 7.2 to 1.7 $\mu\text{g/L}$ between the first and second phases, and rose to 5.8 $\mu\text{g/L}$ when the children resumed their conventional diets.

Metabolite levels varied widely among the samples, however. Recent research suggests that fractions of MDA and TCPY form as the parent compounds degrade in foods and the environment. Therefore, some proportion of the children's exposure may have been to the metabolites themselves in the foods.

The current study provides insight into how residual OP pesticides in food correspond with the absorbed dose, and the researchers conclude that a diet of organic foods protects children from exposure. They caution against applying results to the general population, however. Given that people from different backgrounds and living in different areas may have different and more significant OP exposures, it would be a mistake to assume that switching to an organic diet would eliminate all exposure to these

1 of 1

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Journal of Exposure Analysis and Environmental Epidemiology (2003) 13, 187–202
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www.nature.com/jea

ORIGINAL RESEARCH

Aggregate exposures of nine preschool children to persistent organic pollutants at day care and at home

NANCY K. WILSON,^a JANE C. CHUANG,^b CHRISTOPHER LYU,^a RONALD MENTON,^b AND MARSHA K. MORGAN^c

^aBattelle Memorial Institute, Durham, NC, USA
^bBattelle Memorial Institute, Columbus, OH, USA
^cNational Exposure Research Laboratory, USEPA, Research Triangle Park, NC, USA

Except for the most volatile compounds, dietary ingestion was the primary route of exposure.

In the summer of 1997, we measured the aggregate exposures of nine preschool children, aged 2–5 years, to a suite of organic pesticides and other persistent organic pollutants that are commonly found in the home and school environment. The children attended either of two child day care centers in the Raleigh–Durham–Chapel Hill area of North Carolina and were in day care at least 25 h/week. Over a 48-h period, we sampled indoor and outdoor air, play area soil and floor dust, as well as duplicate diets, hand surface wipes, and urine for each child at day care and at home. Our target analytes were several polycyclic aromatic hydrocarbons (PAH), organochlorine pesticides, and polychlorinated biphenyls (PCB); two organophosphate pesticides (chlorpyrifos and diazinon), the lawn herbicide 2,4-dichlorophenoxyacetic acid (2,4-D), three phenols (pentachlorophenol (PCP), nonyl phenols, and bisphenol-A), 3,5,6-trichloro-2-pyridinol (TCP), and two phthalate esters (benzylbutyl and dibutyl phthalate). In urine, our target analytes were hydroxy-PAH, TCP, 2,4-D, and PCP. To allow estimation of each child's aggregate exposures over the 48-h sampling period, we also used time–activity diaries, which were filled out by each child's teacher at day care and the parent or other primary caregiver at home. In addition, we collected detailed

1 of 16

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Consumption of organic foods and risk of atopic disease during the first 2 years of life in the Netherlands

Ischa Kummeling^{1,2}, Carel Thijs^{1,3*}, Machteld Huber⁴, Lucy P. L. van de Vijver⁴, Bianca E. P. Snijders¹, John Penders³, Foekje Stelma^{1,5}, Ronald van Ree⁶, Piet A. van den Brandt¹ and Pieter C. Dagnelie³

¹Department of Epidemiology, Care and Public Health Research Institute (Caphri), Maastricht University, Maastricht, the Netherlands
²Respiratory Epidemiology and Public Health Group, National Heart and Lung Institute, Imperial College London, London, UK
³Department of Epidemiology, Nutrition and Toxicology Research Institute Maastricht (NUTRIM), Maastricht University, PO Box 616, 6200 MD, Maastricht, the Netherlands
⁴Department of Health Care and Nutrition, Louis Bolk Institute, Driebergen, the Netherlands
⁵Department of Medical Microbiology, University Hospital of Maastricht, Maastricht, the Netherlands
⁶Department of Experimental Immunology, Academic Medical Center, Amsterdam, the Netherlands

(Received 14 February 2007 – Revised 19 July 2007 – Accepted 20 July 2007)

We prospectively investigated whether organic food consumption by infants was associated with developing atopic manifestations in the first 2 years of life. The KOALA Birth Cohort Study in the Netherlands (*n* 2764) measured organic food consumption, eczema and wheeze in infants until age 2 years using repeated questionnaires. Diet was defined as conventional (<50% organic), moderately organic (50–90% organic) and strictly organic (>90% organic). Venous blood samples taken from 815 infants at 2 years of age were analysed for total and specific IgE. Multivariate logistic regression models were fitted to control for potential confounding factors. Eczema was present in 32% of infants, recurrent wheeze in 11% and prolonged wheezing in 5%. At 2 years of age, 27% of children were sensitised against at least one allergen. Of all the children, 10% had consumed a moderately organic diet and 6% a strictly organic diet. Consumption of strictly organic diet was associated with a reduced risk (OR 0.64 (95% CI 0.44, 0.93)), but not with eczema or wheeze, within the total diet with the development of eczema.

we did find an association between consuming strictly organic dairy products and a reduced risk of eczema.

Organic diet: Eczema: Infants: Birth

British Journal of Nutrition

1 of 8

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Research | Children's Health

VOLUME 114 | NUMBER 2 | February 2006 • Environmental Health Perspectives

Organic Diets Significantly Lower Children's Dietary Exposure to Organophosphorus Pesticides

Chensheng Lu,¹ Kathryn Toepel,² Rene Irish,² Richard A. Fenske,² Dana B. Barr,³ and Roberto Bravo³

¹Department of Environmental and Occupational Health, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA; ²Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, Washington, USA; ³National Center for Environmental Health, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

We used a novel study design to measure dietary organophosphorus pesticide exposure in a group of 23 elementary school-age children through urinary biomonitoring. We substituted most of children's conventional diets with organic food items for 5 consecutive days and collected two spot daily urine samples, first-morning and before-bedtime voids, throughout the 15-day study period. We found that the median urinary concentrations of the specific metabolites for malathion and chlorpyrifos decreased to the nondetect levels immediately after the introduction of organic diets and remained nondetectable until the conventional diets were reintroduced. The median concentrations for other organophosphorus pesticide metabolites were also lower in the organic diet consumption days; however, the detection of those metabolites was not frequent enough to show any statistical significance. In conclusion, we were able to demonstrate that an organic diet provides a dramatic and immediate protective effect against exposures to organophosphorus pesticides that are commonly used in agricultural production. We also concluded that these children were most likely exposed to these organophosphorus pesticides exclusively through their diet. To our knowledge, this is the first study to employ a longitudinal design with a dietary intervention to assess children's exposure to pesticides. It provides new and persuasive evidence of the effectiveness of this intervention. *Key words:* children's pesticide exposure, chlorpyrifos, dietary pesticide exposure, malathion, organic diet.

Subject Division approved the use of human subjects in this study.

