

Why Composting Organic Waste Builds Healthy Communities

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Why Composting Organic Waste Builds Healthy Communities

A Balance Between What Works, and What Matters

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Composting – a Balance Between What Works and What Matters

- Definition of what works –
 - the technical part,
 - how it functions,
 - the economics,
 - life cycle analysis

Composting – a Balance Between What Works and What Matters

- Definition of what works –
 - the technical part,
 - how it functions,
 - the economics,
 - life cycle analysis
- Definition of what matters –
 - love, freedom, compassion, faith, integrity, equality, collaboration, justice, reconciliation, creativity,
 - care for others including the next generation



Compost on Lawns

A Balance Between What Works and What Matters



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Worm Composting in an Apartment

A Balance Between What Works and What Matters



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Community Gardens

A Balance Between What Works and What Matters

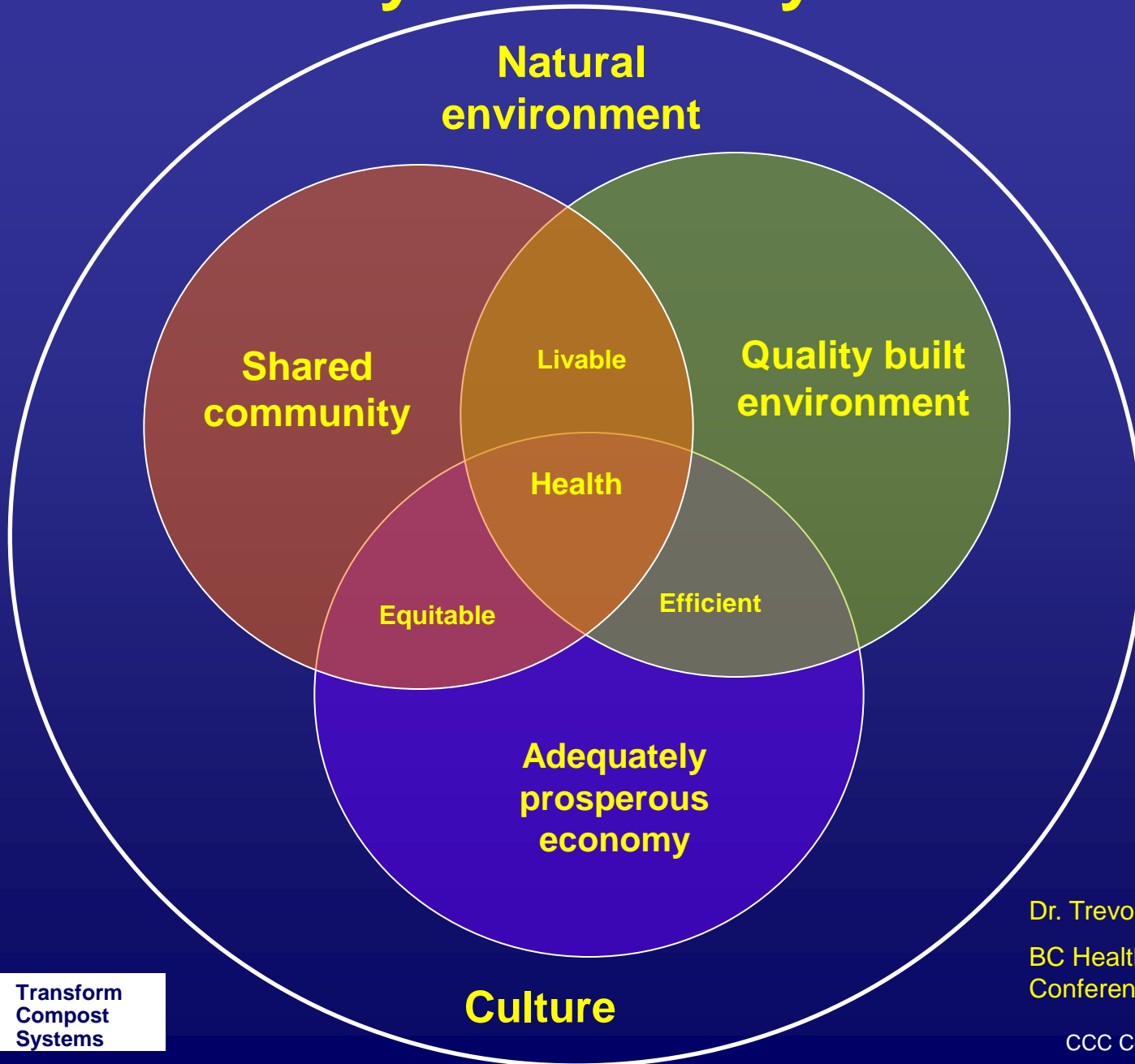


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The Healthy Communities Approach to Waste Management

- How do we define a healthy community?
- Local and sustainable food production is an important aspect of a healthy community
- A fertile soil is important for sustainable food production
- A fertile soil needs organic matter
- Recycling organic matter is an important strategy to maintain healthy soils.

