Approved February 16, 1989
Date

MINUTES OF THE Senate COMMITTEE ON Agriculture.

The meeting was called to order by Senator Allen at
Chairperson

10:06 a.m./~~p.m.~~ on February 15, 1989 in room 423-S of the Capitol.

All members were present except: Senator Harder (excused)

Committee staff present: Raney Gilliland, Legislative Research Department
Lynne Holt, Legislative Research Department
Jill Wolters, Revisor of Statutes Department

Conferees appearing before the committee: Senator Karr
Susan Mercer, private business, Holton
Dan Nagangast, Kansas Organic Producers, Auburn,KS.
Warren Parker, Kansas Farm Bureau
Mike Beam, Kansas Livestock Association
Jayne Link, Peoples Grocery Cooperative, Manhattan
Ron Schneider, Kansas Rural Center
Oren Holle, Farmer, Kansas Organic Producers, Bremen, Kansas
Jim Cooley, Kansas Organic Producers
James Wroblewski, Horticulturist, Kansas City
Jerry Jost, Kansas Rural Center
Ivan Wyatt, President, Kansas Farmers Union
Stephen Paige, Director, Bureau of Food, Drug and lodging, Department of Health and Environment
Larry Woodson, Division of Inspections, State Board of Agriculture
Chris Wilson, President, Kansas Agri-Women
Wilbur Leonard, Committee of Kansas Farm Organizations

The Chairman called the committee to order and attention to SB 173; then called on Senator Karr and the following who spoke as proponents.

Senator Karr gave copies of his testimony to the committee (attachment 1).

Susan Mercer explained that she had operated a restaurant in Holton where she served natural foods. Ms. Mercer stated that there is a demand for that type of food and that there are numbers of people desiring to purchase organic foods. Ms. Mercer requested the passage of SB 173 so that organic foods may be certified and then purchasers would be assured they were purchasing organic foods.

Daniel Nagengast provided copies of his testimony for the committee (attachment 2).

Warren Parker provided copies of his testimony (attachment 3) to the committee.

Mike Beam gave copies of his testimony to the committee (attachment 4). Mr. Beam requested that, if passed, Section 3 subsection (d) (lines 87-91) not be deleted. Mr. Beam also explained that labeling and advertising of meat, poultry, milk, eggs and other animal products shall comply with the laws of USDA and that USDA does not recognize 'organic'.

Jayne Link handed the committee copies of her testimony (attachment 5) and requested the committee pass an organic bill that defines organic.

Ron Schneider explained that SB 173 is a bill that is an economic bill and a bill that will help farmers and one that guarantees to consumers that

they are buying an organic product when that is what they desire to purchase. Mr. Schneider stated that the passage of the organic bill would be little if any cost to the state. Mr. Schneider stated that Bloomingdales had stated that Kansas was missing a lot if the state did not get organic defined and get in the organic markets. Mr. Schneider stated that a negative advertisement does not mean it is an untruthful advertisement. Mr. Schneider encouraged the committee to work for a definition of organic that would be agreeable with all concerned.

Oren Holle gave copies of her testimony (attachment 6) to the committee.

Jim Cooley expressed support for SB 173 and suggested that certification be handled in the private sector. Mr. Cooley suggested that negative advertising is a comparative type of advertising and that instead of using the word negative that the words false and misleading would be a better choice.

James Wroblewski gave copies of information to the committee (attachment 7) and explained that his business now has all of its markets in Missouri. Mr. Wroblewski expressed support for SB 173 with definition of organic which would allow his business to be more competitive.

Jerry Jost gave copies of his testimony to the committee (attachment 8) and requested the word 'false' be substituted for the word 'negative' in line 89 of the SB 173.

Ivan Wyatt gave copies of his testimony in support of SB 173 to the committee (attachment 9).

Stephen Paige made comments about SB 173 and gave copies of his testimony to the committee (attachment 10).

Larry Woodson explained some concerns listed in his testimony that he provided the committee (attachment 11). Mr. Woodson expressed the support of the State Board of Agriculture in carrying out assignments given them if SB 173 passes.

Chris Wilson gave copies of her testimony and information to the committee (attachment 12) and expressed opposition for SB 173.

Wilbur Leonard gave copies of his testimony to the committee (attachment 13) and expressed opposition to SB 173.

The Chairman announced the hearing for SB 173 completed and called for action on committee minutes.

Senator Montgomery moved the committee minutes of February 14 be approved; Senator Francisco seconded the motion; motion carried.

The Chairman adjourned the committee at 11:03 a.m.

GUEST LIST

COMMITTEE: Senate Agriculture DATE: February 15, 1989

NAME	ADDRESS	ORGANIZATION
Jayne Link	Manhattan, KS	People's Grocery Coop
Susan Mercer	Holton, Ks	Seven Sisters Bakery
FRANCES KASTNER	Topeka, KS	Ks food Dealers
LARRY D. WOODSON	TOPEKA	KBOA
Steve Paige	Topeka	KDHE
Tom Tunnell	Topeka	Kansas Grain & Feed Assn.
Dan Nagengast	TOPEKA	Kansas Organic Producers
Jerry Jost	Whiting	KS Rural Center
Ivan Wyatt	McPherson	Ks Farmers Union
Wilbur Leonard	Topeka	Comm. Ks Farm Org.
Warren Parker	Manhattan	Kansas Farm Bureau
Joe Rickabaugh	Topeka	Ks Lvstk Assoc.
MIKE BEAM	"	" " "
Chris Wilson	Topeka	KS Agri-Women
PETE WANNAMAKER	TOPEKA	Ks. Brd. of Ag
Deb Lambley	Topeka	" " " "
Kenneth M. Wilke	"	" " " "
Jim Cooley	Lawrence	Central Soyfoods
Paul Johnson	Perry	individual
Jim Stohlemdic	Kansas City Kansas	Wyandotte Developmental Disabilities Merrill Horticultural Center
Owen D Holle	Marysville KS	Farmer Membership in KOP
Ron Schneider	Lawrence, KS.	INDIVIDUAL KS. RURAL CENTER

STATE OF KANSAS

GERALD "JERRY" KARR
SENATOR, SEVENTEENTH DISTRICT
CHASE, LYON, MARION, MORRIS,
OSAGE COUNTIES
R. R. 2, BOX 101
EMPORIA, KANSAS 66801

TOPEKA

SENATE CHAMBER

COMMITTEE ASSIGNMENTS
MEMBER: AGRICULTURE
ASSESSMENT AND TAXATION
FINANCIAL INSTITUTIONS AND INSURANCE
ECONOMIC DEVELOPMENT
EDUCATION
JOINT COMMITTEE ON ADMINISTRATIVE RULES AND REGULATIONS
LEGISLATIVE EDUCATIONAL PLANNING COMMITTEE

DATE: February 15, 1989

TESTIMONY: Senate Agriculture Committee

FROM: Senator Gerald "Jerry" Karr

SUBJECT: Senate Bill 173 (An act concerning organic food products relating to labeling and advertising.)

In the 1988 Session there was a good deal of effort put forth to develop an advertising and labeling act for organic food products. The bill we have before us today is partly a result of that work. In S.B. 173 we have tried to encompass many of the desired compromises that were discussed last year. It is an effort to bring before the Committee legislation that would allow an organic labeling and advertising act.

Section one of the bill primarily sets forth three major definitions that are used in the legislation. Section two further identifies what a food should be to fall in the category to be labeled organic. Section three of the bill expands on the role of the State Board of Agriculture in registering growers or producers of organic products. Section three also emphasizes that the product must comply with laws, regulations, and guidelines of the U.S. Department of Agriculture, the Federal Food and Drug Administration, and the state of Kansas. Section four requires that each grower who sells food and food products must maintain accurate records of the location of crops and other relevant information for verifying the nature of the food product. The balance of the act further advances the needs of the requirements to implement a labeling and advertising bill.

I would encourage all members of the Committee to carefully consider this bill as we begin testimony considering, not only the vacuum we have in our law identifying and regulating organic food products, but the opportunity this could provide in allowing special market "niches" for foods that are demanded in our society in the 1980's and 1990's. This could provide a mechanism to enhance the value of certain foods and processed food products, especially in the markets outside the state of Kansas.

I think there are a number of other qualified individuals here today who wish to speak to the bill. Mr. Chairman, I would urge that we move directly to them unless there are specific questions.

Senate agriculture
2-15-89
attachment 1

Daniel Nagengast
10630 Hoch Rd
Auburn, KS 66402
272-8322; 671-2661

TESTIMONY ON SENATE BILL #173, CONCERNING ORGANIC FOOD PRODUCTS

Good Morning. My name is Dan Nagengast, and I live south of Auburn, here in Shawnee County. I am the Director of Church World Service/CROP, but also a member of the Kansas Organic Producers (KOP). My wife and I farm 60 acres and grow about 2 acres of organic vegetables and flowers, which we market in Topeka and Lawrence.

I have been asked by the Board of Directors of KOP to represent them in advocating for the passage of an organic definitions bill. I was involved in drafting the alternative bill which I believe most of you have before you.

The KOP position is that we would prefer a bill along the lines of our proposed alternative, but we find acceptable SB #173, with a few changes, or a compromise bill containing elements of the two. There has been an attempt, I am told, to pass an organic definitions bill since the mid-1970's. We are prepared to be flexible.

I am unsure of the extent of the committee's understanding of organic farming, so with your permission, I would like to read a short, general definition of the practice.

> Organically grown food is produced in soil which has not been exposed to synthetically compounded fertilizers, pesticides, herbicides, or growth regulators for a minimum of three years. Only microorganisms, microbial products, and materials of mineral-rock, plant, or animal origin may be used in the production, storage, processing, harvesting, and packaging of such food.

Senate agriculture
2-15-89
attachment 2

There are presently 38 grower-members of KOP and another 67 non-grower members. People interested in organic food come from all walks of life. They eat in Kansas restaurants and buy traditionally grown food. They are pleased, however, when they find organic food in stores, and they buy it, at a premium. Many growers have only a portion of their land under organic practices, with the remainder using traditional practices. They farm with modern equipment in most cases. KOP is not exclusive in any sense. We hope that all Kansas farmers will take a close look at growing food organically and figure out some way to incorporate the practices into their own operations.

There is a potential reward in the marketplace for doing so, and we believe that market is growing. The Ozark Organic Growers Association in Arkansas has seen their sale of vegetables increase from $35,000 three years ago, to estimate sales of $300,000 this year. During that time the number of growers has increased from 11 to 45. The Texas Department of Agriculture estimates the total organic market to be in the $3 billion range.

Many of the other speakers today will explain why they need and want such a bill, and what it means to their businesses.

I want to explain why we have offered the alternative bill to you.

We were concerned with last years bill for 3 reasons. First, there were technical criticisms of the lengthy definition or organic practices found in Sections 1 & 2. The problem is that a thorough definition of what is organic must be lengthy

primarily because it boils down to a list of acceptable and unacceptable practices, soil amendments, fertilizers and pesticides. Several private organizations have already done this however, and their standards and definitions are generally accepted throughout the U.S. I have brought copies of some of these.

Secondly, times being what they are, we were concerned with creating legislation that would cost the State very little. Accordingly, we attempted to "privatize" the process whereby farmers and processors can become certified organic. The burden of funding the certification procedure is shifted to the grower or processor. Incidentally, this would help to create some part-time employment for certifiers in rural areas.

Thirdly, the certification procedures we detail will help to make Kansas Organic Produce acceptable elsewhere in the U.S. For marketing reasons, this is very important.

I have made a schematic drawing of what we envision from this bill. You will find a copy of this appended.

The legislation would set up a 9 member Organic Review Board. The purpose of the Board would be to review the rules, regulations, and standards of, what we have termed "Standard Setting Bodies". These are groups such as the Organic Crop Improvement Association, the Farm Verified Organic Program, Oregon Tilth, and others which have detailed definitions and criteria which must be complied with for certification.

The Board would check specifically to see if; 1) the standards and practices fit in with what the Board deems to be "organic", and; 2) if the group has made provision for third-party certification of farmers and processors. If so, the Board would approve the organization as a "Standard Setting Body" within the terms of the statute.

A farmer or processor wishing to market organic produce would select one of these sets of standards, notify that particular Standard Setting Body that he or she wishes to become certified, and submit to its procedures. If the farmer or processor meets all requirements, he or she can then market food labelled "Kansas Certified Organic - OCIA" or "Kansas Certified Organic - FVO". The certifying organization must be clearly noted. This would protect consumers who wished to know exactly by what standard the organic product has been certified.

There would be a yearly reevaluation of each Standard Setting Body's criteria. Once reapproved, each farmer or processor would again seek certification under the approved standard of their choice. All expenses for certification would fall to the farmer or processor.

One can see how this would allow some flexibility in how the term organic is applied. We spoke with Mr. Lynn Bates, who testified on SB #173 last year and criticized the definition. He has no technical problems with this kind of bill. Secondly, the expense to the State would be minimal, basically for

record-keeping, and some travel expenses of the board.

Finally, produce labelled "Kansas Certifed Organic -OCIA", etc., would be readily acceptable as organic in other markets where those organizations are better known.

Moreover, in the evolving field of organic production, flexibility is built in, as each Standard Setting Body annually updates its practices.

Turning to SB #173, presently before this body, KOP would point out that there is still the problem of technical criticism inherent in spelling out all the technical procedures for organic farming and processing in the body of the statute. We are, however, prepared to help work on that with you.

KOP does have a specific criticism of Section 3 (d) which prohibits "negative" advertising. It is not our desire to do negative advertising. We feel simply that any provisions for <u>false</u> advertising will effectively protect conventional farming methods.

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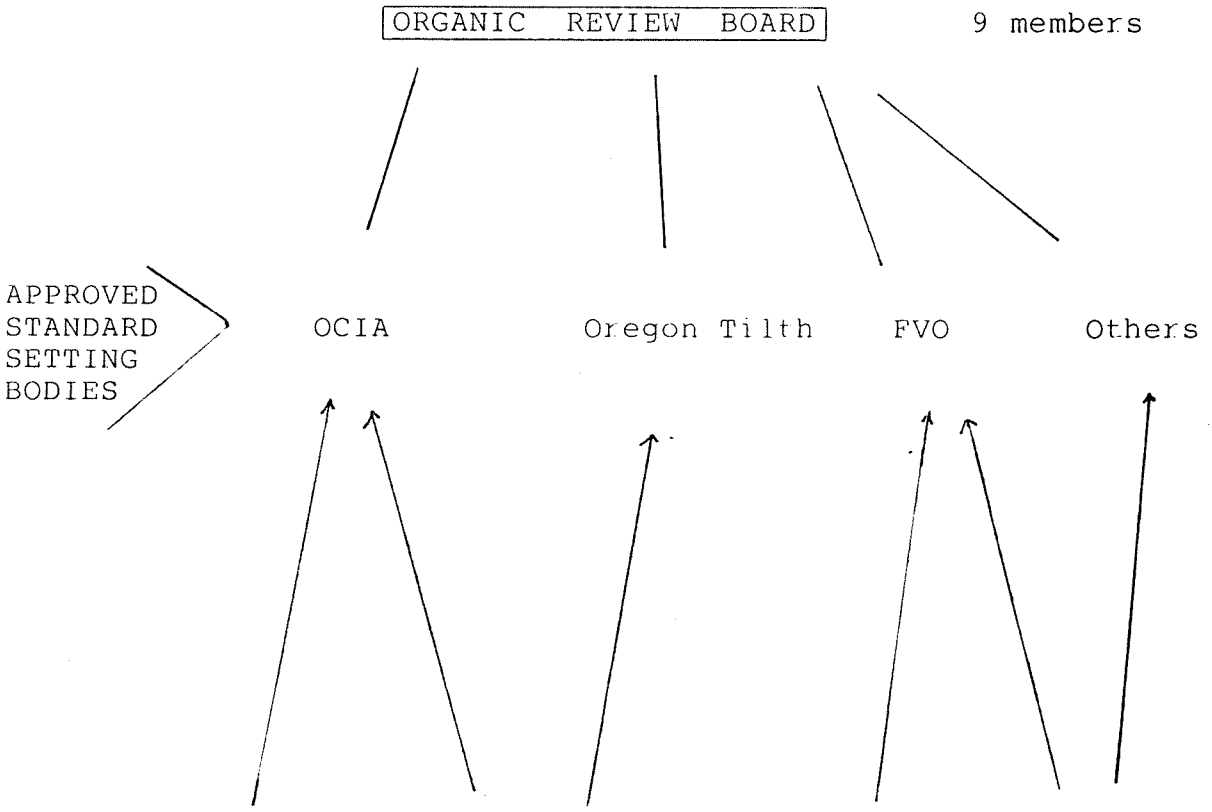
Speaking for KOP, it is our hope that this is the year in which an organic bill of some sort can be ratified. We are prepared to meet in conference with your committee, to answer any questions you might have, and to draft or redraft any provisions until we come up with an acceptable bill. Our only goal is that it will insure that organic produce from Kansas is so-viewed by those interested in it, both within the state and without. Please feel free to ask any questions.