Sampling period. Each child committed to a 15-consecutive-day sampling period, which consisted of three phases. Children consumed their conventional diets during phase 1 (days 1–3) and phase 3 (days 9–15). During phase 2 (days 4–8), organic food items were substituted for most of children's conventional diet, including fresh fruits and vegetables, juices, processed fruit or vegetables (e.g., salsa), and wheat- or corn-based items (e.g., pasta, cereal, popcorn, or chips) for 5 days. These food items are routinely reported to contain OP pesticides [U.S. Department of Agriculture (USDA) 2005]; we used data from the years 2000–2003. OP pesticides are not regularly

260 (1 of 4)

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Exposures of Children to Organophosphate Pesticides and Their Potential Adverse Health Effects

Brenda Eskenazi, Asa Bradman, and Rosemary Castorina

Center for Children's Environmental Health Research, School of Public Health, University of California, Berkeley, California USA

Recent studies show that young children can be exposed to pesticides during normal oral exploration of their environment and their level of dermal contact with floors and other surfaces. Children living in agricultural areas may be exposed to higher pesticide levels than other children because of pesticides tracked into their homes by household members, by pesticide drift, by breast milk from their farmworker mother, or by playing in nearby fields. Nevertheless, few studies have assessed the extent of children's pesticide exposure, and no studies have examined whether there are adverse health effects of chronic exposure. There is substantial toxicologic evidence that repeated low-level exposure to organophosphate (OP) pesticides may affect neurodevelopment and growth in developing animals. For example, animal studies such as impairment on maze performance, locomotion, and during early postnatal life. Possible mechanisms for this include inhibition of acetylcholinesterase, downregulation of muscarinic receptors, and reduced brain weight in offspring. Research findings are plausible that OP exposure may be related to respiratory dysfunction of the autonomic nervous system. The University of California Environmental Health Research is working to build a comprehensive environmental health of rural children. This Center for the Children of Salinas, or CHAMACOS in Monterey County, is studying postnatal OP pesticide exposure and the relationship of exposure and symptoms of respiratory illness in children. The ultimate goal is to translate research findings into a reduction of children's exposure to pesticides and thereby reduce the incidence of environmental

OPs chlorpyrifos and diazinon, was also higher in 1995 than in 1991, most likely due to increased use on cotton, and to a lesser extent on oranges, alfalfa, apples, and broccoli (16,17). Overall, pesticide use in California appears to be stable or increasing, with annual fluctuations making it difficult to identify long-term trends. Pesticide residue in food may also contribute to children's exposures. In response to concern about low-level exposure, the Food Quality Protection Act of 1996 (P.L. 104-170) (19) was unanimously passed by the U.S. Congress to address pesticide food safety issues raised by the seminal 1993 National Academy of Sciences report Pesticides in the Diets of Infants and Children (13). This report drew public attention to the specific vulnerability of children to many pesticides. The National Academy of Sciences

In summary, young children may be especially vulnerable to pesticides because of the sensitivity of their developing organ systems combined with a limited ability to enzymatically detoxify these chemicals (13,123,126-131). According to the National Academy of Sciences (13), children's OP exposures are of special concern because "exposure to neurotoxic compounds at levels believed to be safe for adults could result in permanent loss of brain function if it occurred during the prenatal and early childhood period of brain development" (13). Because there is

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Environmental Health Perspectives • VOLUME 116 | NUMBER 4 | April 2008

Research | Children's Health

Dietary Intake and Its Contribution to Longitudinal Organophosphorus Pesticide Exposure in Urban/Suburban Children

Chensheng Lu,¹ Dana B. Barr,² Melanie A. Pearson,¹ and Lance A. Waller³

¹Department of Environmental and Occupational Health, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA; ²National Center for Environmental Health, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; ³Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA

BACKGROUND: The widespread use of organophosphorus (OP) pesticides has led to frequent exposure in adults and children. Because such exposure may cause adverse health effects, particularly in children, the sources and patterns of exposure need to be studied further.

OBJECTIVES: We assessed young urban/suburban children's longitudinal exposure to OP pesticides in the Children's Pesticide Exposure Study (CPES) conducted in the greater Seattle, Washington, area, and used a novel study design that allowed us to determine the contribution of dietary intake to the overall OP pesticide exposure.

METHODS: Twenty-three children 3–11 years of age who consumed only conventional diets were recruited for this 1-year study conducted in 2003–2004. Children switched to organic diets for 5 consecutive days in the summer and fall sampling seasons. We measured specific urinary metabolites for malathion, chlorpyrifos, and other OP pesticides in urine samples collected twice daily for a period of 7, 12, or 15 consecutive days during each of the four seasons.

RESULTS: By substituting organic fresh fruits and vegetables for corresponding conventional food items, the median urinary metabolite concentrations were reduced to nondetected or close to nondetected levels for malathion and chlorpyrifos at the end of the 5-day organic diet intervention period in both summer and fall seasons. We also observed a seasonal effect on the OP urinary metabolite concentrations, and this seasonality corresponds to the consumption of fresh produce throughout the year.

CONCLUSIONS: The findings from this study demonstrate that dietary intake of OP pesticides represents the major source of exposure in young children.

KEY WORDS: children, chlorpyrifos, dietary exposure, longitudinal pesticide exposure, malathion, organic diets, pesticides, urinary metabolites.

...ir seasons. The data presented in this article are for the CPES-WA study only.