Healthy Community Model



Dr. Trevor Hancock

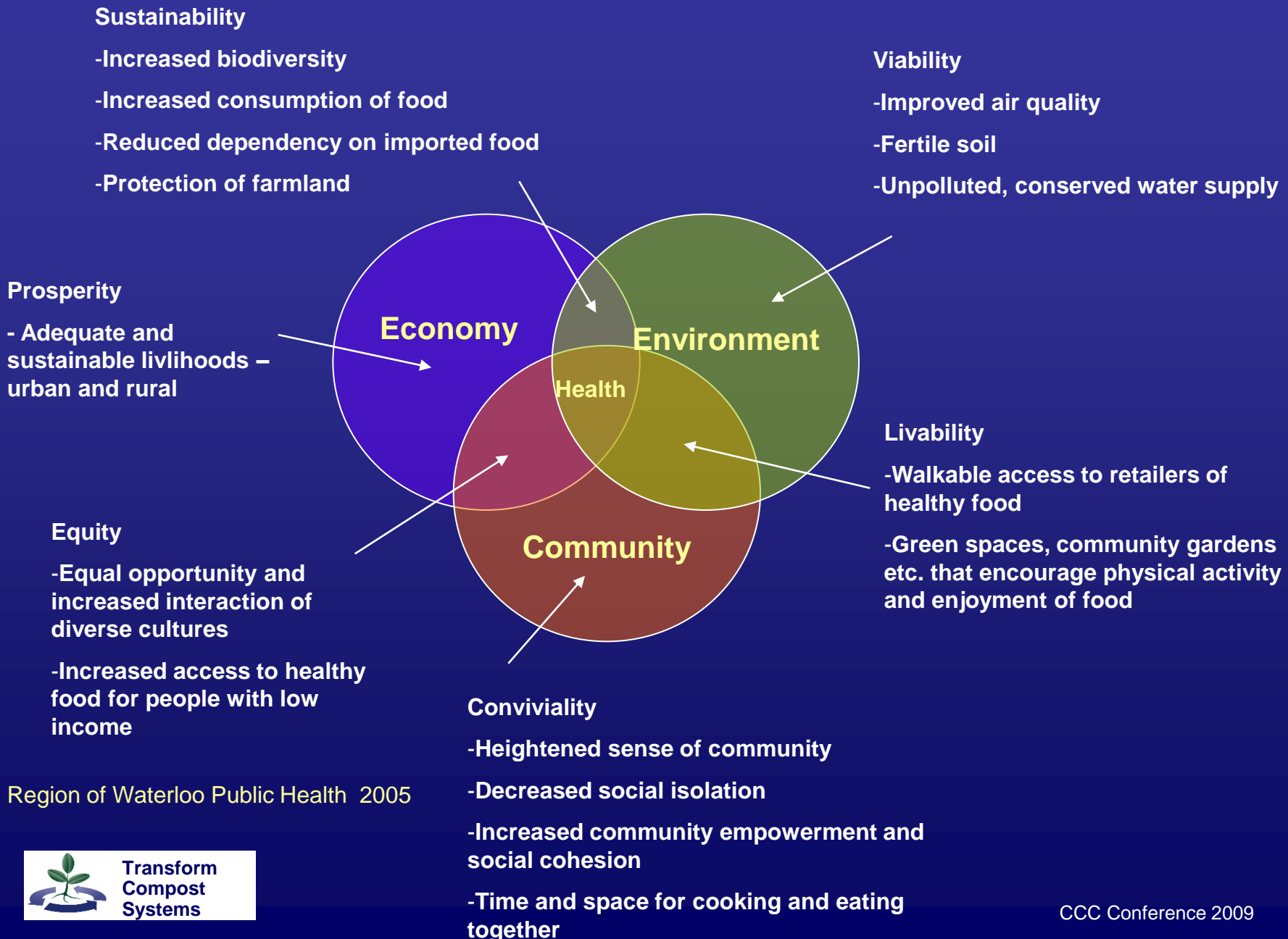
BC Healthy Communities
Conference June 2008

CCC Conference 2009



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Region of Waterloo Sustainable Food System Goals



Region of Waterloo Public Health 2005



Sustainable Food Production – geographic definition of community



We can define community at many levels – what is the most practical in terms of sustainable food production, economics and politics?