ORGANIC REVIEW BOARD
9 members
APPROVED STANDARD SETTING BODIES
OCIA
Oregon Tilth
FVO
Others
FARMERS AND PROCESSORS SEEKING TO BE CERTIFIED ORGANIC

STANDARDS and GUIDELINES
for
OREGON and WASHINGTON TILTH

CERTIFIED ORGANICALLY GROWN

By Harry MacCormack M.F.A.

Edited by Lynn S. Coody M.S.

For the Tilth Certification Committee

Revised Edition: July 1987

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2-7

I. Nitrogen

Nitrogen from the atmosphere is the primary source of all nitrogen used by plants. This inert gas comprises about 78% of the earth's atmosphere. Nitrogen signifies life. Nitrogen is the element in proteins which distinguishes them from carbohydrates. Proteins control movement of energy and materials and the growth of plants.

Nitrogen fixation by soil organisms is the only significant way to maintain the soil supply of nitrogen in a sustainable system.

Supplements of nitrogen or protein-laden fertilizers in organic forms are usually released in substantial ways during the first year after application. Organic forms of nitrogen fertilizer usually provide a residual or second year effect, often doing more to stimulate balanced biological activity that second year. Excess nitrogen available to plants causes them to divert energy, carbohydrates, water and minerals in an attempt to metabolize the nitrogen. Excess nitrogen causes sugars and starches to become unavailable and as a result, plant growth is bloated or too succulent, tubers rot because of excess water, plants become weak, trees become spindly, grains lodge, flowering and fruiting is delayed, ripening is uneven, and vitamin A and C content may drop. In the presense of low sunlight levels excess nitrogen may cause the plant to accumulate nitrates and free amino acids. Free amino acids are known to attract insects while high levels of plant nitrates consumed by animals or humans are converted into toxic nitrites.

Supplementing the natural nitrogen cycle should be done with a view to helping a low concentration flow of nitrate to plants. The more intense the concentration of nitrogen in a supplement, and the more soluble its nature, the more chance there may be that nitrogen supplements are delaying or even harming the natural nitrogen cycle processes.

Encouraged

- Green manuring, composting animal manures, covercropping with legumes.
- Innoculation of nitrogen fixing crops with appropriate bacteria.
- Innoculation of composted materials with bacteria which helps stabilize nutrients.
- Nitrogen fixing microorganisms applied directly to soils or seeds.
- In conjunction with the above practices, low level inputs of soy or cottonseed or other vegetable meals, blood, leather or feather, fish or other animal meals, foliar sprays made with kelps, fish, manures, herbs and other plants or microorganisms in which no synthetic compounds are used in processing .

Permitted

- Primary reliance upon animal meals (blood, meat, fish etc.) or upon vegetable meals (cottonseed, soybean etc.) where excess could lead to imbalanced soil fertility.
- Primary reliance upon chicken manure with these considerations:

  1. quality of crop nitrates.
  2. ground water contamination.
  3. there is a rotation crop between applications.
  4. not more than 5 tons per acre is used on most crops.
  5. not more than 10 tons per acre is used on leafy crops and a cover crop is provided between applications and rotations.

- Primary reliance upon cow, horse, pig or other manures in uncomposted forms.
- Sewage sludge or tankage, if tests have shown it to have less than 10% of the EPA acceptable levels for known pollutants.
- Chilean (sodium) nitrate; even though natural in form is considered to be an inappropriate fertilizer, the nitrogen being highly soluble and subject to leaching losses, denitrification and potential water pollution.
- Banding of any high nitrogen compound should be documented.

Prohibited

- Anhydrous Ammonia, Ammonium Nitrate, Aqua Ammonia, Ammonium Sulfate.
- Calcium Nitrate. Calcium Nitrate is not allowed because in the manufacturing process nitric acid is used with calcium carbonate and about 5% ammonium nitrate is added to bring the nitrogen content to 15.5 %.
- Urea. Urea is not allowed because it utilizes high amounts of energy which is non-renewable in manufacture and because the fertilizer grade of 46% nitrogen can easily disrupt biological activity in soils.

II. Phosphorus

Phosphorus as phosphate is essential for every metabolic process. It handles photosynthetic energies given up by sugars and starches. Phosphorus is very important in flowering, in governing the number and size of seeds, and in determining root development. Every rung of the DNA helix contains two phosphate molecules; phosphate connects the sugars which hold the AT/GC coding bases.

Organic matter and biological activity are often the predominant sources of phosphorus. Phosphorus released by decaying residues is highly available to plants and any phosphorus trapped by soil

organisms eventually becomes available as they die and decay. Soil fungi play an important role in distributing phosphorus throughout the soils upon their death and decompostion. In particular Mycorrhizae appear to be useful fungi when available phosphorus is low.

Phosphorus is easily bound by soil organisms, by mineral elements containing aluminum and calcium, and by clay containing aluminum or iron. An acid pH (below 6.5) makes aluminum more available and therefore the aluminum ties up available phosphorus. Acid soils are also lower in biological activity which would release phosphorus. Alkaline soils (above 6.8) can tie up phosphorus by forming precipitates of calcium phosphate.

Phosphorus becomes poorly available in cool weather, particularly in damp spring soils where biological activity is also low. Sufficient water must be available if plants are to receive dissolved phosphorus. Phosphorus is not easily soluble so leaching is usually not a problem. Phosphorus fertilizers which are not mixed throughout the topsoil (which have been banded) can become unavailable if adequate water is not available.

Both biological and rock - based forms of supplemental phosphorus are available. If spread before green manure is turned under, phosphate fertilizers often last 2-4 years in available forms.

Encouraged

Biological Sources -
- Poultry manures, guano, and bone meal contain high enough phosphate levels to build up deficient soils.
- Composts, cow manure, seed meals, fish and other meat meals, hay pellets and mulches for maintaining stable phosphorus levels.
- Innoculations with or direct placement of mycorrhizae to aid in making rock phosphate available.
- Kelp, manure, fish and herb foliar sprays to feed plants directly.
- Commercial foliar sprays which are not processed with the aid of prohibited synthetic substances.

Rock Based -
- Rock phosphate (particularly on acid soils and in compost piles where raw manure is a component)
- Colloidal or soft rock phosphate

Permitted

- Basic Slag (regions with ore refineries).
- Organophos (soap Phosphated).

Prohibited

- Super Phosphate 0 - 20 - 0 (water soluble product produced by treating rock phosphate with sulfuric acid, forming 20% available P_2O_5, leaving a slight sulphur residue).
- Triple Super Phosphate 0 - 46 - 0 (made by the same process by utilizing phosphoric acid, no sulphur residue).

  note: These amendments, like the purified and synthetic nitrogen sources lead to a loss of organic matter because of their high water solubility and fast flux through the rhizosphere. There are as yet apparently no scientifically justifiable reasons for not using either of these manufactured products. The use of super phosphates in organic growing practices continues to be under discussion. For nine arguments, see Organic & Inorganic Fertilizers by Robert Parnes, page 11.
- Ammonium Phosphates.
- Orthophosphoric Acid.
- Super Phosphoric Acid.

III. Potassium

The amount of potassium used by plants is exceeded only by nitrogen. Potassium uptake is critical during early stages of plant growth. The metabolic energy available to plants relies on availability of potassium and the ratio of sodium to potassium.

Potassium regulates the activities of 40 or more enzymes. It is responsible for cellulose production and cell wall strength which results in resistance to disease and lodging. It facilitates the movement of sugars and starches. It is important in the conversion of nitrogen into protein. It is necessary for drought resistance.

Soil Microorganisms use much less potassium than plants do. Therefore, as organic residues decompose much of the potassium is quickly released. Very little is retained in soil humus. Some soil potassium is available through the cation exchange mechanism and where soil structure permits good root development and cation exchange is significant, roots are likely to find sites containing exchangeable potassium.

Any garden or farm utilizing animal manures, green manures, mulches, compost or other organic residues will probably have enough potassium available. The exception is where residues are predominantly nitrogenous with a poor potassium balance, as in poultry manure, blood meal and cottonseed meal.

Additions of potassium supplements should definitely be based upon soil test recommendations as it is easy to get excess potassium where heavy applications of organic residues exist.

Encouraged

- Organic residues which are not polluted.
- Wood ashes (carefully applied so as not to raise pH or be caustic to soil bacteria.
- Granite dust, green sand, basalt finely ground.
- Sulfate of Potash Magnesia (Sul-Po-Mag, langbeinite, particularly where there is a need for sulfur or magnesium deficiences exist).
- Sulfate of Potash (especially potato growers).
- Kelp and seaweed meals.

Permitted

- Potassium Chloride or Muriate of Potash (acidifies soils as chlorides leach out calcuim and magnesium. Also can interfere with natural nitrogen cycle.)

Prohibited

- Potassium Nitrate.
- Potassium Sulfate from suspect industrial processes.

IV. Sulfur

Sulfur is a necessary element in some amino acids, and amino acids containing sulfur are necessary for all proteins. A deficiency of sulfur will therefore limit the synthesis of proteins. It is essential for the fixation of nitrogen and for building several vitamins.

Sulfur is available to plants from the air and from organic and inorganic sources. Sulfate sulfur is subject to leaching, but it can be bound by clay minerals. Acid soils are often highly leached and may be sulfur deficient. Sulfur is usually not low in alkaline soils or on soils with high organic matter. The use of organic residues and animal manures should satisfy sulfur requirements.

Encouraged

- Sulfate of Potassium Magnesia (Sul-Po-Mag or langbeinite).
- Gypsum or Calcium Sulfate.
- Pure Sulfur.
- Potassium Sulfate.

Permitted

- Sulfur dust (an explosive hazard).

- Epsom salts (hydrated magnesium sulfate).

Prohibited

- Ammonium sulfate.
- Sulfuric acid.
- Ammonium polysulfide solutions.

V. Calcium

Calcium is a nutrient necessary in the development of cell membranes and for proper development of plant roots and tops. Calcium deficiencies can cause short, thick and bulbous roots and die back of both tops and roots. Calcium deficiences can be aggravated by nitrogen or potassium excesses.

Soil pH, the adjustment of which is vital for healthy plant growth, is usually related to the cation exchange rate of calcium. Plants are not directly affected by acidity/alkalinity, but by the availability of phorphorus and trace elements. A pH of 6.5 makes these elements most available. The complex relationship between acid and base cation exchange elements and the measurement of that relationship tells us soil pH. The purpose of using calcium compounds to raise pH is to replace non-nutrient cations such as aluminum and hydrogen with nutrient cations such as calcium, magnesium and potassium. High levels of aluminum and hydrogen are particularly found in wet, cool soils such as those west of the Cascades. Therefore major calcium supplement adjustments are necessary.

Calcium carbonate or agricultural lime will raise pH as will other carbonates such as potassium carbonate. Because they contain available carbonates, all manure applications have a liming or pH raising value, however, that value is variable. Legumes plowed down contain calcium, but they do not raise pH because there are few carbonates present. Straw and grasses turned under have higher levels of carbonates.

Liming to adjust pH should be done according to reliable laboratory recommendations. If pH is below five and organic matter is relatively high, up to two tons of lime per acre, or 10 pounds per 100 square feet can be added to soils to raise pH to the 6.5 balance. Never add more than those amounts at any one time. Lime must be thoroughly tilled into the soil to have any immediate effects. In humid areas such as those in Western Oregon, magnesium may be low and the first ton of lime should be dolomitic limestone.

Encouraged

- Agriculture Limestone - Calcium Carbonate.
- Dolomite Limestone - Calcium and Magnesium Carbonate.

ORGANIC CROP IMPROVEMENT ASSOCIATION, I...

[illegible]

OCIA CERTIFICATION STANDARDS (1987)

Preamble:
The following constitute OCIA minimum standards for organic certification, and must be met or exceeded by the standards of all chapters and affiliates seeking a licence to use the OCIA trademark. All members at large must operate under these standards in order to be certified. These standards are subject to review at the OCIA annual meeting which is held in the first quarter of the year.

ADMISSIBILITY:

1. Certification may be on a whole farm or a field by field basis. If the latter, all fields of the farm unit must be committed to an ongoing program of organic crop improvement.
2. No crop shall be sold as "OCIA Certified Organic" if the same crop is also produced elsewhere on the farm using methods or materials that do not conform to these standards, unless the farmer can clearly demonstrate that there exist both the physical facilities and the organisational ability to ensure that there is no possibility of crop mixing. This criterion applies equally to situations when uncertified crop is produced by the same farmer on another farm unit, or is purchased for resale.
3. No field shall be certified for a harvest to occur less than three years after the most recent use of a non-acceptable pesticide (insecticide, herbicide, fungicide, etc), or less than two years after the most recent application of a non-acceptable fertiliser.
4. In cases where an adjoining farm is growing heavily sprayed crops, or there is other possibility of contamination, there must exist adequate physical barriers to maintain the integrity of certified fields. When contamination is suspected, the certification agent shall require residue testing.
5. Complete information describing at least three (preferably five) most recent years' production methods and materials, as well as information about current production practices, must be provided. The applicant for certification must also furnish an outline of farm management strategies directed at achieving strict compliance with these standards.
6. To be certified, a farm or field must be managed in accordance with the required practices listed below, using authorised methods and materials.
7. The applicant must provide a notarised or sworn affidavit attesting to the truth of information furnished and adherance to these standards.

REQUIRED PRACTICES:

1. Development and implementation of a concientious soil building program designed to enhance organic matter and encourage optimum soil health.
2. Rotation of non-perennial crops in accordance with accepted regional organic practices.

3. Regular monitoring and assessment of soil nutrient balances at least every three years (and preferably annually) in each field to be certified

4. Use of careful management, resistant varieties, intercropping, and maintenance of soil health as the first line of defence against weeds, pests, and diseases.

5. Generation of an audit trail which will permit tracing the sources and amounts of all off-farm inputs, date and place of harvest, and all s between harvest and sale to the wholesaler, retailer, or final consumer

6. Maintenance of machinery and equipment in good enough condition to avoid contamination of soil or crops with hydraulic fluid, fuel, oil, etc.

7. Use of pre- and post-harvest handling procedures and packaging material which ensure maximum product quality (appearance, hygiene, freshness and nutrition) using techniques and materials that are consistent with these standards. Irradiation of certified foods is prohibited.

AUTHORISED METHODS AND MATERIALS: SOILS AND PLANTS

1. Organic Matter:
   a. Composted manure, preferably produced on the farm, or if imported which is free of contaminants.
   b. Uncomposted manure that has been stacked and aged for at least six months prior to application.
   c. Fresh, aerated, or "sheet composted" manures on perennials or crop not for human consumption, or when a crop for human consumption is not to be harvested for at least four months following application. At application the soil must be sufficiently warm (about 10°C) and moist to ensure active microbial digestion.
   d. On radishes, leafy greens, the beet family, and other known nitrate accumulators fresh, aerated, or "sheet composted" manures may not be applied less than four months before planting. At application the soil must be sufficiently warm (about 10° C) and moist to ensure active microbial digestion.
   e. Green manures and crop residues, peatmoss, straw, seaweed, and other similar materials. Sewage sludge is prohibited.
   f. Composted food and forestry by-products which are free of contaminants
   g. All manure sources and management techniques must be clearly documented as a part of the certification process.