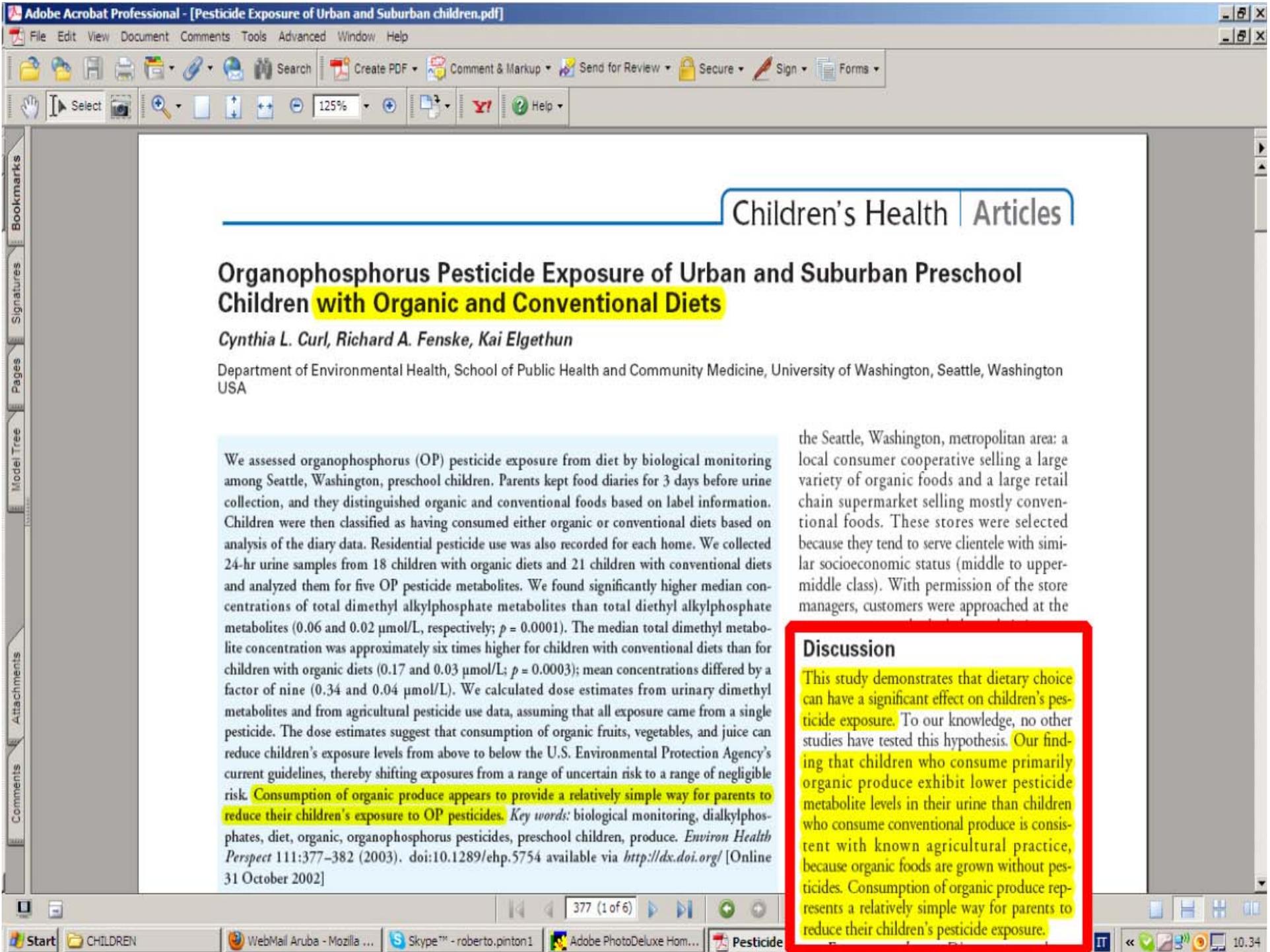
Twenty-three children 3–11 years of age were recruited from two local public elementary schools and a Montessori preschool in the Seattle area. Schools did not provide any assistance in recruiting subjects except for granting permission to send home with the children a letter and a fact sheet describing the study. Families that were interested in participating in this study then contacted the research group directly. A screening questionnaire was conducted over the phone to confirm eligibility, which included children who consumed exclusively conventional diets, spent most of their time in one residence, and had parents or caregivers willing to provide assistance in collecting specimen samples. Once a participant was enrolled, an in-house appointment was made to go over the study protocol, to train the parents/caregivers on

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Esperienza clinica sul divezzamento con prodotti biologici (Centro di alimentazione infantile per la prevenzione delle malattie dell'adulto, presidio ospedaliero Macedonio Melloni, Milano, 2002):

“I vantaggi che si possono ottenere nei bambini con un utilizzo regolare e costante nel tempo dei prodotti biologici sono sicuramente enormi. Rispetto agli alimenti convenzionali, i prodotti biologici forniscono un apporto significativamente maggiore di molte componenti nutrizionali, una qualità migliore per altre e un minore apporto di pesticidi, antibiotici, nitrati, OGM e additivi”.



Organophosphorus Pesticide Exposure of Urban and Suburban Preschool Children with Organic and Conventional Diets

Cynthia L. Curl, Richard A. Fenske, Kai Elgethun

Department of Environmental Health, School of Public Health and Community Medicine, University of Washington, Seattle, Washington USA

We assessed organophosphorus (OP) pesticide exposure from diet by biological monitoring among Seattle, Washington, preschool children. Parents kept food diaries for 3 days before urine collection, and they distinguished organic and conventional foods based on label information. Children were then classified as having consumed either organic or conventional diets based on analysis of the diary data. Residential pesticide use was also recorded for each home. We collected 24-hr urine samples from 18 children with organic diets and 21 children with conventional diets and analyzed them for five OP pesticide metabolites. We found significantly higher median concentrations of total dimethyl alkylphosphate metabolites than total diethyl alkylphosphate metabolites (0.06 and 0.02 $\mu\text{mol/L}$, respectively; $p = 0.0001$). The median total dimethyl metabolite concentration was approximately six times higher for children with conventional diets than for children with organic diets (0.17 and 0.03 $\mu\text{mol/L}$; $p = 0.0003$); mean concentrations differed by a factor of nine (0.34 and 0.04 $\mu\text{mol/L}$). We calculated dose estimates from urinary dimethyl metabolites and from agricultural pesticide use data, assuming that all exposure came from a single pesticide. The dose estimates suggest that consumption of organic fruits, vegetables, and juice can reduce children's exposure levels from above to below the U.S. Environmental Protection Agency's current guidelines, thereby shifting exposures from a range of uncertain risk to a range of negligible risk. Consumption of organic produce appears to provide a relatively simple way for parents to reduce their children's exposure to OP pesticides. *Key words:* biological monitoring, dialkylphosphates, diet, organic, organophosphorus pesticides, preschool children, produce. *Environ Health Perspect* 111:377-382 (2003). doi:10.1289/ehp.5754 available via <http://dx.doi.org/> [Online 31 October 2002]

the Seattle, Washington, metropolitan area: a local consumer cooperative selling a large variety of organic foods and a large retail chain supermarket selling mostly conventional foods. These stores were selected because they tend to serve clientele with similar socioeconomic status (middle to upper-middle class). With permission of the store managers, customers were approached at the

Discussion

This study demonstrates that dietary choice can have a significant effect on children's pesticide exposure. To our knowledge, no other studies have tested this hypothesis. Our finding that children who consume primarily organic produce exhibit lower pesticide metabolite levels in their urine than children who consume conventional produce is consistent with known agricultural practice, because organic foods are grown without pesticides. Consumption of organic produce represents a relatively simple way for parents to reduce their children's pesticide exposure.