For example: If BC is our community – lets ensure that it is a healthy community.

We have incredible diversity of food, environment and climate in BC



Healthy Soil - healthy communities

“Healthy soil is the foundation of the food system. It produces healthy crops that in turn nourish people.

Maintaining a healthy soil demands care and effort from farmers because farming is not benign.” (FAO 2005).



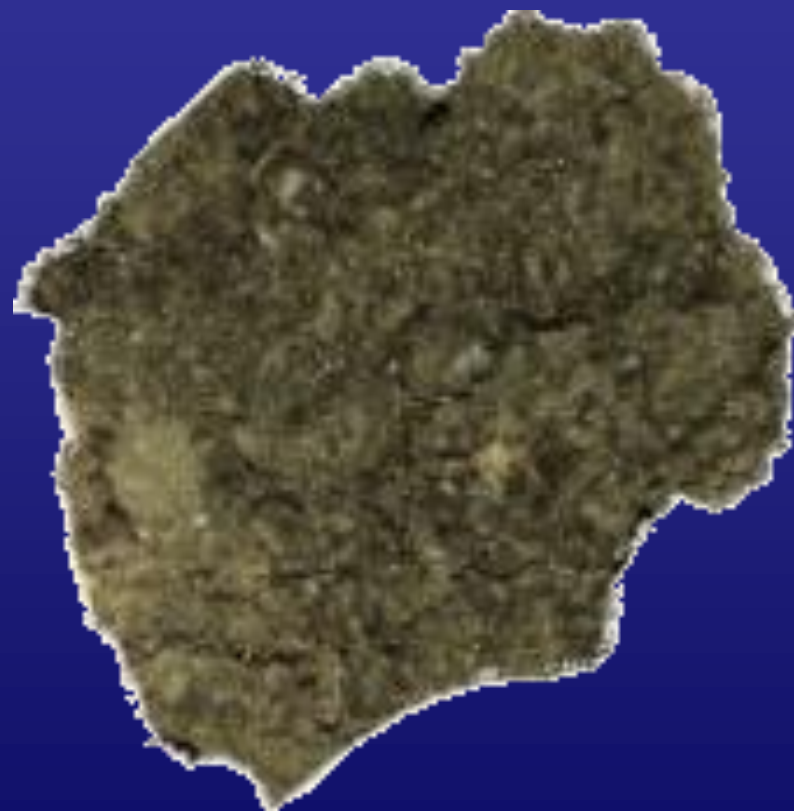
A fertile soil is important for sustainable food production

- Soil is 1-8% organic matter and 92-99% bits of rock
- Food production requires
 - Water
 - Nutrition
 - Light



More organic matter in soil – more water holding capacity

- Increasing soil organic matter from 2% to 3% increases water holding capacity by more than 25,000 L per ha
- Benefits
 - Less watering required for growing crops
 - Less watering of lawns
 - Controlled precipitation runoff in urban areas



More organic matter in soil – less fertilizers and pesticides required

- Organic matter contains all nutrients required for plants – reduces requirements for chemical fertilizers.
- Organic matter improves food quality
- Organic matter promotes healthy soil microorganisms
 - Less requirements for pesticides



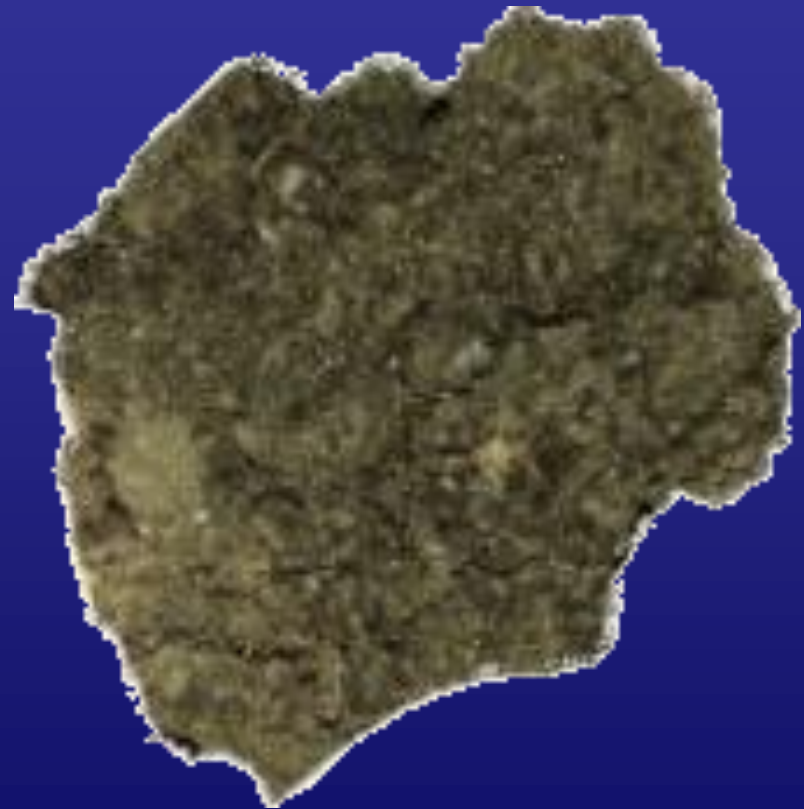
More organic matter in soil – less greenhouse gas emission