2. Minerals:
   a. Agricultural limestone, natural phosphates, and other slowly soluble rock powders.
   b. Wood ash, langbeinite (sulpomag), non-fortified marine by-products, bonemeal, bloodmeal, fishmeal, and other similar natural products
   c. Cottonseed meal, leather meal, and blended products containing these substances are permissable only if free of contaminants.
   d. Highly soluble nitrate, phosphate, and chloride nutrient sources; natural or synthetic, are prohibited from use on soil or foliage.
   e. Ammonia and urea products are prohibited.
   f. Potassium sulphate (preferably natural) where magnesium excess has been officially recognised.
   g. Sodium borate (borax, Solubor), sodium molybdate, and sulphate trace mineral salts are permitted where agronomically justified. Application rates and distribution should be controlled by applying these products in solution with a well-calibrated sprayer.

3. Foliar:
   a. Liquid or powdered seaweed extract or other non-fortified marine by-products. [Explaratory note: In some circumstances such as the use of phosphoric acid to hydrolyse fish emulsion a normal aspect of the industrial process coincidentally furnishes plant nutrients. This is not to be considered "fortification" for the purposes of these standards. The operative criterion is whether a product is added to the process in order to boost the analysis, as is the case with potassium nitrate added to fish emulsion.]
   b. Plant or animal based growth regulators and other plant or animal products.
   c. Adjuvants, wetting agents, and the like.
   d. Mineral suspensions such as silica.

4. Seeds, seedlings, grafting and root stock;
   a. Horticultural crops and non-perennial field crops must be produced from seed that has not been treated with any unauthorised product.
   b. Transplants, seed potatoes, onion sets, small fruits, etc. must be produced using organic methods consistent with these standards.
   c. Exceptions can be made on the basis of unavailability but not on the basis of inconvenience. [Explanatory note: Some types and varieties of seed, etc are not at present available in untreated form - an exception is obviously in order. However, if a grower decides that it is easier or cheaper to purchase non-organic transplants than to produce them on the farm organically, an exception is inappropriate. On the other hand if the ventilation system in the greenhouse fails and the organic transplants die, a temporary exception could be made.]

5. Other:
   a. Assorted plant and/or animal preparations, biodynamic preparations, microbial activators, bacterial inoculants, mycorhizae, etc.
   b. Microbes used in the production of certified crops must be naturally occuring and not the result of genetic engineering.

AUTHORISED METHODS AND MATERIALS: PEST CONTROL

1. Disease:
   a. Use of resistant varieties.
   b. Lime-sulphur, bordeaux, and elemental sulphur. Other sulphur or copper-based products may be approved by the chapter certification committee upon acceptance by the confederation Certification Review Committee.
   c. Fungicidal and cryptocidal soaps, plant preparations, vinegar, and other natural substances.

2. Insects and similar pests:
   a. Use of resistant varieties and the provision of conditions favouring natural equilibrium.
   b. Insecticidal soaps and botanical insecticides such as ryania, sabadilla, etc.
   c. Rotenone, pyrethrum, dormant oil (preferably vegetable-based), and diatomaceous earth may be used with great caution due to their high ecological profile.
   d. Sexual, visual, and physical traps.
   e. All pesticides containing petroleum derivatives (vehicles, extractants, etc.) or synergist as piperonyl butoxide) ar nhibited.

3. Weed Control:
   a. Weeds are to be controlled through a combination of cultural practices which limit weed development (rotation, green manure, fallowing, etc.).
   b. Mechanical, electrical, and thermal weeding.
   c. Microbial weed killers.
   d. Chemical or petroleum herbicides are prohibited. Amino acid herbicides have not yet been registered for use.
   e. Plastic mulches may be used with caution, in rotation with non-plastic-mulched crops, provided the plastic is removed at season end.

AUTHORISED METHODS AND MATERIALS: MEAT PRODUCTION

1. Living Conditions:
   a. Livestock must be provided with living conditions which respect their needs: reasonable liberty, lack of crowding, kindness, etc
   b. Livestock should have access, when seasonally appropriate, to sunshine, fresh air, soil, fresh plants, etc.

2. Feed:
   a. Slaughter animals must be fed organically grown feed.
   b. Exceptions, up to a total of 20% of the ration, can be made on the basis of unavailability, but not inconvenience. At present this applies particularly to protein supplements, molasses, etc. [Explanatory note: See section on seeds and seedlings for the operative principles. Exceptions are more appropriate in the early life of the animal than as it approaches slaughter.]
   c. Plastic roughage, urea, intentional manure refeeding, and similar practices are prohibited.
   d. Early weaning (under 4 weeks for piglets, 3 months for beef, and 18 kg or 2 months for sheep and goats) or feeding of milk replacements are prohibited.
   e. White veal production cannot be considered organic.

3. Supplements:
   a. Any source of feed grade salt is acceptable.
   b. Calcium phosphate materials such as bonemeal, marl, etc. or calcium carbonate materials such as limestone, dolomite, etc.
   c. Magnesium oxide, greensand, seaweed, natural minerals and other free choice trace elements.
   d. Selenium of whatever form (injested or injected at recommended doses).
   e. Vitamins should be provided from sprouted grains, fish liver oils brewer's yeast or other natural sources. Synthetic vitamins may be permitted in cases of long winters, mountainous zones, or poor forage due to bad weather.
   f. Synthetic growth promoters (including antibiotics and trace elements used to stimulate growth) implanted, injected, or injested are prohibited.

4. Purchased Animals:
   a. Slaughter stock must be raised on the farm or purchased from recognised organic producers.
   b. Breeding stock may be bought from whatever source, provided the animal is not in the last third of gestation.
   c. Day old poultry may be bought from whatever source.

5. Herd Health:
   a. The first line of defence must be control of environmental problems through pasture rotation, disinfection, etc.
   b. Cleaning agents and disinfectants should be chosen from amongst soaps, biodegradable detergents, iodine 5%, 1% potassium permanganate solutions, lye, alkali carbonates, caustic potash, lime, and bleach.
   c. Areas to be disinfected should be empty of livestock, and manure should be physically removed as much as possible.
   d. Biotherapies such as plant concoctions and homeopathic remedies.
   e. Vaccinations (including vaccination to stimulate maternal antibodies) probiotics, and similar preventative techniques are permitted.
   f. When the above methods are insufficient, recourse to certain active materials such as ivermectin may be tolerated provided the materials are previously approved by the certification committee, and withdrawal periods are two months or twice the label specification, whichever is longer.
   g. If an animal is dependent on active intervention, it should be removed from the herd.

6. Breeding:
   a. Natural service is the ideal.
   b. Since breeding methods have minimal effect on the quality of the meat produced, various other methods are tolerated, provided they do not unduly restrict the gene pool.

7. Slaughter:
   a. Animals must be treated humanely during loading, unloading, shipping, holding, and slaughter.
   b. Slaughter must be effected under sanitary conditions which shall usually mean government approved slaughterhouses.
   c. Animals must be clearly identified in such a manner as to preclude confusion with non-certified meat. Ideally, certified meat should be slaughtered as a separate batch or hung apart from non-certified meat. [See section 2 under Admissibility for operative principles]

8. Audit Trail:
   a. An audit trail must be maintained which will permit tracing the sources and amounts of all feeds, supplements, medication, etc.
   b. With the exception of poultry, if animals are not individually identified by numbered tags, each animal that is treated with an active material must be clearly identified with a tag specifying the material and date of treatment.
   c. Each animal must be traced from birth to slaughter.

AUTHORISED METHODS AND MATERIALS: DAIRY AND EGGS

The standards are the same as for meat production, with the exception of the following additions.

2. d. Dairy calves may be weaned as young as 12 to 24 hours old, provided they receive colostrum before weaning and receive whole milk until the age of 3 months, or are sold out of the herd shortly after weaning.

3. f. Hormones to increase milk production are prohibited.

4. c. When pullets are purchased, they must be treated in accordance with [illegible] for [illegible] least four months [illegible] certified.

2-13

5. a. All sanitation requirements for milk handling equipment shall be observed, and milk shall be tested for bacteria, somatic cells
   b. Milk equipment sanitisers and udder washes are two potential sources of product contamination. If possible, sanitary standards should be met using OCIA approved materials, however, if due to local regulations unapproved materials must be used.all equipment must be rinsed at least two times more than usually required for the material used.
   f. Withdrawal periods are twelve days, or twice the label specificat whichever is longer. Treated cows are to be milked at the end of the string.
   h. Eggs should be free of manure, but routine washing is discouraged

AUTHORISED METHODS AND MATERIALS: PROCESSORS

Each industrial process is different, and has specific areas in which "organic" methods and materials differ from conventional production. It is the responsibility of industry to develop standards specific to each process (flour milling, tofu, breakfast cereals, etc.) and have those standards approved by the OCIA Certification Review Committee. Such standards must be designed to provide maximum quality and nutritio value within the overall goals of these standards.

1. Raw materials:
   a. All ingredients must be certified by OCIA or an approved equivalen certification program (currently Demeter only).
   b. Exceptions to a total of 2% of ingredients can be made on the bas of unavailability but not inconvenience using the same operative principles which are applied to seeds and seedlings, and to livestock feeds.
   c. Permitted additives include sea salt, fermentation organisms, natural colours, natural flavours, herbs, spices, aluminum-free leavening pure water, and other similar products approved by OCIA.
   d. Carob gum, guar gum, pectins, gelatins, potato starch, corn starch carageenans, etc. may be approved on a case by case basis.

2. Processed Products:
   a. No product can be certified if a similar non-certified product is produced on the same premises, by the same company, or under the same brand name unless the processor can clearly demonstrate that there exist both the physical facilities and the organisatio ability to ensure that there is no possibility of product mixing. For the purposes of these standards, subsidiaries are deemed to be the same company.
   b. In cases where there is risk of contamination, the certification agent shall require residue testing.
   c. The plant must meet all hygiene regulations using sanitation methods approved by OCIA. In general these will be the same as those approved in Section 5.b. under Meat Production and Dairy and Eggs.
   d. All packaging must be free of fungicides, preservatives, fumigants insecticides, or other intentionally added contaminants.
   e. Aluminum, tin, and solder are discouraged in all cases, and prohibited when the pH of the product is not between 6.7 and 7.3.
   f. Processors should research and share information on the relative benefits and drawbacks of the various plastics and papers used for food packaging.

g. Carriers must not ve been fumigated or used to nsport any substances which could compromise organic quality.

3. Audit Trail:
   a. Audit trail and inventory control procedures must be detailed enough to trace all raw materials from the supplier, through the entire plant process, and on through the distribution system to the retailer, using lot numbers, serial numbers, or the like.
   b. Company records (including purchase orders, bills, invoices, and inventory records) shall be made available on demand to a bonded OCIA certification agent or through the Audit Bureau.
   c. The applicant must provide a notarised or sworn affidavit attesting to the truth of information furnished and adherance to these standards.

CERTIFICATION AGENTS:

1. The third party certification agent is to be a demonstrably impartial and independent evaluator of member compliance with these standards or those of the chapter or affiliate to which the member belongs.
   a. The agent shall not be a party to any transaction involving the certified products.
   b. The agent may not be an employee of or have any financial interest in any company which is a party to any transaction involving the certified products.
   c. Advice provided by the agent shall be limited to helping the member meet standards and improve organic production techniques. Consultation for an additional fee at any time within the certification year is unacceptable and constitutes grounds not only for dismissing the agent, but for revoking the member's right to use the seal.
   d. The agent shall not have worked for the applicant member in any capacity in the year prior to the certification year, and shall not work for the applicant member in the year following the certification year.

2. In cases of suspected contamination, or following a request from the certification committee, the agent shall have the right to make unannounced visits, take samples, and require residue tests, all at applicant expense.

3. The relationship between certification agent and member is one of confidence in all matters not pertaining directly to certification. In certain cases it may be necessary for the agent to be bonded. It is also advisable for the agent to carry liability and/or errors and omissions insurance.

CERTIFICATION PROCEDURES: CHAPTERS AND AFFILIATES

1. Chapters and affiliates shall have a certification committee which consists of at least 50% farmers, and shall:
   a. Define and implement standards; verify adherance to standards through peer evaluation and a third party certification agent; ratify or reject the certification agent's recommendation to certify or refuse to certify member farms.
   b. Administer the certification program including hiring the agent, scheduling visits, coordinating paperwork, and ensuring that all requested documents are forwarded to Confederation offices.

2. The certification agent, accompanied by at least one member of the chapter, shall before the harvest begins:
   a. Visit each field and verify that practices conform to standards and to written information in the application.
   b. Examine post-harvest handling facilities, evaluate the applicant's management skills and organisational ability, inventory materials, and ensure that equipment available for weed control, etc. is capable of doing the job required at the scale proposed.
   c. Discuss potential problems and possible solutions with an emphasis on product quality, audit trailing, and organic crop improvement.
   d. Fill out and sign an affidavit (See Admissibility Sec. 7) to be sworn by the applicant before a justice of the peace, notary, etc.
   e. Meet with the certification committee and recommend to certify, or to refuse to certify an applicant member.

3. The chapter or affiliate shall sign a trademark licencing agreement with the pertinent national OCIA corporation, and shall grant rights to use the OCIA Certified Organic trademark to certified members in accordance with normal trademark control procedures. The chapter or affiliate shall ensure that trademark use complies with normal or accepted OCIA practices, and that each member uses a unique Member Identification Number.

CERTIFICATION PROCEDURES: MEMBERS AT LARGE

Certification procedures for members at large are identical to those for chapters and affiliates with two exceptions: 1) The Confederation's Certification Review Committee replaces the certification committee of the chapter or affiliate, and 2) Peer evaluation is difficult at best, and the agent will usually make the certification visit unaccompanied.

APPEALS:

1. An appeal may be initiated against either a refusal of certification or the granting of certification.
   a. Any member or applicant may initiate an appeal, even against a decision made in another chapter or affiliate.
   b. Burden of proof is on the party initiating the appeal, which shall post a US$500 deposit as guarantee of payment.
   c. Expenses will usually be borne by the losing party to the appeal.

2. Appeals of a certification committee decision shall be heard by an ad hoc tribunal consisting of one member of each of three neighbouring chapters, provided none is a party to the appeal.
   a. In appeals against certification, the grower should be notified of the complaint and its nature, be furnished with an outline for response (audit trail, farm plan, financial books, etc), and respond within 72 hours indicating whether the appeal will be contested.
   b. The appeal tribunal shall hear arguments within ten days, and may seek amicus curiae submissions from others. The tribunal decision shall be final and binding for the certification year.

EXTERNAL CONTROL:

The Certification Review Committee of the Confederation shall appoint a demonstrably independent third party agency to verify at random that the certification control procedures of chapters and affiliates meet a consistently high and uniform professional standard.

nsas Farm Bureau

PUBLIC POLICY STATEMENT

SENATE AGRICULTURE COMMITTEE

RE: S.B. 173 - Organic Food Products

February 15, 1989
Topeka, Kansas

Presented by:
Warren A. Parker, Assistant Director
Public Affairs Division
Kansas Farm Bureau

Mr. Chairman and Members of the Committee:

My name is Warren Parker. I am the Assistant Director of Public Affairs for Kansas Farm Bureau. I thank you for the time to make some very brief statements concerning S.B. 173. We do not have any real opposition to the bill, but there is one item we would like to mention.

I would like to direct your attention to Section 3, Paragraph D on Page 3, lines 87-91. This paragraph deals with restrictions in advertising and promotion which we also assume would include the label, as that is the final promotional tool of any product. We believe this is essential language in this bill, to prevent mislabeling, or deceptive advertising or promotion. We ask that this language be protected to avoid claims that can not be verified, and are simply untrue. Thank you very much for your time. I would be glad to attempt to answer any questions.

Senate Agriculture
2-15-89
attachment 3

Kansas Livestock Association

2044 Fillmore • Topeka, Kansas 66604 • Telephone: 913/232-9358

Owns and Publishes The Kansas STOCKMAN magazine and KLA News & Market Report newsletter.

February 15, 1989

TO: Senate Agriculture Committee
Senator Jim Allen, Chairman

FROM: Mike Beam, Executive Secretary, Cow-Calf/Stocker Division

RE: SB 173 - Organic Food Products

The Kansas Livestock Association (KLA) is a trade organization made up of 10,000 members located in all of the 105 counties. KLA, founded in 1894, has members who are actively involved in numerous aspects of livestock production that include cow-calf/stocker producers, feeders, sheep producers, swine operators, and general farming and ranching enterprises.