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Environmental Health Perspectives • VOLUME 109 | NUMBER 3 | March 2001

CHILDREN'S HEALTH

Article

Biological Monitoring Survey of Organophosphorus Pesticide Exposure among Preschool Children in the Seattle Metropolitan Area

Chensheng Lu, Dianne E. Knutson, Jennifer Fisker-Andersen, and Richard A. Fenske

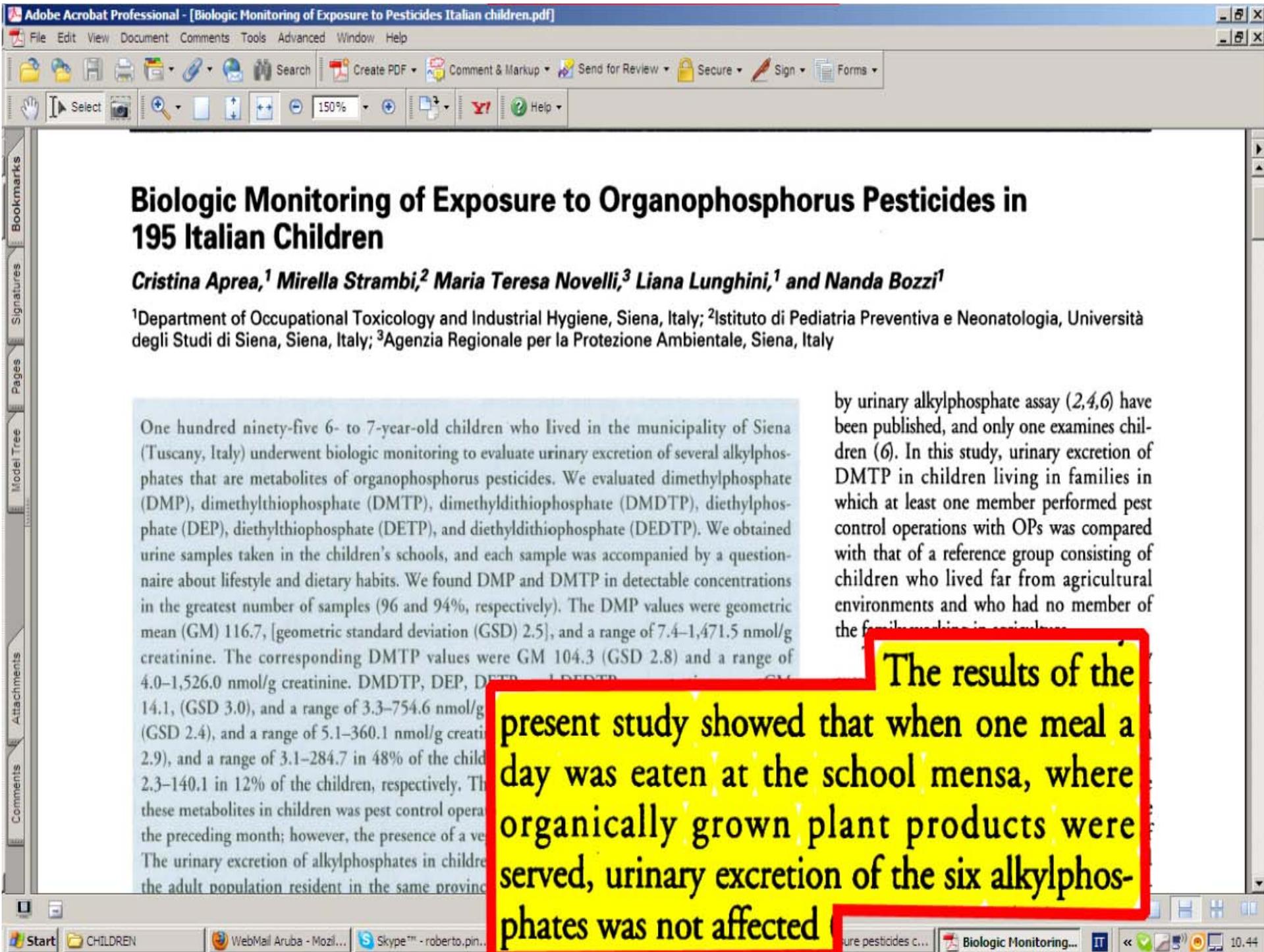
Department of Environmental Health, University of Washington, Seattle, Washington, USA

In this study we assessed organophosphorus (OP) pesticide exposure among children living in two Seattle metropolitan area communities by measuring urinary metabolites, and identified possible exposure risk factors through a parental interview. We recruited children in clinic and outpatient waiting rooms. We obtained spot urine samples in the spring and fall of 1998 from 110 children ages 2–5 years, from 96 households. We analyzed urine samples for six dialkylphosphate (DAP) compounds, the common metabolites of the OP pesticides. Through parental interviews we gathered demographic and residential pesticide use data. At least one of the DAP metabolites was measured in 99% of the children, and the two predominant metabolites (DMTP and DETP) were measured in 70–75% of the children. We found no significant differences in DAP concentrations related to season, community, sex, age, family income, or housing type. Median concentrations of dimethyl and diethyl DAPs were 0.11 and 0.04 $\mu\text{mol/L}$, respectively (all children). Concentrations were significantly higher in children whose parents reported pesticide use in the garden (0.19 vs. 0.09 $\mu\text{mol/L}$ for dimethyl metabolites, $p = 0.05$; 0.04 vs. 0.03 $\mu\text{mol/L}$ for diethyl metabolites, $p = 0.02$), but were not different based on reported pet treatment or indoor residential use. Nearly all children in this study had measurable levels of OP pesticide metabolites. Some of this exposure was likely due to diet. Garden pesticide use was associated with elevated metabolite levels. We found no association between pesticide use and urinary metabolite levels. We will continue to identify risk factors, and develop strategies for pesticide exposure reduction. Two communities located in the Seattle metropolitan area were selected for subject recruitment.

Socioeconomic indicators, such as annual household income and housing type, were not useful predictors of children's exposure to pesticides in this population. One child's parents in community 2 reported buying exclusively organic produce and did not use any pesticides at home. This child was the only subject whose urine samples showed no measurable concentrations of any of the DAP metabolites in the spring and fall samples.

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Biologic Monitoring of Exposure to Organophosphorus Pesticides in 195 Italian Children

Cristina Aprea,¹ Mirella Strambi,² Maria Teresa Novelli,³ Liana Lunghini,¹ and Nanda Bozzi¹

¹Department of Occupational Toxicology and Industrial Hygiene, Siena, Italy; ²Istituto di Pediatria Preventiva e Neonatologia, Università degli Studi di Siena, Siena, Italy; ³Agenzia Regionale per la Protezione Ambientale, Siena, Italy

One hundred ninety-five 6- to 7-year-old children who lived in the municipality of Siena (Tuscany, Italy) underwent biologic monitoring to evaluate urinary excretion of several alkylphosphates that are metabolites of organophosphorus pesticides. We evaluated dimethylphosphate (DMP), dimethylthiophosphate (DMTP), dimethyldithiophosphate (DMDTP), diethylphosphate (DEP), diethylthiophosphate (DETP), and diethyldithiophosphate (DEDTP). We obtained urine samples taken in the children's schools, and each sample was accompanied by a questionnaire about lifestyle and dietary habits. We found DMP and DMTP in detectable concentrations in the greatest number of samples (96 and 94%, respectively). The DMP values were geometric mean (GM) 116.7, [geometric standard deviation (GSD) 2.5], and a range of 7.4–1,471.5 nmol/g creatinine. The corresponding DMTP values were GM 104.3 (GSD 2.8) and a range of 4.0–1,526.0 nmol/g creatinine. DMDTP, DEP, DETP, and DEDTP were found in 14.1, (GSD 3.0), and a range of 3.3–754.6 nmol/g creatinine, (GSD 2.4), and a range of 5.1–360.1 nmol/g creatinine, (GSD 2.9), and a range of 3.1–284.7 in 48% of the children, 2.3–140.1 in 12% of the children, respectively. The urinary excretion of these metabolites in children was pest control operations performed in the preceding month; however, the presence of a vegetable garden in the schoolyard. The urinary excretion of alkylphosphates in children was not affected by the adult population resident in the same province.

by urinary alkylphosphate assay (2,4,6) have been published, and only one examines children (6). In this study, urinary excretion of DMTP in children living in families in which at least one member performed pest control operations with OPs was compared with that of a reference group consisting of children who lived far from agricultural environments and who had no member of the family working in agriculture.

