

Materials List for

Using Flight Mills to Measure Flight Propensity and Performance of Western Corn Rootworm, *Diabrotica virgifera virgifera* (LeConte)

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jove.com/video/59196

Materials

Name	Company	Catalog Number	Comments
Butane multi-purpose lighter	BIC	UXMPFD2DC	To soften wax when tethering
Clear polystyrene plastic vial (45-ml)	Freund Container and Supply	AS112	To hold beetle while anesthetizing
Dehydrated culture media, agar powder	Fisher Scientific	S14153	To make agar for holding moisture for adults
Delrin rod (1" diameter, 3.75" long)	Many suppliers: can use cheapest on the internet.		For post of flight mill
Dental wax	DenTek	47701000335	Adheres wire tether to prothorax
Ferrite ring magnets (OD: 0.69", ID: 0.29", Thickness: 0.118"; 7oz pull)	Magnet Shop	63B06929118	Opposing - to generate the float.
Hall effect sensor	Optikinc	OHN3120U	Look under magnetic sensors on the left side of the Optikinc website then look for the part number. A link is given for current suppliers.
Hypodermic tubing (22 gauge; 0.0358" OD x 0.01975" ID x 0.004" wall)	Small Parts, Inc.	HTX-22T-12	Used for flight mill arms and main axis rod.
Incubator (104.1 x 85.4 x 196.1 cm)	Percival Scientific	I-41VL	
LabVIEW Full Development System software, system-design platform	National Instruments (See http://www.ni.com/en-us/shop/labview/select-edition.html)	LabVIEW 2018 (Full Edition)	Provides environment needed to run flight mill files (.vi extensions) available for download from Jones et al. ¹⁸ at http://entomology.tfrec.wsu.edu/VPJ_Lab/Flight-Mill . LabVIEW 2018 Full is compatible with Win/Mac/Linux operating systems.
Mesh cage (18 x 18 x 18 cm)	MegaView Science Co. Ltd.	BugDorm-4M1515	mesh size = 44 x 32, 650 μm aperture
Needle tool	BLICK	34920-1063	For scoring soil surface for egg laying in laboratory
Nickel ring magnets (3/16" OD x 1/16" ID x: 1/16" thick)	K&J Magnetics	R311	Used to trigger the digital hall effect sensor.
Petri dish (100 mm x 15 mm)	Fisher Scientific	S33580A	

Plastic container (44-ml)	Dart	150PC	For initial rearing of young larvae
Plastic container (473-ml)	Placon	22885	For rearing of older larvae
Round brush (size 2)	Simply Simmons	10472906	For transferring freshly hatched neonates to surface of roots
Sieve (250- μ m)	Fisher Scientific	08-418-05	To separate eggs from soil
Steel wire (28-gauge)	The Hillman Group	38902350282	
Teflon rod (3/8" diameter, 3/4" length)	United States Plastic Corporation	47503	To accept the rotating arm.
Vacuum	Gast Manufacturing, Inc.	1531-107B-G288X	For aspirating adults in laboratory
White poly chiffon fabric	Hobby Lobby	194811	To prevent escape of larvae from rearing container