Mr. Chairman and committee members, I'm Mike Beam with the Kansas Livestock Association. Our members are in the food producing business and have a genuine interest in this legislation. In 1988, Kansas produced over seven and one half billion pounds of red meat and the state is first in cattle slaughter and processing.

KLA policy specifically calls for **"truth in advertising and labeling that accurately and truthfully represents the product and does not condemn the rest of the meat supply that is produced under approved practices."**

For this reason we strongly support the inclusion of subsection (d) in Section 3 (lines 87-91 on page 3). We feel it is imperative that this provision be contained in any organic food bill if it is going to be seriously considered by the legislature.

Senate agriculture
2-15-89
attachment 4

In the past, we have experienced negative ads by branded beef marketers and retailers. There have been statements in print advertisements saying "chances are your steak has a drug problem" and "instead of filling your order at the butcher counter, you may be filling a prescription."

We have no problem with entrepreneurs marketing beef as "natural" or "organic". Today's consumers demand variety in their foods and beverages. If the availability of "organic" meat results in more total demand for our product, then it's positive to our industry.

I want to emphasize, however, if these products are promoted in a negative or misleading manner, it can give consumers an unwarranted concern for the safety of our food products. In this instance, it would cause a negative impact to the meat industry and Kansas livestock producers. The United States has the safest and most wholesome food supply in the world. So be it if producers want to fill a niche for consumers demanding "organic" products. The truth in advertising subsection is vitally important and we respectfully ask the committee to include this provision if the bill is passed. Thank you.

Modern Beef

USE OF HORMONE PRODUCTS IN BEEF PRODUCTION

Several hormonally-active products are approved for use in beef cattle to enhance rate of growth and improve conversion of feed to meat. Although it is commonly said, it is erroneous to claim that hormone-based growth promotants result in accelerated "fattening" of cattle. Just the opposite is true. The use of these products results in increased growth of lean muscle tissue at the expense of fat deposition.

> All products are approved by the Food and Drug Administration on the basis of very stringent tests for safety. There is no evidence of any human health problem from the use of any of these products.

Some of the growth implants involve natural hormones; others involve use of synthetic products. Whether the hormone product is natural or synthetic, the principle involved is the same, and safety is the same.

For a natural hormone, FDA requires that the added amount of hormone from an average daily intake of meat not exceed 1% of the daily production of that hormone by a person in the most sensitive segment of the human population. While the "1% rule" in itself assures safety, it also should be noted that only 10% of the hormone ingested by mouth is actualy absorbed by the body. Tests for synthetic hormone compounds are equally strict.

Hormone compounds are produced naturally by the body --- any body. This includes humans and other animals and even plants. In fact, many plants have much more estrogenic (female hormone) activity than meat ever can have, whether produced with hormone implants or not.

> Because hormones are produced constantly by all animals, including humans, there always is at least some hormone in the muscle. Normal body function is absolutely dependent upon the presence of hormones of various classes.

Table 1 shows daily production of estrogen by humans. The measurement used is nanograms. A nanogram is 1 billionth of a gram. (Roughly the equivalent of one blade of grass in a football field covered with grass).

-over-

Prepared for: ***BEEF PROMOTION AND RESEARCH BOARD***
P.O. Box 3316, Englewood, CO 80155/P.O. Box 8117, Chicago, IL 60681-0117

By: ***NATIONAL CATTLEMEN'S ASSOCIATION***
P.O. Box 3469, Englewood, CO 80155, 303/694-0305

BEEF

TABLE 1 Daily Human Estrogen Production
(Nanograms)

Human	Amount
Female child, before puberty	54,000
Male child, before puberty	41,000
Non-pregnant woman	480,000
Pregnant woman	20,000,000
Adult male	136,000

Table 2 shows the estrogen level in beef from non-implanted and inplanted steers and from heifers.

TABLE 2 Estrogen Levels in Beef

Beef Source	Nanograms per gram of muscle	Nanograms per 3 oz. of muscle
Steer, implanted	0.022	1.9
Steer, non-implanted	0.015	1.3
Heifer	0.013	1.1

There is virtually no difference among the two steer meats and heifer meat. Furthermore, any hormone activity in beef is infinitesimal and of no significance whatsoever when compared with daily production of hormones by the body.

A non-pregnant woman produces at least 400,000 times as much estrogen every day as she can get from an average size serving of beef from an implanted animal. Depending on the stage of her own reproduction cycle, that number could increase to 4.0 million times as much estrogen being produced daily by her as would be consumed in a beef serving. This person could consume 480 lbs. of beef per day (if that were physically possible) from inplanted animals without ingesting more than 1% of her daily estrogen production. Further, considering that only 10% of estrogen consumed orally is absorbed by the digestive system, she could eat 4,800 lbs. without breaking the "1% rule". The additional estrogen in a 3-oz. serving of beef that results due to implanting represents about 1/10,000th of 1% of the daily production of estrogen by a non-pregnant woman.

Table 3 shows estrogen levels in various food products.

-more-

TABLE 3 Estrogen Levels in Foods

Food	Nanograms per gram of food	Nanograms per 3 oz. of food
Beef from implanted steer	0.022	1.9
Wheat germ	40	3,400
Soybean oil	20,000	1,680,000
Milk	0.13	11

Soybean oil, which is found in many vegetable oil products, has almost 1 million times as much estrogen as meat from an implanted steer. In a meal containing potatoes, whole wheat bread, green salad, green peas and round steak from estrogen-treated cattle, the food containing by far the least amount of estrogen is the round steak. In massive amounts, estrogens have been shown to cause tumors or cancer in animals or man. But the amounts of estrogen in plant and animal foods have shown no physiological effect whatsoever.

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Sources: Dr. Darrell Wilkes, director of research, NCA; Dr. Gary Smith, head, animal science department, Texas A&M University.

2/15/89

Mr. Chairman, Members of the Ag Committee:

My name is Jayne Link, I am the Manager of People's Grocery Cooperative in Manhattan,KS. We are a small but growing co-op, we've experienced a 33% growth in income this past year and similar or better growth in the 2 previous years.

I am representing the 110 member households here in asking that there be a bill that establishes a Kansas Organic Definition.

Customers who want to purchase organically grown foods are frequently asking me "How do I know for sure it's really grown organically?" I point out that certification organizations set certain standards and if they are certified by those organizations I feel confident in selling these goods as such.

In Kansas consumers and retailers need protection from products that are sold as organic but are not. There are consumers because of health reasons need to eat foods that are only organically grown--anything less could make them seriously ill. Attached to my testimony is a letter from one such woman from Waterville, KS her name is Irene Witham . As a retailer we need assurance that the products we sell as organic are organic.

During the growing season I am approached by various growers that tell me they have "organic produce". Upon further questions there are at times reason to believe that these goods are not organic--but are being peddled by people who are trying to "cash in" on the organic market.

Senate agriculture
2-15-89
attachment 5

Our co-op purchases 75% of our products from our major supplier "Blooming Prairie Warehouse" in Iowa City, Iowa of that 27% of those purchases are organic. These products have met certification standards that are accepted by our cooperative distributor and I feel confident selling them as such.

I would like to be able to switch some of those purchases to local Kansas organic products, thereby supporting Kansas producers, plus keeping Kansas dollars in Kansas. There is a growing market for these products and this could help stimulate new industry here in Kansas. Growers would then have organic certification that would meet the standards of larger organic brokers out of state.

I think it is very important that a certification board be set up to assure accountability if violations or standards are not met. It would also give growers recognition for meeting these standards.

As a consumer and retailer in the state of Kansas I encourage you to pass a Kansas Organic Definition Bill that sets up a certification Board for accountability to us all.

THANK YOU!

My name is Irene Witham; I am 58 yrs. old; wife, mother and Grandmother.

Six years ago I became a victim of Enviromental Illness, which means my body became overloaded with toxic chemicals from our modern day world. I am allergic to the many chemicals so widely used in every aspect of life today.

To be able to live, I have been forced to search for ways of making my own environment safer: this ~~means~~ has caused many changes in my lifestyle.

One of the hardest has been trying to find a variety of organically grown foods, processed and packaged without chemical contamination, yet at a price I can afford. When I pay a higher price for a food "labled" organic, I would like to have confidence that it truely is. When I eat heavily contaminated foods, ~~like~~ I experience flu-like symtons and can sometimes detect the kind of chemical used. For instance, anything sprayed with Malathion leaves a lingering taste of the chemical & causes severe diarrah. Also color-coatings inside ~~the~~ cans are pure "phenol" and very toxic to me.

I want to thank all of you who are

working to bring us safe, wholesome foods. I look forward to the day when it is available in the super markets and all the "poisoned" foods are nothing.

God bless you all.

P.S.

The doctors who treat this illness are called "Clinical Ecologists" in the new field of medicine termed, "Clinical Ecology".

This past summer I went to a Clinic in Dallas, Tx. known as the best treatment center for Enviromental Illness in the United States. The outstanding Doctor in this field ~~is~~ Dr. William Rea of the Enviromental Health Center, ~~Dallas~~ 8345 Walnut Hill Lane, Dallas, TX. 75231-4262 Tele. number (214) 368-4132

20th century disease

Clinical ecologists expect to see more of illness dogging Waterville woman

By SALLY GRAY

In December 1982, Irene Witham got the flu.

Her life has never been the same, nor will it ever be.

She is the victim of environmental illness, also known as the 20th century disease, environmental allergies or allergic ecologic disease. Odors from chemicals most people aren't even aware of can cause allergic reactions in victims of environmental illness.

Witham, 55, Waterville, emphasizes that the flu virus alone did not cause the disease. The illness is usually brought on by a combination of factors, including stress, hormonal changes, or the immune system's being depressed by an infection.

In some cases, environmental illness occurs after a person suffers a "chemical overload," such as a massive dose of a pesticide.

Clinical ecologists — physicians who specialize in this area — expect to see more and more cases because of the increased use of chemicals and because the illness is being better diagnosed.

Other physicians scoff at the ire field of clinical ecology. itham says that before the set of her illness, she never had an allergy.

"I've always been so healthy, active and really enjoyed life,"

—Photo by Sally Gray

Irene Witham

Surroundings make people sick

Most people don't have problems with the many chemicals they're exposed to every day.

But a few people cannot tolerate such exposure, and those people can be devastated, says Dr. W.L. Sportsman, a Kansas City allergist.

Sportsman, a member of the American Academy of Environmental Medicine, says physicians are seeing more and more problems with environmental illness, or at least are recognizing it more.

"People are gradually becoming aware that they are being made sick by things they're surrounded by," he says, and notes there is a greater exposure to pesticides, herbicides and manufacturing chemicals these days.

People are finding out that sometimes the cause of an illness is not necessarily an infectious agent, but "maybe the environment itself is becoming unhealthy," Sportsman says.

People who have allergies are usually the ones who get into trouble with environmental illness, he says, and allergists can go only so far with standard treatments for these people.

In severe cases, Sportsman says, a patient can go to a special clinic devoted to environmental illness, and undergo extensive tests to determine what substances are making him ill.

The treatment Sportsman uses includes elimination and avoidance of offending substances, and the patient is tested for allergies, including food and chemical ones.

About 10 to 12 percent of the general population has serious allergies, he says, and "a much smaller percentage" falls into the category of environmental illness.

Sportsman says that the field of clinical ecology is controversial and that many physicians don't recognize it as a valid field of medicine.

"It's true you can take care of the majority of cases with standard treatment," he says. "But some (people) come into the office who have symptoms you can't help. . . I want to use every available means to help, rather than say, 'You just have to put up with this.'"

He says clinical ecology is like any new concept in medicine, "It takes awhile to be accepted."

Even walking past the gas water heater and paneling containing particle board and walking across rubber-backed carpeting bothered her.

So the Withams made major renovations. All the natural gas lines were removed, and the

a move back to Marysville was out of the question, she says, because the water is more heavily chlorinated than Waterville's and because there is a large number of trains.

Don Witham retired in March 1985 and the couple moved to

One of Witham's correspondents in Western Kansas is confined to her bedroom, which has been made "safe," and Don Witham says some patients are so severely allergic to so many substances that the people must live in

because the illness is being better diagnosed.

Other physicians scoff at the entire field of clinical ecology.

Witham says that before the onset of her illness, she never had an allergy.

"I've always been so healthy, active and really enjoyed life," she says.

The change in her lifestyle has been dramatic. She must caution visitors to her home not to wear perfume, hair spray or clothes laundered with fabric softener.

She cannot read new magazines or newspapers because of the fumes from the ink. She cannot use toothpaste or cosmetics, and her husband, Don, cannot use shaving lotion because of her sensitivity. She must have all-cotton curtains and bedding.

She cannot have appliances that use natural gas.

The list of everyday items her body cannot tolerate is long.

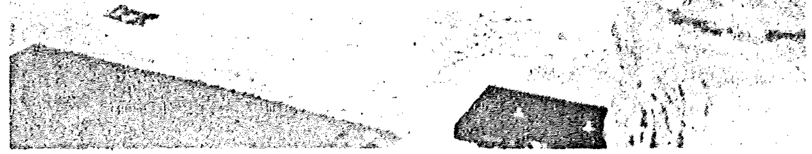
Her symptoms vary with the offending odor and can include coughing, pressure in her head, loss of coordination, inability to concentrate or remember things, pain in her joints, nausea and extreme fatigue.

Along with the difficulty of having to deal with the physical side of the illness is the difficulty of having a little-known disease that sometimes is misunderstood by people around her.

"A lot of people think that I look so healthy," she says. "Many people don't believe me and can't understand how I can be affected."

Other people are afraid of her, she says. One neighbor, though, Myrtle Dettmer, has "gone out of her way to make me feel good" and makes an area of her home tolerable so Witham can visit.

"We have no social life," her husband says, but the couple can



—Photo by Sally Gray

Irene Witham

take day-long trips. Witham must take her oxygen bottle, which is equipped with a ceramic, not plastic mask. The tubing is tygon instead of plastic.

A combination of factors led to Witham's illness.

In July 1979, she and her husband, who was an air traffic controller at the Lincoln airport, moved to a 3-year-old house in the country near Lincoln.

"We could tell there was a propane leak," Witham says, so the propane supplier fixed the problem. She says, however, that the basement always had an odd odor.

The furnace and gas water heater were in the basement, and Witham liked to paint and sew there.

"I was being bombarded," she says. "My indoor air was polluted and my outdoor air was polluted."

Besides pollution from the airport, there were automobile exhaust fumes from traffic on Interstate 80 and the city, exhaust from trains and agriculture spraying.

At Christmas 1982 she came down with a virus and coughed with every breath. Later, when an antibiotic could not clear up the inflamation, she went to an ear, nose and throat specialist who said she had vasomotor rhinitis. She got more medicine and a nasal spray.

But her condition worsened, and she became weak and unable to do her housework. She then went to an allergy specialist and got more medicine. The physician told her she was allergic to odors and advised her to avoid everything that bothered her.

"No medicine worked," Witham says.

A breakthrough came when she went to the beauty shop for a hair cut. She cautioned the hairdresser not to put her near another customer with hair-spray or who was smoking, and Witham explained why.

The hairdresser said Witham sounded like a woman she had read about in People magazine. The hairdresser looked all over the shop for that issue but could not find it.

Witham wrote to the magazine and two months later received the issue containing the story, an interview with clinical ecologist Dr. Alfred V. Zamm.

"Everything I read, I said, 'That's me,'" Witham says. "I had never heard of environmental illness."

Witham called the library to get a copy of Zamm's book, "Why Your House May Endanger Your Health."

After reading it, she began taking scented items out of her house. She removed cosmetics, perfumed soaps, detergents, many plastic items and items made from petroleum.

"The more (items) I got out of my house, the better I was feeling," she says. "Then one day they sprayed corn fields by our house. I had an immunity breakdown and was set back worse than when I started."

Even walking past the gas water heater and paneling containing particle board and walking across rubber-backed carpeting bothered her.

So the Withams made major renovations. All the natural gas lines were removed, and the heating system was converted to electricity. All the insulation was replaced.

During the work, Witham had to remain outside on the deck and lived in a self-contained trailer in the back yard. If she walked into the house, she would instantly get a nosebleed.