The results of the present study showed that when one meal a day was eaten at the school mensa, where organically grown plant products were served, urinary excretion of the six alkylphosphates was not affected

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Research | Children's Health

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Chensheng Lu,¹ Dana B. Barr,² Melanie A. Pearson,¹ and Lance A. Waller³

¹Department of Environmental and Occupational Health, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA; ²National Center for Environmental Health, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; ³Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA

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Attention-Deficit/Hyperactivity Disorder and Urinary Metabolites of Organophosphate Pesticides

WHAT'S KNOWN ON THIS SUBJECT: Exposure to organophosphates has been associated with adverse effects on neurodevelopment, such as behavioral problems and lower cognitive function. Studies have focused, however, on populations with high levels of exposure relative to the general population.

WHAT THIS STUDY ADDS: We conducted a study with 1139 children 8 to 15 years of age, representative of the US population. The findings showed that children with higher urinary levels of organophosphate metabolites were more likely to meet the diagnostic criteria for ADHD.

AUTHORS: Maryse F. Bouchard, PhD,^{a,b} David C. Bellinger, PhD,^{a,c} Robert O. Wright, MD, MPH,^{a,d,e} and Marc G. Weisskopf, PhD^{a,e,f}

Departments of ^aEnvironmental Health and ^fEpidemiology, School of Public Health, Harvard University, Boston, Massachusetts; ^bDepartment of Environmental and Occupational Health, Faculty of Medicine, University of Montreal, Montreal, Quebec, Canada; Departments of ^cNeurology and ^dPediatrics, School of Medicine, Harvard University, and Boston Children's Hospital, Boston, Massachusetts; and ^eChanning Laboratory, Department of Medicine, School of Medicine, Harvard University, and Brigham and Women's Hospital, Boston, Massachusetts

KEY WORDS
attention-deficit/hyperactivity disorder, pesticides, ion Examination

abstract

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7-Year Neurodevelopmental Scores and Prenatal
Exposure to Chlorpyrifos, a Common Agricultural Pesticide

Virginia Rauh, Srikesk Arunajadai, Megan Horton,
Frederica Perera, Lori Hoepner, Dana B. Barr, Robin Whyatt

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**Prenatal Exposure to Organophosphates, Paraoxonase 1,
and Cognitive Development in Childhood**

**Stephanie M. Engel, James Wetmur, Jia Chen, Chenbo Zhu,
Dana Boyd Barr, Richard L. Canfield, and Mary S. Wolff**

**doi: 10.1289/ehp.1003183 (available at <http://dx.doi.org/>)
Online 21 April 2011**

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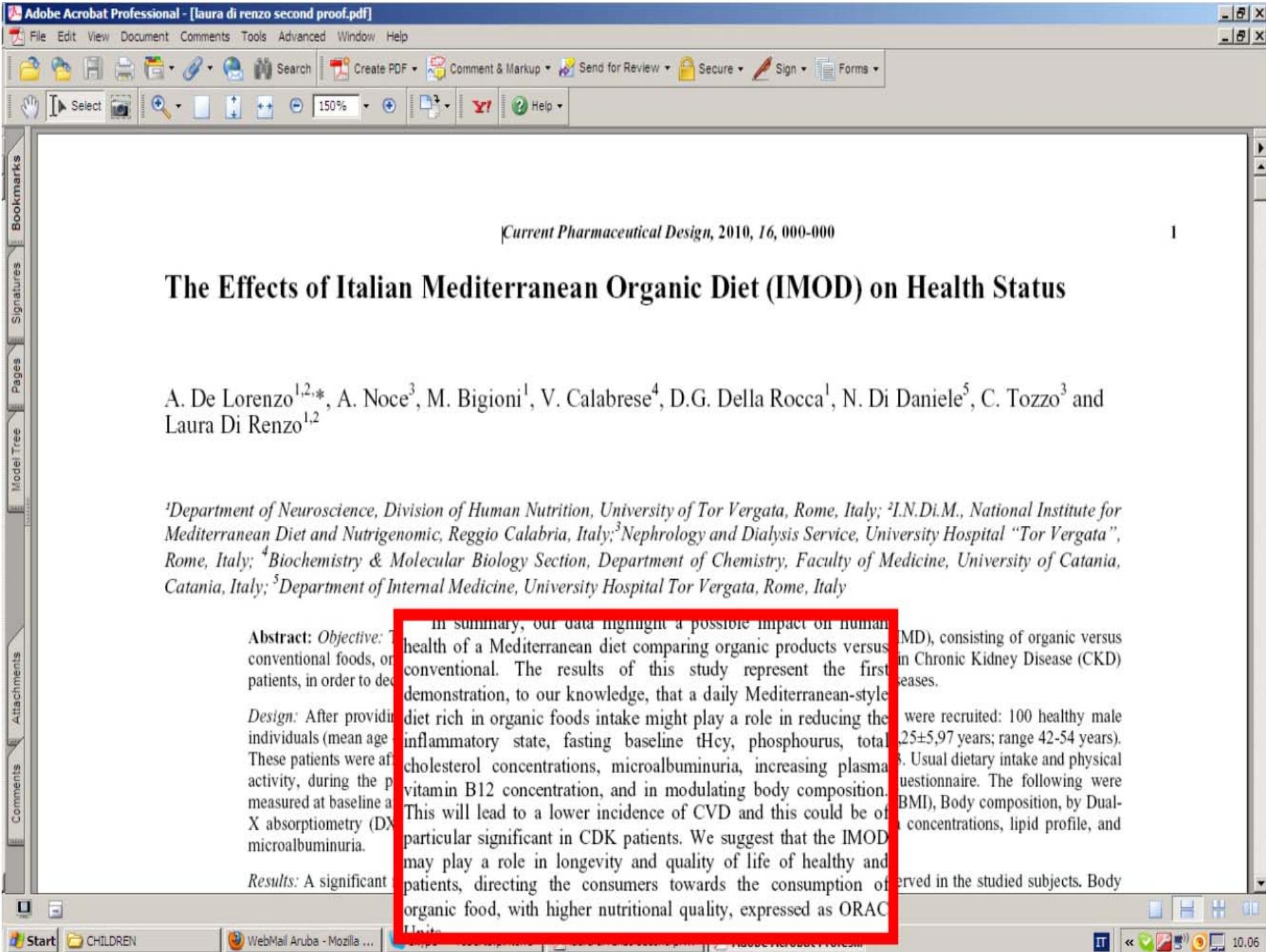
**Prenatal Exposure to Organophosphate Pesticides
and IQ in 7-Year Old Children**

