Fig. 1:
The FAO lists several commodities that derive from one crop species. We pooled these commodities by species, for example pop corn, green corn, and maize all derive from *Zea mais*. Some crops are listed in more than one commodity, pooled with commodity crops. We could not separate the production of these crops and therefore a few species are listed twice such as, *Phaseolus* spp. in 'bean dry' with several other species, all with insect-mediated increased production, and 'bean green' which includes only *Phaseolus* spp. Data available at http://faostat.fao.org/ (FAOSTAT 2005). Literature listed in Appendix 2.
Animal pollination = evidence of increased fruit set, fruit weight and/or quality, seed set and/or seed quality, and/or increased pollen deposition (an indirect measure) when visited by animals, mainly insects, for at least one variety per crop. Crops are classified into the following categories:

(i) **increase** = pollinators increase production of plant parts that we consume
(ii) **increase - seed production** = pollinators increase seed production necessary to produce the vegetative parts that we consume
(iii) **increase - breeding** = pollinators increase in seed production in plant breeding and plants reproduce vegetatively
(iv) **no increase** = no production increase with pollinators
(v) **mixed response** = this category is only used for commodities; most species showed an increase in production with pollinators while other species did not

Crop species	**Commodity**	**World production** (Mt)	**Animal pollination**	**References**
Saccharum officinarum	Sugar cane	1 328 216 730	no increase	James 1980
Zea mais	Maize, Green corn, Sweet corn	733 084 158	no increase	Russell & Hallauer 1980
Triticum spp. (mainly *T. aestivum*, *T. durum*, *T. spelta*)	Wheat	629 561 977	no increase	Allan 1980
Oryza ssp. (mainly *O. sativa*)	Rice, Paddy	606 648 911	no increase	Ronnie Coffman & Herrera 1980
Solanum tuberosum	Potato	330 518 791	increase - breeding	Plaisted 1980; Free 1993
Beta vulgaris	Sugar beet	248 611 386	no increase	Smith 1980
	Fresh vegetables NES	247 176 759	mixed response	
Glycine max, G. soja	Soybean	204 429 429	increase	Koelling *et al.* 1981; in Free 1993; Moreti *et al.* 1998; Nogueira-Couto *et al.* 1998 for G. wightii; Chiari *et al.* 2005a,b
Manihot esculenta, syn. *M. utilissima, M. palmata*	Cassava	203 618 052	increase - breeding	Kawano 1980
Elaeis guineensis	Oil palm	163 141 697	increase	in Free 1993; Dhileepan 1994; in Westerkamp & Gottsberger 2000; Tandon *et al.* 2001; Krantz & Poinar 2004; Mayfield 2005
Hordeum disticum,	Barley	153 948 740	no increase	Starling 1980

H. hexasticum, H. vulgare				
Ipomoea batatas	Sweet potato	127 169 113	increase - breeding	Jones 1980
Lycopersicon esculentum	Tomato	124 111 781	increase	in Free 1993; du Toit 1994; Asada & Ono 1996; in Delaplane & Mayer 2000; Hogendoorn *et al.* 2000; in Westerkamp & Gottsberger 2000; Morandin *et al.* 2001; Cauich *et al.* 2004; Higo *et al.* 2004; Greenleaf 2005; Bell *et al.* 2006; Greenleaf & Kremen 2006a; in Slaa *et al.* 2006
Citrus aurantifolia, C. aurantium, C. bergamia, C. grandis, C. limetta, C. limon, C. maxima, C. medica (var. *cedrata*), *C. myrtifolia, C. paradisi, C. reticulata, C. sinensis, C. unshiu, Fortunella japonica*	Bergamot, Chinotto, Citron, Clementine, Grapefruit, Kumquat, Lemmon, Lime, Manderine, Orange, Pomelo Tangerine	110 965 382	increase	in Crane 1991; in Free 1993; Bhatia *et al.* 1995; in Sharma & Jindal 1997; Wallace & Lee 1999; Sanford 2003; Chacoff 2006; Chacoff & Aizen 2006
Musa sapientum, M. cavendishii, M. nana, M. paradisiaca	Banana, Plantain	105 294 510	increase - breeding	in Free 1993; Mutsaers 1993
Citrullus lanatus	Watermelon	94 525 177	increase	in Free 1993; Stanghellini *et al.* 1997; Stanghellini *et al.* 1998; in Delaplane & Mayer 2000; Kremen *et al.* 2002; Stanghellini *et al.* 2002; Kremen *et al.* 2004; Njoroge *et al*. 2004
Brassica chinensis, B. oleracea	Cabbage, Cauliflower	84 703 926	increase - seed production	in Free 1993
Gossypium hirsutum, G. barbadense, G. arboreum, G. herbaceum	Seedcotton	69 849 042	increase	in Free 1993; Rhodes 2002
Vitis vinifera	Table Grape, Vine Grape	67 070 746	no increase	in Free 1993; Rhodes 2002
*Malus domestica**[1]	Apple	63 205 385	increase	in Crane 1991; in Free 1993; Sekita & Amada 1993; Fourez 1995; Batra 1998; in Delaplane