"There was never a day went by that I wasn't allergic to something," she recalls.

She had to give up going to church because she couldn't stand the drive across town, and, she says, the church was sprayed for termites.

"Also, everyone tries to smell so good on Sunday," she says.

She was unable to get out to do much shopping. When she would go someplace "I'd get zapped again. Allergies cause stress, and the effect snowballs.

"There were times I began to feel normal, then I'd go out and try to do too much."

She knew that the only way she would get better was to move to an area with cleaner air.

One day as they were going home after visiting relatives in Topeka, the Withams stopped in Waterville to visit Mr. and Mrs. Lawrence Hull, relatives of Don's. The Hulls mentioned that an older house in town was for sale, and the Withams drove by it.

They went home, made a list of everything a home would need in order to be "safe" and decided to return to look at the inside of the house.

Witham, whose maiden name is Breit, is a Marysville native and a 1948 graduate of MHS. But a move back to Marysville was out of the question, she says, because the water is more heavily chlorinated than Waterville's and because there is a large number of trains.

Don Witham retired in March 1985 and the couple moved to Waterville in April. Because he had had a heart attack, they were "a little scared for him to move down here, but this move has been good for Don" because the pace of life is slower, Mrs. Witham says.

"It's been culture shock," he says with a smile.

In early summer of 1983 Witham had gone to an allergist in Omaha who did extensive tests that included putting drops of selected chemicals under her tongue. The chemicals caused everything from itching to convulsions.

She then knew more precisely what chemicals to avoid.

"The doctor helped me but didn't go far enough," she says.

After the Withams' move to Waterville, her sister Dorothy, who lives in Leavenworth, told her of a clinic in Kansas City where she might get some help.

In early March of this year, Witham went to the physician, Dr. W.L. Sportsman, a member of the American Academy of Environmental Medicine, who tested her for food allergies. She now knows what foods to avoid, has neutralizing drops to put under her tongue before she eats to desensitize her to some foods, and takes injections for her allergies to mold, pollen and animal dander.

To help cope emotionally, Witham writes to others afflicted with environmental illness but has yet to meet any other patient face-to-face.

A woman from Missouri has told her about the formation of a support group, and Witham is encouraged about that.

One of Witham's correspondents in Western Kansas is confined to her bedroom, which has been made "safe," and Don Witham says some patients are so severely allergic to so many substances that the people must live in rooms lined with foil.

Coping physically has meant other lifestyle changes for Witham.

"My bathroom looks like a kitchen," she says.

She uses oatmeal, made fine in the blender, for face powder, baking soda for toothpaste and jojoba and olive oil for skin lotion.

When eating at a restaurant, the Withams go earlier or later than usual mealtimes. Witham says she is also getting braver about politely asking smokers to extinguish their cigarettes.

The couple can attend church again, at the First Baptist Church in Blue Rapids, which has an open-style sanctuary. The congregation lets the Withams have one section to themselves.

"It's really great to be able to go to church," she says.

Witham stresses that environmental illness "can hit anyone at any age."

"It's like smoking," she says. "Everyone says, 'It (lung cancer) can't happen to me.'"

"With the increased use of chemicals, I worry about my children and my grandchildren."

Witham says part of the tragedy of environmental illness is that most persons don't realize what is wrong until they are severely ill.

"I think there are a lot of people who have environmental illness to a smaller degree," she says.

Witham says she would be glad to talk to anyone who might need help.

TESTIMONY TO T SENATE AG COMMITTEE S B 3

A PRODUCERS VIEWPOINT

My name is Oren Holle and I farm with my brother, Leland near Marysville, Kansas in northwest Marshall county. We operate 1100 acres largely without the use of chemical herbicides and insecticides. Approximately one-half of this acreage is in commonly grown crops and the balance is rangeland for our 70 cow beef herd. Our grain production is used primarily in our 1500 head farrow to finish hog operation which we also manage largely without the use of drugs, feed additives or medications.

We have been what is commonly refered to as "transitional" farmers for the past four to five years in that we still use some products not acceptable within the framework of the term "organically grown" as it is presently understood. We are firmly convinced however that within the next several years we con fit our production methods within the basic framework of SB 173. Productive and profitable agriculture is possible and practical under these basic guidelines.

It would be nice, from our perspective, if our current methods of production would fit the term "Organic" but that brings up the point that the definition of "Organic" must be reasonbly specific. we can see that anything short of clear cut guidelines leave an area wide open for abuse.

The terms "Organic, Organically Grown, or Natural" have gained wide acceptance in grower and consumer circles alike. It is time to establish the true meaning of these terms so that consumers may be confident that products so labled conform to a set of basic standards that clearly mean they will be free of all possible traces of synthetic chemical formulations.

We really don't want another set of government regulations, but unfortunately, as producers we are powerless to enforce any basic plan with out them.

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e also believe it will tter serve the ineterest all concerned that a state agency be placed in charge rather than attempting federal legislation in this matter.

As producers we lack the expetise to propose all the proper legal terminology neccessary to formulate an enforceable statute, but allow us to emphasize a few points important to us as organic growers.

1. The terms "Organic, Organically Grown or Natural" must be identified as being synonomous.
2. Basic standards must be specific so that abuses and violations can be readily identified.
3. Terms of the law must apply equally to growers, processors and consumers of Organic products

These three points, in our opinion can be served by the terms of SB 173.

As an additional point, registration of certification needs to be simple and reasonbly convenient so that it will encourage rather than discourage participation.

Possibly the establishment of a system to register existing certifying agencies might serve that purpose. If you would allow us an example; The Organic Crop Improvement Association is currently a nationally recognized certification agency. If it is determined that their standdards, certification procedures and enforcement policies meet meet or exceed the basic guidelines set forth by statute then it would be a fairly simple matter to have them register their certified growers as a group. Their Certified Organic label could then be deemed acceptable. We believe that other legislation may already be proposed that could serve that purpose and we would strongly support that concept. This kind of procedure would serve to streamline operations and help to reduce the expenture of time and money to make this legislation both affordable and effective without undue burden.

The time has come to take action on this matter. There is a growing concern for chemical management, groundwater contamination and environmental impact to name a few. Due to these factors we believe that positive action to address this issue can serve to strengthen the econimic viability of a new era in agriculture when growers consumers and processors once again take responsible action to assure a safe wholesome food supply for the consumer.

We believe Organic production is here to stay and will be a viable part of the market now an continue to gain importance into the next century. We can bring about a fair and equitable climate for this part of the food industry with responsible action now.

MERRITT HORTICULTURAL CENTER

PROGRAM GOALS

Merritt Horticultural Center, a division of Wyandotte Developmental Disabilities Services, has three goals: vocational training, therapy, and recreation, primarily for mentally and/or physically handicapped individuals using horticultural activities as a medium.

All clients participating in the greenhouse, garden, or lawn maintenance activities will be paid either piece rate or hourly wages.

PURPOSE

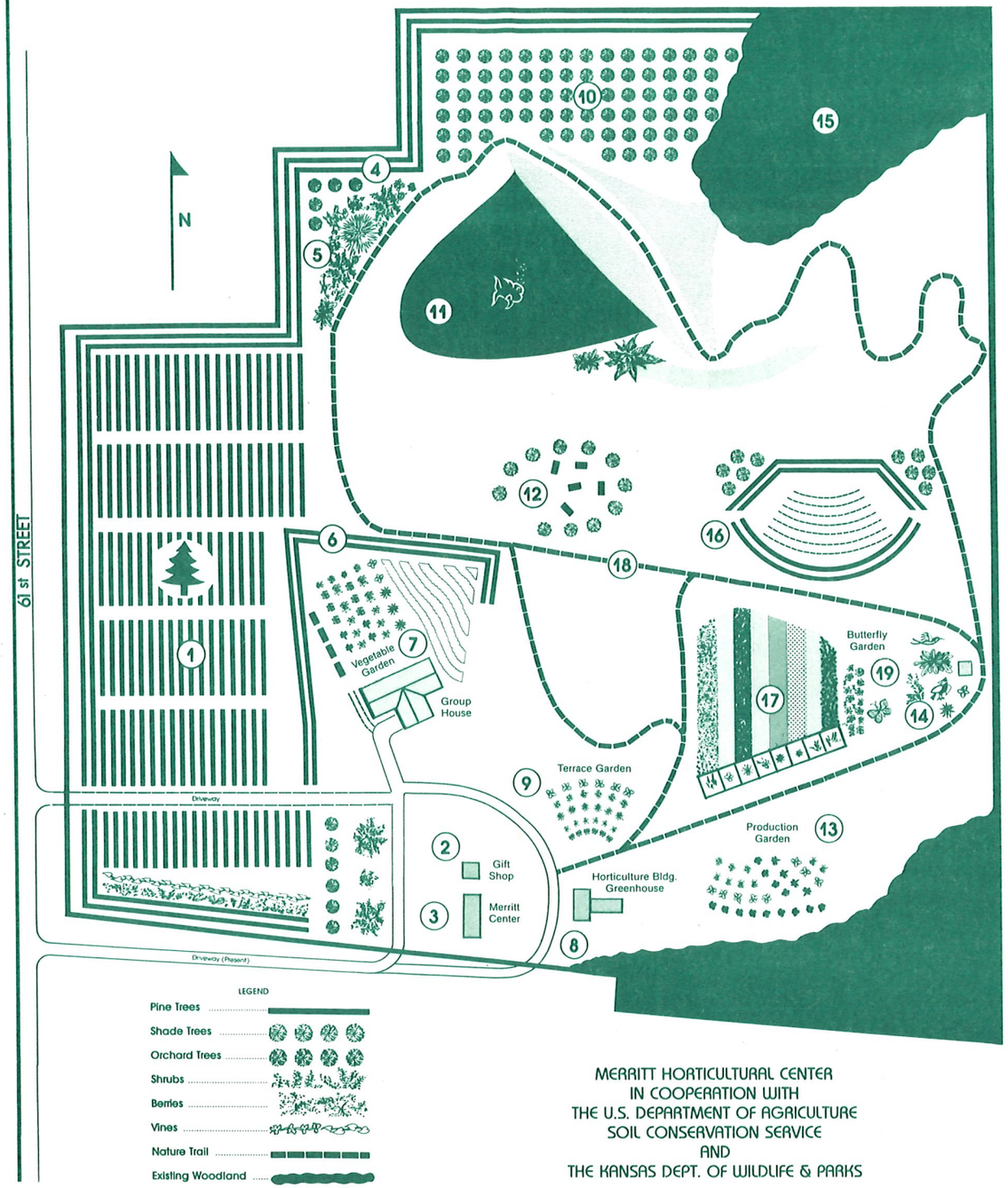
The purpose of these activities is to enhance the emotional and psychological well-being of clients referred; to provide job training for entry level horticultural activities such as mowing, trimming and basic greenhouse tasks; and to provide recreational experiences for individuals in an environment where their needs and requirements are a major consideration.

REFERRALS

CALL

299-9254

for information regarding admission



MERRITT HORTICULTURAL CENTER
IN COOPERATION WITH
THE U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AND
THE KANSAS DEPT. OF WILDLIFE & PARKS

MERRITT CENTER PROJECT COMPONENTS

1. Christmas Tree Planting
2. Gift Shop
3. Merritt Center
4. Border Windbreak
5. Wildlife Habitat Area
6. Residence Windbreak
7. Vegetable and Perennial Vegetable Garden
8. Horticulture Bldg./Greenhouse
9. Terrace Garden
10. Orchard
11. Pond
12. Picnic and Pond Observation Area
13. Production Garden
14. Wildlife Observation Area
15. Firewood Production Area
16. Amphitheater in Natural Setting
17. Native Grassland
18. Nature Trail
19. Butterfly Garden

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THE GIFT SHOP

The selection of unique gift items includes dried arrangements, handcrafted wood items made by Merritt Center employees, tropical and bedding plants, art and craft items by Kansas and midwestern artists and craftsmen.

Regular hours 8:30 - 4:00, Monday - Friday
Open additional hours seasonally
Call the Merritt Center for information.

The Junior League of Kansas City, Kansas, Inc. provided funding for gift shop remodeling.

FRIENDS of MERRITT

Your membership in Friends of Merritt helps provide support for our program and its goals.

- ☐ **$ 5.00 STUDENT MEMBERSHIP**
- ☐ **$15.00 REGULAR MEMBERSHIP**
- ☐ **$25.00 CONTRIBUTING MEMBERSHIP**
- ☐ **DONATION**

For the purchase of trees, flowers, shrubs, or gardening equipment

- ☐ **VOLUNTEER WORK**

Gardening, greenhouse, crafts, and special projects

Friends of Merritt will receive the WDDS newsletter and information regarding activities at the Merritt Center.

ENCLOSED IS MY CHECK IN THE AMOUNT OF

$ _____

Name _____

Address _____

City _____ State _____

Zip _____ Phone _____

RETURN TO
Merritt Horticultural Center
411 North 61st Street
Kansas City, Kansas 66102

BE A FRIEND!

YOU CAN HELP. . .

THROUGH YOUR MEMBERSHIP and THROUGH VOLUNTEER WORK

(see side panel for details)

HORTICULTURAL THERAPY

Karl Menninger — *"I want to be on record as believing strongly in this program of training in Horticultural Therapy. It is one type of what we call adjunctive therapy which brings the individual close to the soil, close to Mother Nature, close to beauty, close to the mystery of growth and development. It is one of the simple ways to make a cooperative deal with nature for a prompt reward."*

FUNDING

Merritt Horticultural Center is licensed as a work activity center by the Kansas Department of Social and Rehabilitation Services. Funding sources for this program include the Wyandotte County Mill Levy, the Kansas Department of Social and Rehabilitation Services, income from horticultural activities, contracts, grants, and donations.

AFFIRMATIVE ACTION

Wyandotte Developmental Disabilities Services and its program divisions are an Equal Opportunity Employer and adhere to all guidelines prescribed by Federal, State, and local governments related to fair employment practices and avoidance of discrimination.

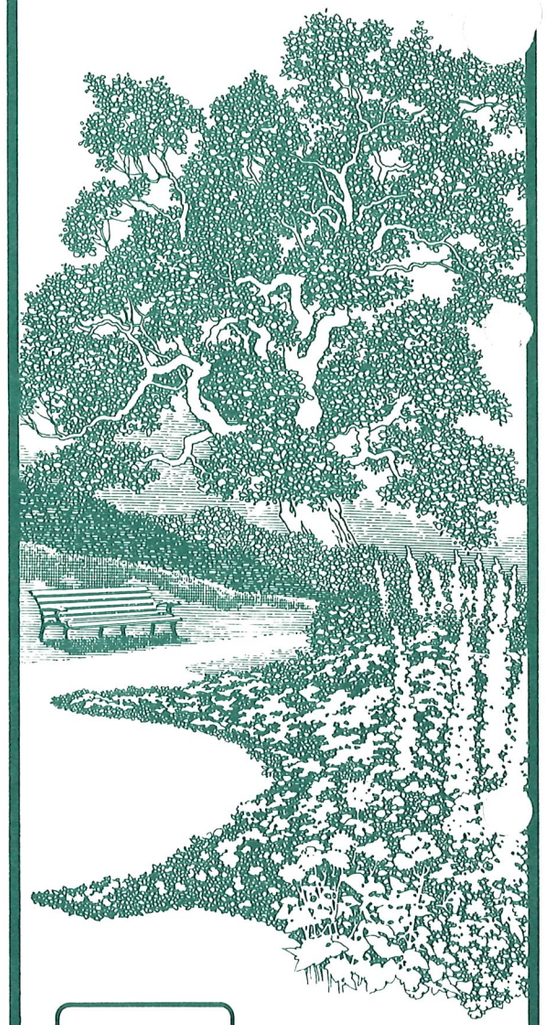
OTHER WDDS PROGRAMS

- WYANDOTTE DEVELOPMENTAL PRE-SCHOOL
  321-0217
- COMMUNITY LIVING SERVICES
  421 N. 61st St. 334-6721
- WORK ACTIVITY CENTER
  1333 Washington 281-5096
- SHELTERED SHOP
  750 Cheyenne 621-1498

MERRITT HORTICULTURAL CENTER ADVISORY BOARD

The Advisory Board is composed of professionals in Horticulture-related businesses, representatives of Federal and State agencies and community organizations who provide the expertise necessary for the success of our program.