**Maryse F. Bouchard, Jonathan Chevrier, Kim G. Harley,
Katherine Kogut, Michelle Vedar, Norma Calderon,
Celina Trujillo, Caroline Johnson, Asa Bradman,
Dana Boyd Barr, Brenda Eskenazi**

doi: 10.1289/ehp.1003185 (available at <http://dx.doi.org/>)

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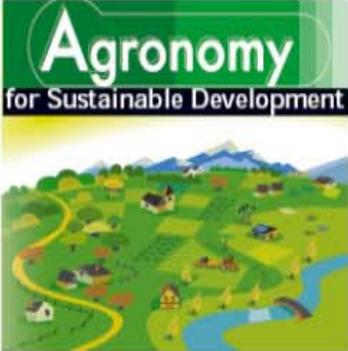
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© INRA, EDP Sciences, 2009
DOI: 10.1051/agro-2009019

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Review article

Nutritional quality and safety of organic food. A review

In line with several published literature reviews, the French Agency for Food Safety (AFSSA) performed under my coordination an up-to-date exhaustive and critical evaluation of the nutritional and sanitary quality of organic food. This review is based on the AFSSA report issued and recently published studies. The major points are: 1• organic plant products contain more dry matter and minerals (Fe, Mg); and contain more anti-oxidant micronutrients such as phenols and salicylic acid, 2• organic animal products contain more polyunsaturated fatty acids, 3• data on carbohydrate, protein and vitamin levels are insufficiently documented, 4• 94–100% of organic food does not contain any pesticide residues, 5• organic vegetables contain far less nitrates, about 50% less; and 6• organic cereals contain overall similar levels of mycotoxins as conventional ones. Thus, organic agricultural systems have already proved able to produce food with high quality standards. I propose also improvements of organic production to achieve sustainable food production for humans in the near future.

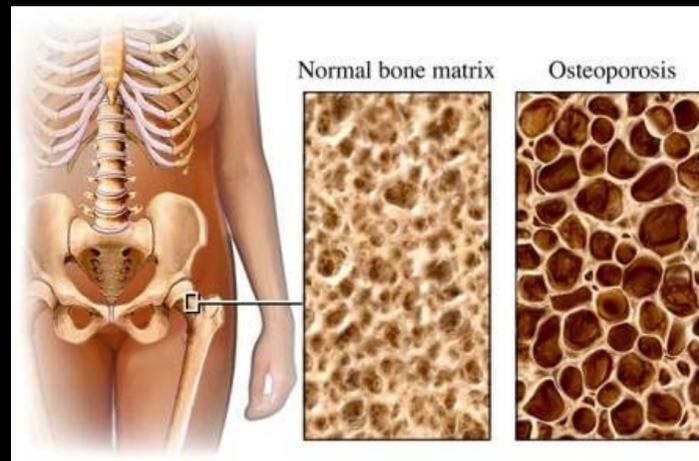
Abstract – Food security, nutritional quality and safety vary widely around the world. Reaching these three goals is one of the major challenges for the near future. Up to now, industrialized production methods have clearly shown severe limitations such as a worldwide contamination of the food chain and water by persistent pesticide residues, and reduced nutrient and flavor contents through low-cost intensive food production and/or processing. In line with several published literature reviews, the French Agency for Food Safety (AFSSA) performed under my coordination

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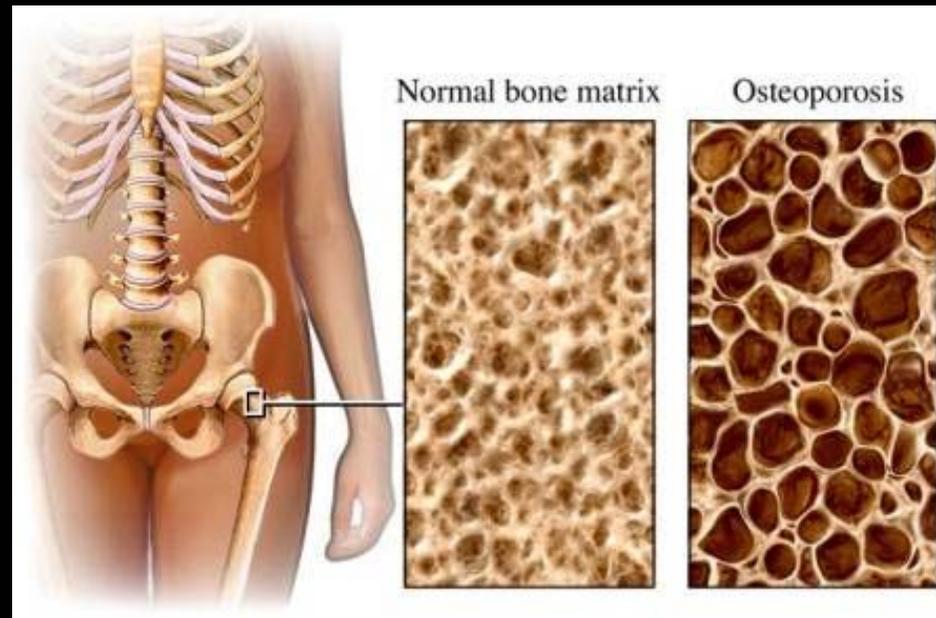
Secondo le analisi ufficiali dell'USDA i broccoli che nel 1950 presentavano 12,9 milligrammi di calcio, nel 1999 ne presentavano solo 4,4 mg, con una perdita secca di due terzi. Il dato è generale: per tutta l'ortofrutta e i cereali si registra un declino statisticamente significativo per numerosi nutrienti (non solo calcio, ma anche proteine, fosforo, ferro, riboflavina, acido ascorbico...)

Donald R. Davis, , Melvin D. Epp e Hugh D. Riordan, "Changes in USDA Food Composition. Data for 43 Garden Crops, 1950 to 1999", in Journal of the American College of Nutrition, Vol. 23, No. 6, 669-682 (2004)



I vegetali coltivati con le tecniche moderne, che pure garantiscono raccolti quantitativamente più elevati, hanno un contenuto di vitamine e sali minerali inferiore a quello che avevano cinquant'anni fa, a causa dell'effetto diluizione.

Frutta e verdura sono più sì di dimensioni maggiori, ma fondamentalmente perché contengono più acqua: il loro valore nutrizionale è infatti proporzionalmente più basso che nel passato.



Direttiva 2006/141/CE della Commissione, del 22 dicembre 2006, riguardante gli alimenti per lattanti e gli alimenti di proseguimento e recante abrogazione della direttiva 1999/21/CE

Gazzetta ufficiale n. L 401 del 30/12/2006

Articolo 10

*1. Gli alimenti per lattanti e gli alimenti di proseguimento **non devono contenere residui di singoli antiparassitari** in quantità superiori a 0,01 mg/kg rispetto al prodotto pronto per il consumo o ricostituito in base alle istruzioni del fabbricante.*

(...)