				& Mayer 2000; in Westerkamp & Gottsberger 2000; Vicens & Bosch 2000; Kron *et al.* 2001; Sekita 2001; Stern *et al.* 2001; Thomson & Goodell 2001; Wei *et al.* 2002; in Soltész 2003; Ladurner *et al*. 2004; Sharma *et al.* 2004
Allium cepa, A. ascalonicum, A. fistulosum	Onion, Shallots, Welsh onion (green)	61 328 750	increase - seed production	in Crane 1991; in Free 1993; Schittenhelm *et al.* 1997; Witter & Blochtein 2003
Sorghum guineense, S. vulgare, S. dura	Sorghum	57 871 754	no increase	Schertz & Dalton 1980
Cocos nucifera	Coconut	54 708 169	increase	in Free 1993; Da Conceicao *et al.* 2004; Meléndez-Ramírez *et al.* 2004
Brassica napus	Rapeseed, Oilseed rape	46 770 903	increase	in Free 1993; Adegas & Noqueira Couto 1992; Abel & Wilson 1999; Bürger 2004; Manning & Boland 2000; Abel *et al.* 2003; Morandin & Winston 2005
Cucumis sativus	Cucumber, Gherkin	40 953 372	increase	in Free 1993; Stanghellini *et al*. 1997; Gingras *et al.* 1999; Stanghellini *et al.* 2002
Dioscorea spp.	Yam	39 901 384	increase - breeding	Akoroda 1983; Abraham & Gopinathan Nair 1990; Segnou *et al.* 1992; in Free 1993
Arachis hypogaea	Peanut, Groundnut	35 894 864	increase	in Crane 1991; in Free 1993
Solanum melongena	Eggplant, Aubergine	30 144 463	increase	in Free 1993
Echinocloa frumentacea, Eleusine coracana, Eragrostis abyssinica, Panicum miliaceum, Paspalum scrobiculatum, Pennisetum glaucum, Setaria italica	Millet	27 763 700	no increase	Burton 1980
Cucumis melo	Cantaloupe, Melon	27 332 753	increase	in Free 1993; Norden 1985; Kato & Nogueira-Couto 2002; Elzen *et al*. 2004; Valantin-Morison *et al*. 2006

Mangifera indica	Mango	27 043 155	increase	in Free 1993; du Toit 1994; Bhatia *et al.* 1995; Dag *et al.* 2001
Helianthus annuus	Sunflower	26 460 824	increase	Bichee & Sharma 1988; in Crane 1991; in Free 1993; DeGrandi-Hoffman & Martin 1993; Moreti *et al.* 1996; in Heard 1999; DeGrandi-Hoffman & Watkins 2000; Dag *et al.* 2002; Greenleaf & Kremen 2006b
Avena spp., mainly *Avena sativa*	Oat	25 843 813	no increase	Brown 1980;
	Fresh fruits NES	25 374 992	mixed response	
Capsicum annuum, C. fructescens, Pimenta dioica (syn. *P. officinalis, P. dioica*)	Chile pepper, Red pepper, Bell pepper, Green pepper, Allspice, Pimento	24 678 810	increase	Jarlan *et al.* 1997a,b; Meisels & Chiasson 1997; Raw 2000; Dag & Kammer 2001; Ercan & Onus 2003; De Oliveira Cruz *et al.* 2005
Daucus carota	Carrot	24 405 409	increase - seed production	in Free 1993; Schittenhelm *et al.* 1997; in Slaa *et al*. 2006
Lactuca sativa, Cichorium intybus, C. endivia	Lettuce, Chicory	22 001 381	increase - seed production for *Cichorium*, no increase for *Lactuca*	in Pouvreau 1984; in Free 1993; Goubara & Takasaki 2004
Cucurbita maxima, C. mixta, C. moschata, C. pepo	Pumpkin, Squash, Gourd, Marrow, Zucchini	18 803 468	increase	Norden 1985; in Free 1993; Nepi & Paccini 1993; in Delaplane & Mayer 2000; Canto-Aguilar & Parra-Tabla 2000; Ashworth & Galetto 2001; Cardoso 2003; Fuchs & Müller 2004
Pyrus communis	Pear	18 693 165	increase	in Free 1993; in Delaplane & Mayer 2000; in Westerkamp & Gottsberger 2000; Maccagnani *et al.* 2003; in Nyéki & Soltész 2003; Monzón *et al.* 2004; Stern *et al.* 2004
Phaseolus spp. (P. vulgaris, P. lunatus, P. angularis, P. aureus, P. mungo, P. coccineus, P. calcaratus, P. aconitifolius, P. acutifolius	Bean dry like Kidney bean, Haricot bean, Lima bean, Azuki bean, Mungo bean, String bean	18 368 480	increase	Du Toit 1990; in Crane 1991; in Roubik 1995; in Carrek & Williams 1998; Ibarra-Perez *et al.* 1999
Secale cereale	Rye	17 674 901	no increase	Morey & Barnett 1980