Wyandotte Developmental Disabilities Services
Administrative Offices
9400 State
334-1330



merritt horticultural center

411 North 61st Street
Kansas City, Kansas 66102
299-9254

THE KANSAS RURAL CENTER, INC.
304 Pratt Street
WHITING, KANSAS 66552
Phone: (913) 873-3431

Testimony in Support of S.B. 173

Chairman Allen, and members of the committee. I am Jerry Jost speaking on behalf of the Kansas Rural Center. We support Senate Bill 173 and urge this committee to consider several options that would serve to strengthen the development of certification and marketing of organic produce in Kansas.

We believe this bill is primarily a consumer bill, designed to ensure that the consumer obtains the quality of product they want. The development of a process of certification and labeling of organic products can serve to protect the consumer and advance a growing market niche for farmers, processors and retailers of organic products.

Eleven states have already passed laws on organic certification and labeling. Six other states are considering similar legislation. The Midwestern Legislative Conference, a sub-group of the National Council of State Governments, have listed the establishment of organic food standards as one incentive to encourage agricultural development.

Organic food products is an expanding market. The experience with Bloomingdales of New York City last year has confirmed this is one specialty line Kansas farmers can benefit from. Estimates of the national organic market range in the billions of dollars. This growth market is an opportunity that this bill addresses and promotes for the state of Kansas.

We suggest the committee strongly consider amending the bill to set up an "overview board" that would authorize private, third-party certifiers to assure that produce grown and processed would be according to verifiable standards. This "privatization of certification" would minimize cost to the state and utilize paper audit trails and peer review of production standards to ensure

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appropriate quality standards. We recommend the committee also substitute the word "false" for the word "negative" in line 89 in order to better fit in with existing consumer protection laws.

In summary, this bill can offer a needed economic and marketing tool for a select number of farmers and processors in the state of Kansas. It is good legislation that should be further strengthened by a third-party certification amendment. Senate Bill 173 promotes Kansas agricultural products in an unique market niche. We urge you to take favorable action on this bill.

STATEMENT

OF

IVAN W. WYATT, PRESIDENT
KANSAS FARMERS UNION

ON

SB-173 (LABELING ORGANIC FOOD PRODUCTS)

BEFORE

THE SENATE COMMITTEE ON AGRICULTURE

FEBRUARY 15, 1989

MR. CHAIRMAN, MEMBERS OF THE COMMITTEE:

I AM IVAN WYATT, PRESIDENT, KANSAS FARMERS UNION.

THE KANSAS FARMERS UNION POLICY ADDRESSES SB-173 IN TWO PARTS.

FIRST, UNDER "ECONOMIC DEVELOPMENT" THE POLICY STATES;

"AN IMPORTANT SEGMENT OF ECONOMIC DEVELOPMENT SHOULD BE TO PROMOTE VALUE-ADDED AGRICULTURE PRODUCTS IN THE RURAL COMMUNITY BY PROVIDING MARKET AVAILABILITY WITH A BALANCE OF COMMITMENT TO BOTH EXISTING AND NEW ECONOMIC BASE INDUSTRIES.

AG-RELATED, VALUE-ADDED ENTERPRISES SHOULD BE SO DEVELOPED AS TO SUPPORT AND PROMOTE FAMILY-SIZED FARM UNITS AS OPPOSED TO CORPORATE OWNERSHIP OF AGRICULTURAL RESOURCES.

TRUE ECONOMIC DEVELOPMENT AND ENHANCEMENT FOR KANSAS IS THE ENCOURAGEMENT, ENHANCEMENT AND ESTABLISHMENT OF LOCAL COMMUNITY MANUFACTURING AND PROCESSING FACILITIES."

THE SECOND PART OF THE KANSAS FARMERS UNION POLICY STATES: "WE CALL FOR THE ESTABLISHMENT OF A PROGRAM, CERTIFICATION AND LOGO OF 'KANSAS CERTIFIED ORGANIC' PRODUCED FOOD PRODUCTS."

AS I READ SB-173 I DON'T BELIEVE IT SETS FORTH A STATE LOGO IDENTIFYING THESE PRODUCTS AS BEING ORGANICALLY PRODUCED, PROCESSED, ETC.

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THE STATE O' 'EXAS HAS A SIMILAR PROGRA' THAT IDENTIFIES PRODUCTS AS BEING ORGANICALLY PRODUCED WITH A STATE OF TEXAS LOGO.

IT SHOULD BE SIMPLE FOR THE STATE OF KANSAS TO PROVIDE, OR AUTHORIZE THE USE OF SUCH A LOGO WHEN THE GROWER OR PRODUCER REGISTERS WITH THE

KANSAS STATE BOARD OF AGRICULTURE AS PRINTED IN SB-173 (LINES 71, 72, 73).

SB-173 PROVIDES THE INCENTIVE, BUT MORE IMPORTANT IT ESTABLISHES THE GUIDELINE FOR DETERMINING WHAT "ORGANIC" MEANS IN REFERENCE TO FOOD PRODUCTS.

IT IS BECOMING MORE AND MORE EVIDENT THERE IS A GROWING MARKET FOR ORGANICALLY AND CHEMICAL FREE GROWN AND PROCESSED FOOD PRODUCTS, IRRELEVANT TO THE DEBATE OF WHAT IS GOOD OR BAD, OR DANGEROUS TO THE CONSUMER.

TO IGNORE, OR TO ATTEMPT TO PLACATE THIS MARKET IS FOOL HARDY.

HISTORY SHOWS YOU CANNOT IGNORE A VIABLE MARKET AND CANNOT FORCE THE CONSUMER TO BUY SOMETHING THEY DON'T WANT.

SOME 10 OR 15 YEARS AGO THE CATTLE INDUSTRY TRIED TO TELL THE CONSUMER THEY DIDN'T KNOW WHAT WAS GOOD FOR THEM WHEN THEY BEGAN TO DEMAND LEANER CUTS OF BEEF.

WHEN PEOPLE COULDN'T BUY THOSE LEANER CUTS, THEY TURNED TO POULTRY. MUCH OF THAT MARKET NOW HAS BEEN LOST FOREVER TO THE BEEF INDUSTRY.

THE AMERICAN AUTO INDUSTRY WENT THROUGH A SIMILAR "NO WIN" SITUATION ABOUT THE SAME TIME, WHEN THE AMERICAN CONSUMER WAS WANTING A SMALLER MORE EFFICIENT AUTOMOBILE. HOWEVER, "DETROIT" CONTINUED TO BUILD THE GAS GUSSLERS. ONCE THE JAPANESE CAPTURED THAT PART OF THE MARKET, AMERICAN MANUFACTURES FOUND IT VERY DIFFICULT TO REGAIN MUCH OF THAT MARKET.

TODAY THE BROILER INDUSTRY IS SUFFERING FROM CREDIBILITY GAP IN THE QUESTIONABLE INSPECTION OF THE SLAUGHTER AND PACKAGING OF MASS PRODUCED BROILERS.

PASSAGE OF SB-173 CAN SET KANSAS INDEPENDENT PRODUCERS AND PROCESSORS UP TO BUILD ON A GROWING CONSUMER MARKET FOR CHEMICAL FREE FOOD PRODUCTS, THAT ARE PROCESSED AND PACKAGED UNDER MORE HYGIENIC PROCEDURES AND CONDITIONS.

THIS IS A MARKET THAT ADAPTS READILY TO LOCAL COMMUNITY ECONOMIC DEVELOPMENT.

IT MAY NOT BE ADAPTABLE TO THE BIG CORPORATE ECONOMIC DEVELOPMENT SCHEME OF THINGS, THAT GRABS HEADLINES, BUT IT DOES ADAPT TO INDEPENDENT LOCAL PRODUCTION, PROVIDES DIVERSIFICATION AND LOCAL EMPLOYMENT THROUGH COMMUNITY PROCESSING FOR LOCAL, INTER-STATE AND INTRA-STATE MARKETS.

THE BEAUTY OF THIS TYPE OF "ECONOMIC DEVELOPMENT" IS IT NOT ONLY GENERATES LOCAL INCOME, BUT ALSO THE PROFITS STAY IN THE LOCAL COMMUNITY.

AS MOST OF US ARE AWARE, CATTLEMEN ARE FINALLY BECOMING CONCERNED ABOUT THE GROWING CONCENTRATION OF THE MARKETING AND PROCESSING IN THE BEEF INDUSTRY, AS IN THE BROILER AND EGG INDUSTRY, WHICH ISOLATES THE SMALLER FEEDER AND PROCESSOR OF LIVESTOCK FROM A VIABLE MARKET.

THIS BILL WILL NOT ONLY PROTECT THE CONSUMER FROM THE FRAUDULENT MARKETING OF IMITATIONS OF ORGANIC AND CHEMICAL FREE FOODS, BUT WOULD ENCOURAGE THE MANY INDEPENDENT PRODUCERS NOW PRODUCING FOR THAT MARKET AND WOULD ENCOURAGE OTHERS TO EXPAND OR ENTER INTO SUCH PRODUCTION AND MARKETING.

SB-173 DOES NOT SET A NEW PRECEDENT. WE ALREADY HAVE LAWS ON THE BOOKS THAT PREVENTS THE MARKETING OF IMITATION DAIRY PRODUCTS, MEAT PRODUCTS, ETC., WITHOUT PROPER LABELING.

I WOULD HOP[illegible]OT ONLY THAT THIS AGRICUL[illegible]RE COMMITTEE WILL GIVE A STRONG ENDORSEMENT OF THIS BILL, BUT IT WOULD ALSO RECEIVE ENCOURAGEMENT AND ASSISTANCE FROM THE KANSAS STATE BOARD OF AGRICULTURE AND KANSAS INC.

IN RECENT DAYS, THE USDA FOOD SAFETY AND INSPECTION SERVICE IS EXAMINING PROPOSALS FOR EXPORTING SUCH PRODUCTS. THE FEDERAL INSPECTION SERVICE ANNOUNCED IT IS PREPARED TO WORK CLOSELY WITH THE TEXAS DEPARTMENT OF AGRICULTURE FOR THE PRODUCTION AND CERTIFICATION OF CHEMICAL-FREE LIVESTOCK.

PASSAGE OF SENATE BILL 173 COULD NOT BE MORE TIMELY.

SB173STA.DOC

STATE OF KANSAS

DEPARTMENT OF HEALTH AND ENVIRONMENT
Forbes Field
Topeka, Kansas 66620-0001
Phone (913) 296-1500

Mike Hayden, *Governor*

Stanley C. Grant, Ph.D., *Secretary*
Gary K. Hulett, Ph.D., *Under Secretary*

TESTIMONY PRESENTED TO

SENATE AGRICULTURE COMMITTEE

BY

THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

Senate Bill 173

Passage of Senate Bill 173 will create a new Act directed at the regulation of organic food products. Senate Bill 173 defines "organic raw agricultural commodity," "processing" and "synthetically compounded." Registration with the Kansas State Board of Agriculture will be required of growers or producers of products to be promoted as organic. Foods included in this bill are currently regulated by the Kansas State Board of Agriculture thru various laws, or by the Kansas Department of Health and Environment thru the Food, Drug and Cosmetic Act.

Section 2, paragraph (e) requires foods to contain 10% or less of the level of pesticide, fungicide or herbicide regarded safe by the U.S. Food and Drug Administration. Such tolerances are established by the Environmental Protection Agency with enforcement provided by the FDA. In some cases such levels are the detection levels of the compound. Determinations of lesser amounts, such as 10%, are not practical with current analytical procedures.

At the present time the provisions of the Kansas Food, Drug and Cosmetic Act do not prohibit the identification of foods or food products as natural, organic, organically grown or biologically grown. These terms may be used along with common or usual product names. Labels may also carry statements regarding the use of pesticides, fertilizers and drugs.

Generally speaking, the KDHE is uncomfortable with the terminology used in this bill including organic, organically grown and biologically grown, being limited to certain types of foods. All plants and animals are composed of organic material and the growth process is biological. It is the position of the.

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Kansas Department of Health and Environment that provisions of this bill have little signifiance in the protection of the public's health. It is the recommendation of the Kansas Department of Health and Environment that the intentions of this bill be pursued thru voluntary agreement on standards by industry, rather than thru state agencies.

Mr. Chairman, I am available for questions.

Presented by

Stephen N. Paige
Director
Bureau of Food, Drug and Lodging
February 15, 1989

PRESENTATION TO THE
SENATE COMMITTEE ON AGRICULTURE
FEBRUARY 15, 1989

GOOD MORNING MR. CHAIRMAN AND MEMBERS OF THE SENATE COMMITTEE ON AGRICULTURE. MY NAME IS LARRY WOODSON AND I AM HERE TO OFFER TESTIMONY ON SENATE BILL 173.

THERE ARE A COUPLE OF POINTS I WISH TO RAISE RELATIVE TO THIS BILL.

1) THE KANSAS STATE BOARD OF AGRICULTURE IS IDENTIFIED AS THE AGENCY THAT PRODUCERS AND GROWERS REGISTER WITH AND THE REGISTRATION SHALL INCLUDE AFFIRMATION UNDER OATH. REGISTRATION IS REQUIRED IN ORDER TO IDENTIFY, LABEL, OR ADVERTISE FOOD AS ORGANIC.

THE AGENCY IS CHARGED WITH THE RESPONSIBILITY OF COLLECTING THE FEES FROM THE GROWERS AND PRODUCERS.

IF THE GROWER OR PRODUCERS ARE "REGISTERED" WITH THE BOARD OF AGRICULTURE AND WE HAVE ACCEPTED THEIR "AFFIRMATION UNDER OATH", WILL THIS IMPLY ENDORSEMENT? IF REGISTRATION IMPLIES ONLY REGISTRATION, NO

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FISCAL IMPACT IS JUSTIFIED.

ON THE OTHER HAND, IF ENDORSEMENT IS IMPLIED, THERE ARE NO PROVISIONS FOR SCIENTIFIC ANALYSIS, INVESTIGATIONS, OR AN AFFIRMATIVE OBLIGATION TO ENFORCE THE LAW.

2) SECTION 3(C) STATES THAT THE LABELING AND ADVERTISING SHALL BE IN ACCORDANCE WITH USDA, FDA AND STATE LAWS, REGULATIONS AND GUIDELINES. CURRENT USDA REGULATIONS DO NOT ALLOW FOR THE USE OF THE TERM "ORGANIC"-RELATED TO CONDITIONS UNDER WHICH ANIMALS WERE GROWN OR FED.

THE STATE MEAT AND POULTRY INSPECTION PROGRAM HAS ADOPTED THE FEDERAL REGULATIONS BY REFERENCE AND THE 50% FEDERAL FUNDING OF THE PROGRAM IS BASED ON MAINTAINING AN "EQUAL TO" STATUS WHICH INCLUDES LABELING OF MEAT AND POULTRY PRODUCTS.

SO, EVEN IF PRODUCTS WERE PRODUCED IN ACCORDANCE WITH THE CRITERIA ESTABLISHED IN SECTION 2(C), THEY STILL COULD NOT BE LABELED AS "ORGANIC".

DAIRY PRODUCTS ALSO CAUSE A CONCERN.

WHILE RECOGNIZING A GROWING CONSUMER INTEREST IN AND DEMAND FOR ORGANIC FOODS BASED ON THE BELIEF THAT THEY ARE SAFER, IT WILL BE DIFFICULT TO ASSURE FROM A SCIENTIFIC STANDPOINT THAT THEY CONTAIN NO MORE THAN 10% OF LEVELS OF PESTICIDE, FUNGICIDE, OR HERBICIDE GENERALLY RECOGNIZED AS SAFE. GENERAL SCREENING OF A PESTICIDE CAN RUN IN EXCESS OF $150-$200/SAMPLE. SPECIFIC IDENTIFICATION AND QUANTIFICATION MAY RUN EVEN HIGHER.

IN ABSENCE OF ADEQUATE DEFINITIONS AND ACCURATE MEANS OR SCIENTIFIC MEANS FOR ENFORCEMENT, WE ARE ENTERING UN-CHARTERED WATERS. RECOGNIZING THIS, WE WILL DO OUR BEST TO CARRY OUT THE WISHES OF LEGISLATURE. IF NECESSARY, WE MAY NEED TO FINE TUNE THE BILL AT A LATER DATE - SHOULD A <u>UNIFORM</u> BILL BE FORTHCOMING FROM WASHINGTON.