*2. I **pesticidi elencati nell'allegato VIII non devono essere utilizzati** nei prodotti agricoli destinati alla produzione di alimenti per lattanti e alimenti di proseguimento.*

Tuttavia, ai fini del controllo:

*a) si ritiene che gli antiparassitari elencati nella tabella 1 dell'allegato VIII non siano stati utilizzati se i loro **residui non superano una soglia di 0,003 mg/kg**. Tale quantità, considerata il limite di quantificazione dei metodi analitici, sarà mantenuta costantemente aggiornata alla luce del progresso tecnico;*

*b) si ritiene che gli antiparassitari elencati nella tabella 2 dell'allegato VIII non siano stati utilizzati se i loro **residui non superano una soglia di 0,003 mg/kg**. Tale quantità sarà mantenuta costantemente aggiornata alla luce dei dati relativi alla contaminazione ambientale.*

Legge 23 dicembre 1999 n.488
articolo 59

*“Per garantire la promozione della produzione agricola biologica e di qualità, le **istituzioni pubbliche che gestiscono mense scolastiche ed ospedaliere prevedono nelle diete giornaliere l'utilizzazione di prodotti biologici, tipici e tradizionali nonché di quelli a denominazione protetta, tenendo conto delle linee guida e delle altre raccomandazioni dell'Istituto nazionale della nutrizione.**” (...)*

PIANO D'AZIONE PER LA SOSTENIBILITA' AMBIENTALE DEI CONSUMI NEL SETTORE DELLA PUBBLICA AMMINISTRAZIONE

(OVVERO PIANO NAZIONALE D'AZIONE SUL GREEN PUBLIC PROCUREMENT - PAN GPP)

- provenienza da agricoltura biologica di almeno il 40% (espresso in percentuale di peso) di frutta, verdure e ortaggi, legumi, cereali, pane e prodotti da forno, pasta, riso, farina, patate, polenta, pomodori e prodotti trasformati, formaggio, latte UHT, yogurt, uova, olio extravergine, di almeno il 15% della carne e di almeno il 20% del pesce

membri a dotarsi di piani d'azione accessibili al pubblico per l'integrazione delle esigenze ambientali negli appalti pubblici".

Tali piani:

<<.....dovranno contenere una valutazione della situazione esistente e stabilire obiettivi di ampia portata da conseguire entro tre anni, specificando chiaramente le misure da adottare a tal fine. I piani, elaborati per la prima volta entro la fine del 2006 e in seguito sottoposti a revisione ogni tre anni, non saranno giuridicamente vincolanti, ma serviranno a dare impulso politico al processo di

LEGGI REGIONALI

<i>Regione</i>	<i>anno</i>	<i>n.</i>	<i>obbligo</i>	<i>contributi</i>
FRIULI VEN. GIULIA	2000	15		☒
MARCHE	2002	4		☒
BASILICATA	2002	18		☒
TOSCANA	2002	18		☒
EMILIA ROMAGNA	2002	29	☒	
VENETO	2002	6	☒	
PUGLIA	2003	26	☒	
LAZIO	2009	10		☒
TRENTO (Prov. Aut.)	2009	13	☒	
SARDEGNA	2010	1	☒	

In Emilia Romagna i prodotti forniti per la preparazione dei pasti devono essere costituiti in misura complessivamente non inferiore al 70% da prodotti biologici, integrati, tipici e tradizionali, con **priorità a quelli biologici**, ma **devono essere biologici** tutti i prodotti utilizzati per i servizi di ristorazione dei nidi d'infanzia, delle scuole materne ed elementari.

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Sportello mense bio



Sportello Mense BIO
PRODOTTI BIOLOGICI • RISTORAZIONE IN EMILIA ROMAGNA



Regione Emilia-Romagna







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"La Regione Emilia-Romagna ha scelto, già con la legge n. 29 del 4/1 1/2002, di introdurre l'uso di alimenti biologici nelle mense scolastiche della regione, insieme all'utilizzo di prodotti tipici e tradizionali, perché gli alimenti usati per la dieta dei nostri figli devono essere sicuri, senza residui di pesticidi, senza conservanti, coloranti o sostanze lucidanti e rispettare la freschezza, la stagionalità, i cicli naturali delle piante, il territorio, le tradizioni alimentari."

Tiberio Rabboni
Assessore Agricoltura
Regione Emilia-Romagna

- L'opuscolo in distribuzione nelle scuole della Regione Emilia-Romagna.
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In Veneto nelle mense prescolastiche, scolastiche e negli ospedali e luoghi di cura gestiti in qualsiasi forma da soggetti pubblici e privati devono essere utilizzati **prodotti biologici e prodotti certificati OGM free.**



REGIONE DEL VENETO



VENETO AGRICOLTURA

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La mensa biologica - situazione, obblighi e opportunita' per la ristorazione scolastica in Veneto

è una pubblicazione di Veneto Agricoltura, finanziata dal Piano regionale di intervento per il rafforzamento e lo sviluppo dell'agricoltura biologica.

In questa sezione è possibile visionare contenuti tratti dalla guida e scaricare ulteriori approfondimenti legati alle singole tematiche correlate alla ristorazione scolastica biologica.

E' possibile scaricare la monografia completa QUI

Inoltre: è possibile accedere QUI alle presentazioni del seminario "La mensa biologica: situazione, obblighi e opportunità per la ristorazione scolastica in Veneto"

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Linee d'indirizzo per l'alimentazione nei nidi d'infanzia 3 mesi-3 anni elaborata dalla Direzione Centrale Salute Integrazione Socio Sanitaria e Politiche Sociali della Regione Friuli Venezia Giulia:

“Per tutte le tipologie reperibili sul mercato, i prodotti alimentari convenzionali vanno sostituiti con prodotti alimentari ottenuti con metodo di produzione biologico”

TRENTO LEGGE PROVINCIALE 3 novembre 2009, n. 13

Norme per la promozione dei prodotti agricoli e agroalimentari di prossimità e per l'educazione alimentare e il consumo consapevole

Art. 3

Strumenti di intervento

1. La Provincia interviene per:

- a) incentivare l'utilizzo, nell'ambito dei servizi di ristorazione collettiva pubblica gestiti da enti pubblici o da soggetti privati in regime di convenzione, di prodotti agricoli e agroalimentari di qualità riconosciuta e certificata, biologici e di prossimità;**
- b) promuovere l'utilizzo di prodotti agricoli e agroalimentari di qualità riconosciuta e certificata, biologici e di prossimità da parte delle imprese esercenti attività di ristorazione od ospitalità nell'ambito del territorio provinciale;**

LEGGE PROVINCIALE 3 novembre 2009, n. 13

Norme per la promozione dei prodotti agricoli e agroalimentari di prossimità e per l'educazione alimentare e il consumo consapevole

Art. 5

Utilizzo dei prodotti agricoli e agroalimentari di qualità riconosciuta e certificata, biologici e di prossimità nei servizi di ristorazione collettiva pubblica

1. I servizi di ristorazione collettiva pubblica sono resi garantendo che nella preparazione dei pasti siano utilizzati prodotti agricoli e agroalimentari di qualità riconosciuta e certificata, biologici e di prossimità

(...)