The soil carbon pool is the greatest pool of carbon on the planet. More than 50% of this C is gone from the soil and is in the air.

55-100 Pg of C has been lost from the soil C pool through erosion and degradation.

1.1 Pg C per year can be sequestered in the soil through improved conservation and management.

This is 30% of our annual increase in CO₂ emissions to the atmosphere from all sources. Lal (1999)



Addition of compost increases soil organic matter

Composting transforms organic "waste" into a nutrient-rich soil amendment capable of improving soil. By composting, humans participate in what has been called nature's "Law of Return" because a vital link is established for the return of organic matter to soil systems, which is more sustainable in the long run. The organic matter resource is conserved, and problematic wastes are converted into a beneficial product (CIWMB 2008).



So, shall we compost in our apartments and backyards?

- Yes, to return organic matter back to the soil
- Yes, to have our children teach us about the importance of recycling and soil organic matter
- No, if its only about waste reduction and minimizing landfilling
 - How are we taking care of rats, etc.



So, shall we compost in our own local communities?

- Yes, if the total economics dictate that this is the best place to do it.
- Yes, if the resulting organic matter can be returned to the land.
- No, if the cost is too high to composting sustainably in a high rainfall climate
- No, if the social cost of odors are too high.



The local solution is not necessarily the best solution...

Example: the vertical farm

- Is this a practical solution when acres of greenhouses lie empty because they can't afford to grow crops on inexpensive land?
- What about our connection with the soil?
- What about pest control?
- What about light?



We need to think practically about where we will compost as well.



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Compost for Healthy Communities: Additional benefits

Lawn care – Topdressing with compost

What Matters:

- peace of mind knowing our children and pets are safe
- Enhanced beauty of our homes

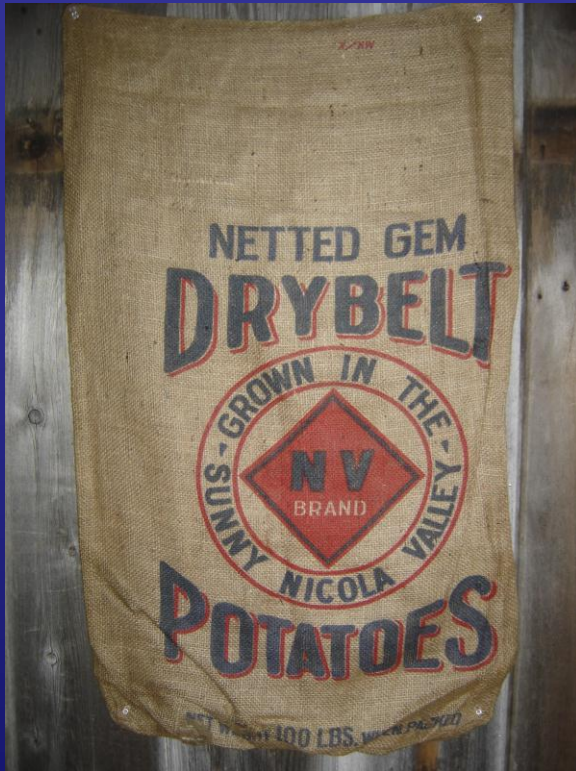
What works:

- Less costly than conventional lawn management paradigm
- No aeration required
- No thatch removal
- No additional fertilizer
- No pesticides
- Improved soil water holding capacity



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Summary – Why Composting is Important for Healthy Communities



- We need to promote healthy communities
- Local and sustainable food production is an important aspect of a healthy community
- A fertile soil is important for sustainable food production
- A fertile soil needs organic matter
- Recycling organic matter is an important strategy to maintain healthy soils.
- Composting should not be done for the sole purpose of a zero waste goal