HAVING RAISED THESE POINTS OF INTEREST OR CONCERN, WE WILL ATTEMPT TO ANSWER ANY QUESTIONS THAT YOU MAY HAVE.

Kansas Agri-Women

organized in 1973 as United Farm Wives of America

STATEMENT OF THE KANSAS AGRI-WOMEN

TO THE SENATE AGRICULTURE COMMITTEE

SENATOR JIM ALLEN, CHAIRMAN

REGARDING S.B. 173

FEBRUARY 15, 1989

Mr. Chairman and Members of the Committee, I am Chris Wilson, President of Kansas Agri-Women. Kansas Agri-Women is a promotional and educational organization of farm, ranch and agribusiness women. We are one of 37 affiliate organizations of American Agri-Women, the nation's largest coalition of women in agriculture. I am currently serving as National Legislation Chairman of American Agri-Women.

One of the main issues we will be addressing on the national level this year is food safety, and S.B. 173 has food safety implications. While our organizations do not have positions in regard to labeling of foods as "organic", we are concerned about food safety issues and would like to share some information with you on this important topic. As producers, we are proud of the safe, wholesome and abundant food supply we provide. We hope you will have a few minutes to read the food safety brochures we have distributed with our statement.

We have questions concerning how organic labeling would affect our members who grow specialty crops which are sold through health food stores. For instance, a number of our members in Western Kansas produce pinto beans and sunflowers. These commodities, grown with the aid of commercial fertilizers and pesticides, are sold to a firm in Colorado. They are then packaged and sold in health food stores. Because they are sold

for a higher value in the health food stores, and are presumed by the consumer to be something different than what is available in grocery stores, the price to the producer is often higher. While we appreciate the higher value of the crop, we question the practice of health food stores in marketing products as "organic", when the consumer may believe that to mean produced without the aid of commercial fertilizers and pesticides.

Also, almost all food produced in the United States meets the requirement of Sec. 2 (e) on lines 68-70 of the bill. According to the Food and Drug Administration, only 0.2 to 0.3 percent of foods contain higher levels of pesticides than are allowed by federal standards. There are no detectable residues of pesticides in 80 to 90 percent of all food, and of the remaining 10 to 20 percent, most would meet the requirement in Sec. 2 (e) of no more than 10 percent of the FDA tolerance levels. As a result, would our Western Kansas pinto beans continue to be able to be labeled "organic" under S.B. 173?

While it appears that this bill would allow us to continue to use production tools, such as animal and plant medicines (antibiotics and pesticides), and yet have the products labeled "organic", the consumer would be purchasing something other than perceived. Also, the consumer would develop the perception of "organic" versus non-organic, fostering misconceptions about the safety of our overall food supply. These are some of the many questions which need to be addressed in considering S.B. 173.

Thank you for the opportunity to comment. I would be happy to respond to any questions you may have.

FOOD SAFETY

IT'S HARD TO KNOW WHAT TO BELIEVE

HERE ARE THE FACTS

The dietary dose (of pesticide residues) is so small as to pose a trivial risk.

Dr. Bruce Ames, Chairman of the Biochemistry Department at the University of California, Berkeley

If we needlessly pull effective products from the agricultural fields, there is a danger of insect infestation, less food and higher consumer costs.

Elizabeth Whelan, founder and Director of the American Council on Science and Health

Although many people believe the most significant threats to health in the diet are additives, preservatives, and pesticides, most experts agree that such substances as fat, cholesterol, and sodium are of much greater concern because they are indisputably involved in some of the leading causes of death in the U.S., including heart disease and stroke.

Tufts University Diet and Nutrition Letter

QUESTION I have heard a lot about pesticides in food. Should I be afraid to eat fresh produce?

ANSWER No. To assure food safety, the California Department of Food and Agiculture (CDFA) spends more than $40 million each year for the nation's most advanced and comprehensive program to regulate and monitor pesticide use. The goal of this successful program is to be sure there are no unhealthy pesticide residues in your food.

QUESTION What does the regulatory and monitoring program involve?

ANSWER The process begins long before a crop is planted in the field. Pesticides must be registered before they can be used in this state. They are carefully evaluated by CDFA staff scientists for any human health and environmental effects. Materials which cannot be used safely are not registered. This is in addition to the review done by the federal government.

To assure compliance with the nation's toughest pesticide laws, California has the largest and best-trained enforcement organization in the nation. Agricultural biologists in every county issue permits before certain chemicals can be used and make site inspections to be sure they are applied correctly.

As a final check, the produce you eat is sampled for traces of pesticides. CDFA tests more produce for pesticide residues than any other state, looking for residues that exceed the maximum allowable levels set by the federal Environmental Protection Agency (EPA). These standards are called "tolerances."

In short, the state's monitoring program, including registration, overseeing chemical use in the field, and testing produce for residues, ensures that your food is the most wholesome in the world.

QUESTION How does California's residue testing program work?

ANSWER Agricultural inspectors take random samples from fields before harvest, from wholesale markets, chain store distribution centers, packing sheds, processing plants, retail markets, and points of entry into the state.

Within hours the samples are analyzed by screening tests which can detect any of more than 100 different pesticides. Additional tests are often run to look for pesticides of special interest which do not show up in these broad-spectrum tests. CDFA's analytical methods can detect any pesticide which can occur as residue on food crops, and find chemical traces in the parts-per-billion range. One part per billion is the equivalent of one second in 32 years.

QUESTION What does the produce testing program show?

ANSWER Over the many decades of the state's testing program, the results have been very consistent.

- There are no residues detected in about 80 percent of the samples.
- Residues below—usually well below—the allowable levels are found in about 18 percent of the samples. In the great majority of these cases, the residues are less than half the tolerance levels.
- Annually, less than 2 percent of the samples violate EPA-established tolerances. Since these standards include a safety margin, illegal residues rarely present a health risk. In fact, health experts recommend we eat more fruits and vegetables to increase fiber in our diet and reduce the risk of some types of cancer.

QUESTION What happens when illegal pesticides are found?

ANSWER It doesn't happen often, but when it does, investigators track it back to the source. If the crop is still in the field, harvest is prohibited and the produce can be plowed under. If produce with hazardous residues is found in the channels of trade, it is quarantined and destroyed.

In addition to the economic losses from the loss of a crop, growers who violate the law are subject to civil and criminal prosecution, fines, jail and the denial of permits to use chemicals to protect their crops.

QUESTION Many foreign countries don't have our strict pesticide laws. Doesn't that make imported produce particularly dangerous?

ANSWER In recent years, California has increased its monitoring of imported produce to 30 percent of the total sample. The results indicate very little if any difference in pesticide levels between imported and domestic produce. The U.S. Food and Drug Administration also inspects imported produce.

Producers who are growing for the U.S. market are aware of our more stringent regulations. If they want to sell in this market, they have to abide by our rules.

QUESTION Why are chemicals necessary to grow food crops?

ANSWER Pesticides, along with non-chemical techniques like rotating crops, help control insects, diseases and weeds. They make possible the abundance of fruits and vegetables you see in your market. Pesticides help make your food costs the lowest in the world. By making it possible to store produce and transport it over long distances, pesticides also help provide you year round with a wide variety of fruits and vegetables.

QUESTION Where do chemicals go after they are applied to a crop?

ANSWER Crop growth, wind and rainfall begin the breakdown into non-toxic materials. Sunlight, bacteria, and the crop itself continue the process. Most chemicals eventually dissipate into the environment as harmless, naturally occurring elements such as carbon, oxygen and hydrogen. The state's residue testing program is a final check.

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QUESTION But I keep reading stories about cancer-causing pesticides in food. It's hard to know what to believe.

ANSWER Believe the scientific evidence. All plants have naturally occurring toxic chemicals to protect them against pests. Carl Winter, toxicologist for the Cooperative Extension, University of California, Riverside, reports, "Virtually every food item produced has been shown to contain some natural toxins and it has been estimated that the concentrations of natural toxins in foods are 10,000 times greater than those of synthetic chemicals."

These naturally occurring chemicals far exceed the traces of man-made pollutants in your food. Even so, these "natural pesticides" are not considered concentrated enough to be dangerous. According to the American Cancer Society, cancer rates have stabilized or declined in recent decades, except for increases in lung cancer (blamed on smoking), and skin cancer (caused by excessive tanning).

In fact, we should be eating more fruits and vegetables, not less, the U.S. Surgeon General, the National Cancer Institute, American Heart Association and the American Cancer Society all tell us.

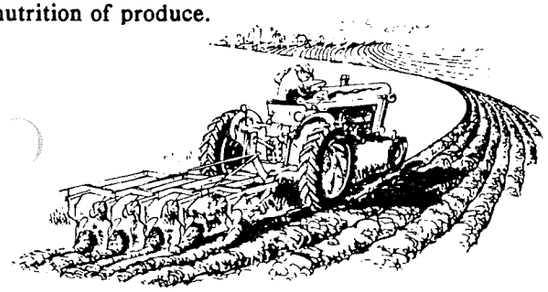
Fruits and vegetables can lower your risk of cancer because they are low in fat and high in fiber. A low-fat, high-fiber diet also decreases the risk of heart disease, high blood pressure and diabetes.

This brochure was developed in cooperation with the California Department of Food and Agriculture.

Why and how are pesticides used?

Pesticides are necessary in most commercial farming to improve food quality and [illegible]bility by reducing damage and [illegible]ition from insects, diseases and weeds. [illegible]des, along with other techniques like rotating crops to limit the build-up of certain insects, diseases and weeds, do more than just make produce look pretty. Effective control techniques keep bugs out of your food. By limiting insect damage, these pest control practices also protect plants, and you, from certain diseases, molds and mildew, which are much more likely to occur in plants damaged by insects. Pesticides are also necessary to control or eliminate natural toxins, some of [illegible]h are highly poisonous. These toxins are [illegible]duced by bacteria or fungi which could grow on foods if not controlled.

Some pesticides are applied directly to the plant, others are injected into the soil before or after the crop is planted, and some are applied after the crop is harvested to protect it from rotting in storage, transportation or display at your supermarket. Supermarkets, however, do not apply pesticides to produce and no chemicals are used in the water your store sprays on fruits and vegetables to keep them fresh. Pesticides do not affect the taste or nutrition of produce.



Are residues from pesticides present in significant amounts by the time I eat the produce?

No. Residues are not present in significant amounts for a number of reasons:
1) only part of the pesticide application reaches its target; the rest is dispersed and usually breaks down into non-toxic substances in the environment;

2) crop growth, wind and rainfall dilute the residues;
3) sunlight, micro-organisms and the crop degrade them further;
4) the insignificant residues that might exist are often concentrated in outer leaves or peel of produce that are often thrown away;
5) washing, peeling, and cooking usually remove residues; and
6) the government sets maximum allowable residue limits for each pesticide on each crop.

All of these factors restrict the potential amount of pesticides you might eat to levels which are not considered a significant risk according to scientific experts, including the World Health Organization. Still, there are those who feel any level of pesticide is significant and undesirable.

Are pesticide residues considered safe?

There is no standard or absolute scientific definition of "safe". As a consumer, you're exposed to only minute quantities of residues -- if any -- by the time the food gets to your table. The vast majority of health and food professionals consider this total daily amount almost negligible and of little significance, even if you ingest the residues at the maximum limits allowed by the government over a lifetime.

Nevertheless, high doses of some pesticides can cause adverse reactions in laboratory animals. This makes certain chemicals of more concern to toxicologists than others. These require close scrutiny during their licensing process and when used. This scrutiny ensures that the toxicity of the chemical -- at the level allowed -- doesn't present a significant health problem even if consumed over a lifetime. For your added safety the amount of residue you might possibly be exposed to by the time the food reaches you is many, many times lower than the federally allowable limits, which are already designed to provide you a big margin of safety.

When new information becomes available about a pesticide, the government may re-evaluate its safety. In some cases, this has resulted in prohibiting the further sale and use of the chemical. In such cases, what was once considered safe, under new information or standards of safety, has been determined to present too high a risk for the benefit received. In short, definitions of "safety" change over time to ensure you the highest possible level of protection.

Now that I'm eating more fresh produce, shouldn't I be more concerned?

You should be concerned with anything you put in your mouth. However, in general, scientists regard the effects of pesticides as having little or no adverse impact on human health for several reasons:
1) As noted above, it is virtually impossible to eat enough of one food at one time for the toxicity of the chemical (natural or man-made) to be a hazard, even with your increased consumption of produce;
2) most of today's pesticides break down into non-toxic substances relatively fast -- unlike older ones -- so they aren't stored in the body and don't cause ongoing exposure;
3) your body, through many different mechanisms, including metabolism, kidney and liver function and excretion, handles small amounts of many different chemicals simultaneously, even though any one of the chemicals in high doses has the potential to cause harm;
4) although it is possible to have additive effects of chemicals, there is little evidence of a "synergistic" effect (greater than the sum of the parts) given the levels and types of pesticides that may remain in foods. In fact, interactions between chemicals in foods do occur at times, making them less toxic.

You're already eating more fresh fruits and vegetables -- which are available and relatively low cost through the careful use of modern pest control techniques -- because reputable health groups have suggested that they significantly improve your health and help protect against some types of cancer. The key to a safe food supply is variety,

moderation, and a good sanitation program for growers, grocers and especially you, the consumer.

What is my role in helping ensure safe produce?

Besides eating a wide variety of healthful foods in moderation, there are several general rules you can follow to do your part in the safety chain:
--Wash all fruits and vegetables before your family eats them
--Peel fruits
--Remove the outer leaves of vegetables
--Store produce at correct temperatures and eat while fresh
--If you grow your own produce using pesticides, make sure you follow the manufacturer's instructions carefully

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How and why are our foods monitored for pesticides?

Standards for pesticide licensing and use are set by the U.S. Environmental Protection Agency (EPA) and monitored by the U.S. Food and Drug Administration (FDA). FDA personnel take samples of produce as it leaves the farms and orchards, at packing operations, wholesale markets and major produce distribution centers, and as it enters the country from foreign nations.

Pesticides are monitored for three major reasons:
1) to enforce the pesticide laws by identifying illegal pesticide residues and removing those commodities with illegal residues from the marketplace when possible.

"Illegal" means either: a) too much residue remains, or b) a residue of a pesticide is found but that pesticide is not authorized by EPA for use on that crop, even though it is approved for use on other crops.
2) to deter illegal residues by identifying problems caused by intentional misuse or some other unintentional factor, such as unusual weather conditions or poor farming practices. If illegal residues exist, the food is confiscated and destroyed and the farmer loses his investment.
3) to determine the incidence of pesticide residues in the food supply.

The FDA monitors chemicals that are frequently used, on frequently consumed foods, and those chemicals of a particular health concern. It is not the intent of monitoring to test all produce, because the only way to test for pesticides is to grind up the sample and analyze the "extract."

What do monitoring results show?

Since 1961 the FDA has analyzed chemical residues in 234 individual foods and more recently has studied the diets of 22 population groups based on age, sex, ethnicity and geography. With very few exceptions, dietary intake of pesticides is hundreds and even thousands of times lower than the Acceptable Daily Intake levels established by the World Health Organization.

Data from the FDA and state programs historically show that:

-- 80 to 90 percent of foods contain no detectable residues of pesticides (down to a minimum detection standard), because the produce was not treated or the pesticide has already degraded;
-- 10 to 20 percent contain traces of some chemicals, but at allowable limits not considered a health threat and which will further degrade by the time it reaches the consumer;
-- 2 to 3 percent contain residues of a pesticide which is not licensed for use on that crop (even though the same levels may be legal and allowable on other crops); and
-- 0.2 to 0.3 percent contain higher levels of pesticides than are allowed by federal standards and attempts are made to seize, destroy or hold the produce until the residues break down and the remaining residue is within the limits considered "safe".

Consider this example from California, which produces approximately half of the fresh fruits and vegetables consumed in the country. The 1987 State pesticide residue monitoring program indicates that, overall, less than 1.5% of all samples were not in compliance with federal standards.

What about foreign produce?