4. Nei servizi di ristorazione resi a favore di asili nido, scuole dell'infanzia e scuole di primo grado del primo ciclo di istruzione va comunque assicurato che nella preparazione dei pasti siano utilizzati in misura prevalente prodotti biologici di prossimità, ovvero, se insufficienti, prodotti di prossimità.

Alimentazione sana

A SCUOLA E IN FAMIGLIA



(...)

Fino ai tre anni di età si raccomanda una scelta di cereali raffinati, non integrali (pasta, pane, riso, farina). Dopo i tre anni di età si consiglia di inserire gradualmente nell'alimentazione del bambino cereali e derivati semintegrali e integrali.

È raccomandabile che gli alimenti semintegrali e integrali provengano preferibilmente da agricoltura biologica, in quanto nella parte esterna del chicco del cereale si concentrano le sostanze utilizzate nell'agricoltura tradizionale.

(...)

Alimentazione sana

A SCUOLA E IN FAMIGLIA



(...)

È **preferibile** che frutta e verdura provengano da **agricoltura biologica**, ove possibile da filiera corta.

(...)

se si consuma la frutta con la buccia, scegliere quella **da agricoltura biologica**.

Tar Puglia, Lecce, 27 febbraio 2001

“Si deve osservare che la **generalità** e la **tassatività** del **dovere** delle amministrazioni di prevedere l'utilizzazione, nelle mense scolastiche ed ospedaliere, dei prodotti in questione mal si concilia con un determinato rilievo economico del servizio da affidare in appalto.

Sotto il profilo del 'buon senso comune', poi, non è giustificabile che l'utilizzazione di determinati prodotti in mense destinate a soggetti che si trovano in età o situazioni della vita particolarmente delicate sia assicurata o meno a seconda che l'ammontare economico del servizio superi o meno una certa entità”.

Tar Puglia, Bari, 2005

“Il criterio del massimo ribasso è pienamente legittimo quando sia comunque garantita, attraverso le minuziose prescrizioni della lex specialis e del capitolato, come nel caso di specie, la qualità dei prodotti alimentari e la loro conformità ai metodi dell’agricoltura biologica”.

Tar Friuli Venezia Giulia 2004:

*“Il Comune è chiaramente soggetto destinatario della norma dell’art. 59, 4° comma, della L. n. 488/99 in quanto una delle ‘istituzioni pubbliche che gestiscono mense scolastiche’ **il che è sufficiente a radicare l’obbligo, nei suoi confronti, dell’uso di prodotti biologici e tradizionali.** Tale obbligo è oggettivamente esteso ai “servizi relativi alla ristorazione” da esso gestiti, sia che pertengano ad istituzioni scolastiche vere e proprie (...) sia a quelle affini non scolastiche (asili nido, centri estivi) e cioè a tutti i servizi, che siano strumentali o accessori alla somministrazione di pasti - e senza i quali essa non potrebbe avvenire - in cui consiste la ristorazione, che fa carico al Comune.”*

Tar Sardegna, 2001

“Appare conforme alla ratio ispiratrice della norma, volta a consentire a categorie particolarmente meritevoli di cura di beneficiare di cibi di prima qualità, ritenere che la disposizione in questione debba **trovare la massima applicazione possibile**, interpretando la locuzione ‘Istituzioni pubbliche’ nel senso di ricomprendere non solo le Pubbliche Amministrazioni tradizionali ma anche tutti gli organismi pubblici, comunque denominati, erogatori del medesimo servizio”

CONCLUSIONI (I)

**le amministrazioni
pubbliche e gli
organismi pubblici
comunque denominati
che gestiscono servizi
relativi alla ristorazione
(prescolastica,
scolastica o anche solo
affini) sono **obbligate** a
utilizzare
**quotidianamente
prodotti biologici****

CONCLUSIONI (II)

l'appalto deve attribuire valore preminente alla qualità dei prodotti offerti (offerta più vantaggiosa e non offerta più economica); il massimo ribasso ammesso solo quando sia prevista in capitolato la qualità biologica dei prodotti

CONCLUSIONI (III)

La riduzione dei trasferimenti erariali ai Comuni **non può** essere addotta a giustificazione di **scelte diverse, che sono contrarie alla legislazione vigente.**

Tabella 3 – Frequenza dell'utilizzo di prodotti biologici

Provincia	ogni giorno	più volte a settimana	1 volta a settimana	1 o 2 volte al mese	non li utilizza	non risponde
Belluno	2	1			1	
Padova	6	3			1	
Rovigo	1	1				1
Treviso	7	2				1
Venezia	6	2			2	
Verona	9	3	1			
Vicenza	9	2	2	2		1
Veneto	40	14	3	2	4	3
%	60,61%	21,21%	4,55%	3,03%	6,06%	4,55%

Tabella 6 – Tipologia dei prodotti biologici utilizzati quotidianamente

Provincia	Ortofrutta	Pane pasta	Latte e derivati	Carne e derivati	Olio	Cereali	Pelati passata	Uova	Altro
Belluno	1	2			1		2		
Padova	4	4			3	3	2	1	3
Rovigo	1	1	2		2	2	2	2	1
Treviso	7	5			4				1
Venezia	4	4	1		1	1	2	1	1
Verona	12	6	4	1	5	4	3	2	1
Vicenza	5	7	3		1	2	5	2	2
Veneto	34	29	10	1	17	12	16	8	9
%	85,0%	72,5%	25,0%	2,5%	42,5%	30,0%	40,0%	20,0%	22,5%

Tabella 5 - Costo di un pasto nei Comuni che utilizzano quotidianamente prodotti biologici

Costo del servizio	numero di Comuni	percentuale
non risponde	1	2,5%
inferiore a 3 euro	3	7,5%
da 3 euro a 3,30 euro	3	7,5%
da 3,31 euro a 3,50 euro	2	5,0%
da 3,51 euro a 3,70 euro	2	5,0%
da 3,71 euro a 4,00 euro	9	22,5%
da 4,01 euro a 4,20 euro	5	12,5%
da 4,21 euro a 4,50 euro	4	10,0%
da 4,51 euro a 4,70 euro	2	5,0%
da 4,71 euro a 5,00 euro	4	10,0%
da 5,01 euro a 5,20 euro	0	0,0%
da 5,21 euro a 5,50 euro	5	12,5%
Oltre 5,50 euro	0	0,0%
Totale	40	100,0%



Per saperne di più:

<http://www.sportellomensebio.it>

<http://bioveneto.venetoagricoltura.org>

<http://www.bio.buonalombardia.it/index.php?section=bioscuola&m=mense>

<http://www.federbio.it>



Grazie dell'attenzione.