Dated: July 28, 2008

Recycling Used Greenhouse/Nursery Plastics

Thomas A. Dudek, District Extension Horticulture & Marketing Educator
MSU Extension, Grand Haven, MI 49417

Greenhouse and Nursery business generate a significant quantity of plastics each year. The opportunity to recycle plastics has changed over the past few years due primarily to high oil prices which translate into more value for recycled plastics.

Increasingly, greenhouse and nursery firms will be asked to be more sustainable businesses. Part of the sustainable production philosophy is to recycle used poly film, pots, flats, plug trays, etc. The following information can help you develop recycling within your business. If done correctly there is financial payment back to you as opposed to costing you money for disposal fees.

What are the buyers concerns? Most often plastic buyers/brokers give three reasons why they do not want to take recycled greenhouse/nursery plastics.

- The quantity of plastic is small
- Plastic types are mixed together
- Plastics are dirty or have chemical residues

What can you do to start a recycling program for your used plastics?

Tip#1: Know your plastics and keep them separate. Most plastics don't mix when they're melted during recycling. Mixed types are worthless to a buyer, and they will be rejected immediately. If you don't know the type plastics, ask your supplier. Keep good records on what plastic type is used at which location at your greenhouse or nursery.

Tip#2: Keep all plastics clean…very clean! Storing plastics is different than storing items that can tolerate some dirt. You have to "clean up your act" if you want to market your plastic wastes. Doing your part to assure a clean product will put money in your pocket and prevent a disposal problem. Remember:

- No moisture – dry bales only
- No mud, sod, or soil. Store bales indoors off the floor.
- No trash, such as weeds, organic matter, rags, or tape
- No loose paper, corrugated cardboard, or paperboard inside bales
- No wood or broken pallet pieces
- No polystyrene (Styrofoam) or polyurethane foam (foam rubber)
- No oil or grease
- No steel banding, twine, or rope. Plastic banding preferred.

Tip#3: Develop a market. On the next page are those companies in which have expressed some interest in accepting certain types of plastics from the horticultural sector. Recycling is market-driven, and many of these companies will change their addresses or policies routinely. Call them to determine their current terms for accepting deliveries. You may also want to send a sample of the material. Notice that some pay shipping costs, some pay for the plastic itself, and some may not pay at all. When in doubt, send a sample.

Guide to Plastic Recyclers Listed Below

Common plastic resins accepted

PE=polyethylene
- LDPE=low density polyethylene, #4, film is very quiet when shaken
- LLDPE=linear low density polyethylene, called "stretch film", very thin
- HDPE=high density polyethylene, #2, film is very noisy when shaken

PVC=polyvinyl chloride (called vinyl), #3, usually in rigid pipes
PP=polypropylene, #5, feels like nylon, somewhat fibrous
PET=polyethylene terephthalate, #1, mainly soda bottles, rare in ag
PS=polystyrene, #6, turns white when creased, soluble in gasoline
- HIPS=high impact polystyrene

PC=polycarbonate, usually clear and very tough
ABS=acrylonitrile-butadiene-styrene, often called Plexiglas

Types of plastics used for various horticultural products

Row covers – Usually polyolefin, PP (#5) or polyester, sometimes LLDPE
Greenhouse film – Usually LDPE (#4)
Nursery pots – Usually PP (#5), PS (#6), or HDPE (#2)
Greenhouse/Nursery trays or flats – Usually PS (#6), sometimes PP (#5)
Trickle irrigation tubing – LDPE (#4)

This information is for educational purposes only. References to commercial companies do not imply endorsement by MSU Extension or bias against those not mentioned. Reprinting this information verbatim can be made with credit to Michigan State University. Reprinting cannot be used to endorse or advertise a commercial company.

Name: Bata Plastics
Address: 1001 40th Street, S.E. Grand Rapids, MI 49508
Phone: (616) 452-5300
Email: leehammond@bataplastics.com
Fax: (616) 452-5300
Contact Person: Matt Bertotti
Plastics Accepted: All types
Quantity Accepted: All quantities
Contamination Allowed: None
Shipping Paid by: Bata Plastics
Payment for Plastic: Depends on material

Name: EcoQuest LLC
Address: 13650 172nd Ave., Grand Haven, MI 49417
Phone: (616) 296-0767
Email: carey.boote@gmail.com
Fax: (616) 296-0796
Contact Person: Carey J. Boote, David Dykstra
Plastics Accepted: PP PET PS HIPS PC ABS Pots, Trays
Quantity Accepted: 1000 lbs minimum delivery
Contamination Allowed: Light dirt, dust, no loose materials
Shipping Paid by: Negotiable
Payment for Plastic: Yes, typically-dependent on qty & type

Name: Mondo Polymer Technologies
Address: 27620 State Route 7, Reno, OH 45773
Phone: (740) 376-9396
Email: ron@mondopolymer.com
Fax: (740) 376-9960
Contact Person: Ronnie Wesel
Plastics Accepted: PE
Quantity Accepted: Any
Contamination Allowed: Trace
Shipping Paid by: Mondo
Payment for Plastic: Negotiable

Name: Louis Padnos
Address: P.O. Box 1979, Holland, MI 49422
Phone: (616) 218-3769
Email: ben.westdorp@padnos.com
Fax: (616) 396-7789
Contact Person: Ben Westdorp
Plastics Accepted: All plastics (Also all forms of paper, cardboard)
Quantity Accepted: Negotiable
Shipping Paid by: Negotiable
Payment for Plastic: Yes
Contamination: Negotiable

Name: Plaspro LLC
Address: 3680 Suite 100 44th Street
Phone: (616) 446-6176/(616) 803-0567
Email: splaspro@gmail.com
Contact Person: Syed Siraj
Plastic Accepted: HDPE, LDPE, PE, ABS and polyethylene
Quantity Accepted: All Quantities
Contamination Allowed: Minimal
Shipping Paid by: Negotiable
Payment for Plastic: Negotiable