There is no reason to believe that foreign produce is less safe than U.S.-grown. Even though foreign countries do not have as strict pesticide laws as the U.S., all food imported to this country must meet the same standards U.S. farmers do in terms of which and how much residue is allowed on the food. Monitoring results in California, which tests a significant amount of foreign -- particularly Mexican -- produce, indicates that the compliance rate for foreign produce is about the same as for California-grown. If foreign produce contains illegal residues it is returned or destroyed. In addition, the grower must get official certification on his next five shipments -- before they leave his country -- that the food does not contain what the U.S. considers illegal residues.

Do waxes have chemicals in them?

The primary purpose of waxes -- produced by the plant itself or applied by man -- is to hold in moisture so the product, such as an orange, doesn't dry out. Sometimes, waxes contain minute amounts of federally approved fungicides in them to prevent the food from rotting during transportation and display. It is not the purpose of the wax to seal in pesticides applied in the field. Generally, waxes can be washed off with soapy water. This good practice also washes off dirt and germs from people handling the food.

What is being done to improve my food supply?

National and state monitoring programs are being revised constantly to improve the efficiency and effectiveness of the monitoring of our foods -- both domestically grown and imported. Farmers are learning to maximize the quality of their produce while minimizing the use of pesticides. They are providing vital data to the government about how and when they use chemicals, and what residues remain when the food leaves the farm. Food processors and chemical manufacturers are providing more and better data concerning residues. All of this information is/will be used to make more realistic assessments about food safety.

America's farmers and supermarkets are proud of their record in providing you with a safe, abundant, nutritious and relatively low cost supply of produce.

Other sources for more information on the safety of fresh produce are:

1) The consumer affairs expert at your supermarket
2) Write to:
U.S. Environmental Protection Agency
Office of Pesticide Programs
401 M Street, S.W.
Washington, D.C. 20460
3) Your County Agricultural Extension Agent (under county government in the phone book)

For answers to questions regarding the use of crop protection chemicals in food production, contact:

Dr. Linda Carter
Du Pont Company Agricultural Products
BMP, Walker's Mill 6-168
Wilmington, Delaware 19880-0040
(302) 992-6263

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Safe at the Plate

This nation is blessed with a fresh, nutritious and relatively low cost supply of fruits and vegetables which contributes significantly to good nutrition and improved health. Our produce is grown using a variety of farming practices, sometimes including the use of farm chemicals to control pests -- insects, diseases and weeds. Yet, most consumers like you are unfamiliar with why and how these pests are controlled and many have asked "Is our food safe?" This pamphlet is designed to provide you with some insight -- in an easy-to-read, question-and-answer format -- into the issue of food safety, specifically the use of pesticides.

RIED ABOUT PESTICIDES N FOOD AND WATER?— Here Are the Facts.

By Dr. J. Gordon Edwards

PESTICIDES AND PUBLIC HEALTH

Pesticides, in whatever form and for whatever use, are prime targets for media attacks. Little or no attention is paid to the positive values resulting from their use, while potential erse effects (usually having little or no basis in fact) are magnified out of all proportion. In reality, the hazards are infinitesimal compared to the dangers from common household products and chemicals that occur naturally in the environment. The chlorine in our drinking water is more poisonous than most of the insecticides and herbicides to which we may be exposed. Without chlorination, however, the disease-causing organisms in water would cause serious illness or death to many people, even in this country.

Pesticides annually save thousands of human lives in developing countries, increase the amount and improve the quality of agricul- l products, and abate the ravages of mal- rition and disease. Hundreds of millions of humans now alive and healthy would have died long ago if synthetic pesticides had not been used on their behalf. Modern man-made chemicals have replaced the more dangerous "natural" insecticides such as lead arsenate, sulphur, lime, cyanide and fluorine, which were the most widely-used pesticides prior to 1940. Those expensive chemicals were extremely toxic to humans as well as non-target birds and mammals, and persisted indefinitely in the environment. Whether pesti- s are "natural" or "man-made" has little g on how much of a hazard they pose humans and our environment.

CANCER TRUTH

Dr. Bruce Ames, chairman of the Biochemistry Department at the University of California in Berkeley, recently stated that "the total amount of possible carcinogenic pesticides we eat in a day, on average, is both trivial and about twenty times less in amount than the known natural carcinogens in a cup of coffee, which is in itself a minimum risk." EDB (ethylene dibromide) was the major fumigant of stored foods before it was capriciously banned by the Environmental Protection Agency (EPA). Ames points out that "its abundance in our daily food intake posed only one-tenth the carcinogenic hazard of the aflatoxins (natural chemicals produced by common molds) in a peanut butter sandwich."

TOXICOLOGY THAT MAKES SENSE

It is a toxicological principle that almost every chemical (natural *or* man-made) will be toxic at a large enough dosage, but at low enough levels every chemical is harmless to humans. Most critics of pesticides fail to acknowledge this, deliberately avoid mentioning the monstrous doses that were fed to experimental animals, and do not reveal how much would have to be ingested by a person in order to elicit comparable adverse effects. For example, a human would have to drink over 500 cans of diet soda daily in order to ingest the proportion of saccharin (per kilogram of body weight) that the experimental mice were forced to eat daily by researchers who sought to "prove" that the sweetener might be harmful to humans. There was obviously little reason for concern about drinking one or two diet sodas a day, but the media not only failed to put the experimental data into perspective, but further distorted matters by printing headlines like "PEOPLE EXPOSED DAILY TO CANCER AGENTS IN SOFT DRINKS." Such matters are discussed at length in Dr. Alice Ottoboni's recent book entitled, *The Dose Makes the Poison,* and in Edith Efron's classic volume entitled, *The Apocalyptics*

The concentration of any chemical in the environment or in food and drink must be expressed as a *proportion* within the samples analyzed, rather than simply cited as being "present." One part per million refers to the presence of one "part" of the chemical for each million "parts" of soil, water or food. Imagine a huge pile of pennies worth $10,000.00 (i.e., a million of them). Now add one more penny to that pile, and you will have added "one part per million," or "one ppm." No man-made chemical is toxic enough to exert harmful effects at such low concentrations, but some *natural* chemicals, such as aflatoxins and botulism toxins, are. A concentration of one part per billion (ppb) is one-thousand times *less* than one ppm. A pile of pennies worth 10 million dollars must therefore be imagined, whereafter one more penny added to the pile would be one part per billion (one ppb) of the entire pile. News stories have sought to frighten readers by referring to one part per *trillion* of DDT in river bottom sediment! Some readers actually think that is *more* than one part per million, "because a trillion is larger than a million." The media make no effort to explain that such a concentration is actually a million times *less* than one part per million!

MEDIA SHOULD EDUCATE

To further lessen public concern, the news media could (and should) publicize the extensive testing that is required by the government before any pesticide can become "registered." (None can be marketed until they have been registered.) The toxicity of each substance is indicated by assigning it an "LD_{50}" (meaning "lethal dose for 50% of the test animals"). The LD_{50} of malathion is about 1400 mg/kg; for aspirin it is about 730 mg/kg; and for parathion it is about 10 mg/kg. Those figures represent the number of milligrams of the chemical per kilogram of body weight of the animal which does kill 50% of the animals. The proportional reference is necessary, because obviously a small dose that barely kills a mouse would have no effect on a dog or a human (with much larger bodies). Notice that the *larger* the LD_{50}, the *lower* the hazard from ingesting, inhaling or handling the chemical, for it takes *less* of the more toxic material to elicit adverse effects. Malathion is thus about half as toxic as aspirin, and parathion is 70 times as toxic as aspirin.

NUMBERS THAT MEAN SOMETHING

After years of tests on animals, the government determines how many ppm of each chemical might be dangerous to people. That amount is called the "maximum safe residue level." They also calculate a "no observable effect level," or NOEL, for each chemical. Experimental test animals are usually fed 50 to 500 ppm daily of insecticides (and one vociferous anti-DDT biologist at the University of California fed his caged pheasants nothing but grain with 12,000 ppm of DDT . . . and still caused only a few adverse effects.) If feeding great doses of a chemical causes no harm, researchers may then inject great quantities directly into the blood, or pump it into the stomach. They also frequently dissolve the insecticide in powerful solvents that do not occur in nature, thereby eliciting ad-

verse effects that cannot be caused by great doses of the pesticides *without* solvents.

Dr. Ames reminds his readers that every plant in nature produces its own pesticides, comprising as much as 5% of the plant's weight. He observes that "the amount of nature's pesticides we are ingesting daily is at least 10,000 times the level of man-made pesticides" and that "many (natural pesticides) are now being shown to be both mutagenic and carcinogenic." Despite all this, some people eagerly purchase and eat "natural" or "organic" foods, and are hysterically afraid of traces of the carefully-regulated man-made chemicals. (for those inferior foods they usually pay greatly inflated prices!)

Discussions of the safety of food, water, air and the environment are to be encouraged, but the anti-pesticide participants should always include enough solid data to make factual analysis possible. The important issues of carcinogenicity, mutagenicity and teratogenicity of chemicals in the environment, the work-place, and on our tables, deserve our attention and consideration — but always in a rational manner, without the bias that results from distorted media reporting.

BOOKS CURRENTLY ON THE NCEB RECOMMENDED READING LIST*-Prices quoted include U.S. postage, provided order is accompanied by check or Visa/Master Charge

1. **Are Pesticides Really Necessary?** Dr. Keith C. Barrons ($6.95)
2. **At the Eye of the Storm,** Ron Arnold ($5.95)
3. **The Resourceful Earth,** Ed. by Julian Simon & Herman Kahn ($12.95)
4. **The Apocalyptics, Cancer and the Big Lie,** Edith Efron ($8.95)
5. **The Coercive Utopians,** by Rael Jean and Erich Isaacs ($7.45)
6. **Why Are They Lying to Our Children?** Herbert I. London, Ph.D. ($7.95)
7. **Before It's Too Late,** Bernard L. Cohen ($13.95)
8. **Ecology Wars,** Environmentalism As If People Mattered, by Ron Arnold ($14.95)

NCEB CURRENT PAMPHLETS*

P-2 **Agriculture, America's Brightest Star, Outshines Its Quibbling Critics** (Robert H. White-Stevens, Ph.D.)
P-3 **In Search of an Environmental Ethic** (Robert H. White-Stevens, Ph.D.)
P-5 **World Food Supplies Dependent Upon Farmers' Freedom to Produce** Robert H. White-Stevens, Ph.D.)
P-6 **The Price of a Good Environment** (James R. Dunn, Ph.D.)
P-7 **Technology and a Better Environment** (Margaret N. Maxey, Ph.D.)
P-10 **Meat, Potatoes and The Delaney Clause** (Thomas H. Jukes, Ph.D.)
P-12 **"Coercive Utopians" Disrupt U.S. Economy** (H. Peter Metzger, Ph.D.)
P-14 **1978 — The Year of the Pest, Part 1, Thanks to the Coercive Utopians, The Plagues Return; (R. H. White-Stevens, Ph.D.)**
P-15 **1978 — The Year of the Pest, Part 2 of 3, Coercive Utopians Unleash Insect Vectored Diseases; (R. H. White-Stevens, Ph.D.)**
P-16 **1978 — The Year of the Pest, Part 3, Are Coercive Utopians Making U.S. Safe?** (Robert H. White-Stevens Ph.D.)
P-17 **The Threatened Status of American Leadership in Agric, & Industrial Sci. & Technology** (Robert H. White-Stevens, Ph.D.)
P-18 **Positive Environmentalism I — Delete the Negative** (James R. Dunn, Ph.D.)
P-19 **Humanity & Environmental Harmony** (Donald R. Johnson, Ph.D.)
P-20 **Environmentalism II — Accentuate the Positive** (James R. Dunn, Ph.D.)
P-22 **Regulatory Harassment of U.S. Agriculture** (Robert Devlin, Ph.D.)
P-23 **Silent Spring — Broken Spring** (J. Gordon Edwards, Ph.D.)
P-25 **The Welfare Swindle — The Do-Gooders Unmasked** (Peter Metzger and Richard Westfall)
P-27 **The Role of the Media-Generated Fear in Protecting the Medfly** (J. Gordon Edwards, Ph.D.)
P-28 **Energy and Environmental Responsibility — An Alternate View** (James R. Dunn, Ph.D.)
P-29 **Clean Air 1982 — A Perspective** (John J. McKetta, Ph.D. & I. W. Tucker, Ph.D.) (25¢)
P-30 **NCEB Feature Book of the Season — Are Pesticides Really Necessary?** (Keith C. Barrons, Ph.D.)
P-31 **Energy — The Essential for a Progressive Economy** (Aubrey J. Wagner)
P-33 **Is the Sky Falling?** (Dr. John J. McKetta) (50¢)
P-35 **Saving Lives With Pesticides** (J. Gordon Edwards, Ph.D.)
P-36 **Pest Management and the Public** (Keith C. Barrons, Ph.D.)
P-37 **The Environmental Voice from Australia** (John C. Grover)
P-38 **Garden of Eden Revisited** (Thomas H. Jukes, Ph.D.) and **Not Too Much Pepper, Thank You** (K. C. Barrons, Ph.D.)
P-39 **The Wilderness Issue — How Much Is Enough? How Much Is Excess** (James R. Dunn, Ph.D.)
P-40 **'Resourceful Earth' Rebuts Doom Prophets** — (A Book Review by Dr. Herbert I. London)
P-41 **The Apocalyptics, Cancer and the Big Lie** — (A Book Review by Dr. J. Gordon Edwards)
P-42 **The Coercive Utopians** — (A Book Review by Sara Cherner)
P-43 **Why Are They Lying to Our Children?** (A Book Review by James R. Dunn, Ph.D.) and **Before It's Too Late** (Hugh Henry)
P-44 **Tragedy of DDT** (Dr. Thomas H. Jukes — A Reprint)
P-45 **Pesticides** (An essay by Ron Arnold)
P-46 **Selenium, Paracelsus and Cancer** (Thomas H. Jukes, Ph.D.)
P-47 **Asbestos — Let's Get the Facts Straight** (James R. Dunn, Ph.D.)
P-48 **Toxic Terror — A Book Review** (Daniel Henninger, Wall Street Journal)
P-49 **Conservation Dependent Upon Industrial Development** (James R. Dunn, Ph.D.)
P-50 **Radon: How Great a Hazard?** (Dr. Bernard L. Cohen)
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WORRIED ABOUT PESTICIDE IN FOOD AND WATER? HERE ARE THE FACTS

J. GORDON EDWARDS, Ph.D.

Dr. Edwards, a Counselor of the National Council for Environmental Balance, is a professor of entomology at San Jose State University, San Jose, California. A ranger, naturalist-botanist, he has written for many publications on biology, ecology, entomology, mountain climbing, ornithology and zoology.

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Committee of . . .

Kansas Farm Organizations

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TESTIMONY IN OPPOSITION TO SB NO. 173

BEFORE THE SENATE COMMITTEE ON AGRICULTURE

February 15, 1989

Mr. Chairman and Members of the Committee:

I am Wilbur Leonard, appearing on behalf of the Committee of Kansas Farm Organizations. We appreciate this opportunity to explain to the Committee the views of our members with respect to Senate Bill No. 173.

We're not here to take issue with any Kansas farmer or producer of agricultural products who wishes to use only natural materials in the production of foods for human consumption. We're aware of the market for such products and we believe it should be encouraged. We further believe that a disservice would be done to this effort by the creation of an "almost organic" or a "partially organic" class of food. It seems to us that foods are either naturally grown or they aren't.

This bill is very similar to House Bill No. 2448, which was before this Committee in 1987 and 1988. It presents the same problems with respect to the testing of any products which might be questioned. It places little responsibility on wholesale or retail distributors which could be the group which would account for the largest volume of sales.

The registration with the state board of agriculture is little more than a directory listing. That agency is granted no enforcement powers, no oversight or even the authority to question the legitimacy of an application, let alone the power to reject one for good cause.

We are pleased that there is a good faith attempt toward positive advertising of natural food products and a general disavowal of the vocal minority of producers who have tried to prosper by attempting to tear down conventional producers by means of negative advertising.

We fail to see that, under this bill, any significant progress could be made in supervising the sale of foods reported to be organically produced and we therefore urge that it not be passed.

Senate agriculture
2-15-89
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