	Fresh tropical fruits NES	16 344 385	mixed response	
Olea europea	Olive	17 176 231	no increase	in Free 1993; Singh 1997
Ananas comosus	Pineapple	15 698 667	increase - breeding	in Free 1993
Prunus persica, Persica laevis	Peach, Nectarine	15 300 003	increase	in Free 1993; in Delaplane & Mayer 2000; in Westerkamp & Gottsberger 2000; da Mota & Nogueira-Couto 2002; in Szábo *et al*. 2003b
Allium sativum (syn. *Alliaria sativum*)	Garlic	14 087 991	increase - breeding	Etoh & Hong 2001; Kamenetsky & Rabinowitch 2001
Triticale sp.	Triticale	13 837 072	no increase	Larter & Gustafson 1980
Spinacia olearacea	Spinach	12 767 172	no increase	in Free 1993
Pisum sativum, P. arvense	Pea, dry and green like Garden pea, Field pea	21 248 340	no increase	Gritton 1980; in Free 1993; Franklin *et al.* 2000; Mcphee 2003
Colocasia esculenta	Taro (Coco Yam)	10 687 728	increase - seed production	Ivancic 2004
Prunus domestica, P. spinosa	Plum, Greengage, Mirabelle, Sloe	9 628 708	increase	in Free 1993; Calzoni & Speranza 1998; in Delaplane & Mayer 2000; in Westerkamp & Gottsberger 2000; Frève *et al.* 2001; in Szábo 2003
Cicer arietinum	Chick pea, Bengal gram, Garbanzo bean	8 625 894	no increase	in Free 1993; Abbo *et al.* 2003
Coffea arabica, C. canephora, C. liberica	Coffee, green	7 786 909	increase	in Free 1993; Manrique & Thimann 2002; Roubik 2002a,b; Klein *et al.* 2003a,b,c; De Marco & Coelho 2004; Ricketts *et al.* 2004; Ricketts 2004
Phoenix dactylifera	Date palm	6 907 093	no increase	Crossa-Raynaud 1984
	Roots and Tubers NES	6 873 021	mixed response	
Carica papaya	Papaya	6 786 794	increase	in Free 1993; Jindal & Sharma 1997; in Westerkamp & Gottsberger 2000
Asparagus officinalis	Asparagus	6 547 137	increase - in seed production	in Free 1993; in Delaplane & Mayer 2000
Vigna spp., *V.*	Bean, green	6 383 990	increase	Vaz *et al.* 1998

unguiculata, V. subterranean (syn. Voandzeia subterranea), Phaseolus spp.				
*[2]	Mixed Grain	5 407 982	no increase	
Abelmoschus esculentus	Okra, Gumbo	4 989 804	increase	in Crane 1991; Hamon 1991; in Free 1993
Vicia faba	Broad Bean, dry (Broad bean, Faba bean, Field bean, Horse bean)	4 434 072	increase	in Free 1993; Le Guen *et al*. 1993; Suso *et al*. 1996; Bond & Kirby 1999; Pierre *et al*. 1999
	Pulses NES	4 173 895	mixed response	

***[1]** FAO lists for apples the following species: *Malus pumila, M. sylvestris, M. communis, Pyrus malus.* We changed this to *M*. *domestica* according to Routley *et al.* 2004

*[2] mixed response of cereal species that are sown and harvested together

Main components (crop species) of the commodities:

Fresh vegetables NES (comprises 21 crops; 12 increase, 7 no increase, 2 unknown)
Bamboo shoots*, Bambusa* spp. no increase - wind-pollination (Nadgauda *et al.* 1997)
Beets, Chards*, Beta vulgaris* no increase - wind-pollination (Smith 1980)
Capers*, Capparis spinosa* increase - seed production (Eisikowitch *et al.* 1986)
Cardoons*, Cynara cardunculus* increase - seed production (Racuia *et al.* 2004)
Celery, *Apium graveolens* increase - seed production (Free 1993)
Chervil*, Anthriscus cerefolium* increase - seed production (Spalik 1996)
Cress*, Lepidium sativum* no increase - wind-pollination (Robertson 1923)
Fennel*, Foeniculum vulgare* increase - seed production (in McGregor 1976; in Free 1993; Koul *et al.* 1993; Németh *et al*. 1999; Falzari *et al*. 2005)
Horseradish*, Cochlearia armoracia* increase - seed production (in Free 1993)
Sweet marjoram, *Majorana hortensi* unknown
Oyster plant, *Tragopogon porrifolius* increase - seed production (Petanidou & Vokou 1990)
Parsley*, Petroselinum crispum* increase - seed production (in Free 1993)
Parsnips*, Pastinaca sativa* increase - seed production (in Free 1993)
Radish*, Raphanus sativus* increase - seed production (in Free 1993)
Rhubarb*, Rheum spp.* no increase - wind-pollination (Wodehouse 1931)
Rutabagas, swedes*, Brassica napus napobrassica* increase - seed production (in Free 1993)
Savory, *Satureja hortensia* unknown
Scorzonera*, Scorzonera hispanic* increase - seed production (Banga 1961)
Sorrel, *Rumex acetosa* no increase - wind-pollination (Wodehouse 1931; Cavers & Harper 1964)
Tarragon, *Artemisia dracunculus* no increase - wind-pollination (Watson 2002)
Watercress, *Nasturtium officinale* no increase - passive self-pollination (Howard & Lyon 1952)

Fresh fruits NES (comprises 15 crops; 12 increase, 1 no increase, 2 unknown)
Azarole, *Crataegus azarolus* (syn. *C. ruscionensis*) increase (Phipps 2003; Dönmez 2004)
Babaco, *Carica pentagona* no increase - parthenocarpy (Kempler & Kabaluk 1996)
Elderberry, *Sambucus nigra* increase (Bolli 1994)
Jujube, *Zizyphus jujuba* increase (in Free 1993; Sharma & Jindal 1997)
Litchi, Lychee, *Litchi chinensis* increase (in Free 1993; Bhatia *et al*. 1995; Stern & Gazit 1996; Sharma & Jindal 1997)
Loquat, *Eriobotrya japonica* increase (in Khan *et al.* 1986, Morton 1987; in Crane 1991; in Free 1993; Sharma & Jindal 1997)
Medlar, *Mespilus germanica* unknown (Reiter 1947; Phipps 2003)
Pawpaw, *Asimina triloba* increase (Willson & Schemske 1980; Gottsberger 1999; Pomper *et al*. 2003)
Pomegranate, *Punica granatum* increase (in Free 1993; in Knuth 1908; Rana & Dwivedi 1997; Melgarejo *et al.* 2000; Derin & Eti 2001; Mars & Marrakchi 2004)
Prickly pear, *Opuntia ficus-indica* increase (Grant & Hurt 1979; Weiss *et al.* 1993; in DeFelice 2004)
Rose hips *Rosa spp.* (*Rosa* section *Caninae*) increase (Jicinska 1976; Stougaard 1983; Kevan *et al.* 1990; Ueda & Akimoto 2001; in Kevan 2003)
Rowanberry, *Sorbus aucuparia* increase (Campbell *et al*. 1991; Bixby & Levin 1996; Sperens 1996; Raspé 1998; Pías & Guitián 2006)
Service-apple, *Sorbus domestica* increase (Rohrer *et al.* 1994)
Tamarind, *Tamarindus indica* increase (in Free 1993)
Tree-strawberry, *Arbutus unedo* unknown (Sealy 1949; Hagerup 1957; Herrera *et al.* 1984; Rasmont *et al.* 2005)

Fresh tropical fruits NES (comprises 17 crops; 13 increase, 1 no increase, 3 unknown)
Atemoya, Cherimoya, Custard apple, *Annona spp*., mainly *Annona squamosa* increase (Galon *et al.* 1982; Gazit *et al.* 1982; George *et al.* 1989; George *et al.* 1992; in Free 1993; Nadel & Pena 1994; Peña *et al*. 1999; Kill & da Costa 2003; Blanche & Cunningham 2005)

Breadfruit, *Artocarpus altilis (*syns. *A. incisus, A. incircus, A. incise, A. communis*) unknown (Morton 1987; Hasan & Razak 1992; in Free 1993; Ragone 1997; in Heard 1999)
Carambola, *Averrhoa carambola* increase (in Free 1993; in Heard 1999; Richards 2001)
Durian *(Durio zibethinus)* increase (Morton 1987; Salakpetch *et al.* 1992; George *et al.* 1994; Yaacob & Subhadrabandhu 1995; Husin & Abidin 1998; Lim & Luders 1998; in Westercamp & Gottsberger 2000)
Feijoa, *Feijoa sellowiana* increase (Schroeder 1953; Stewart 1984, 1989; Patterson 1990; in Free 1993; Ducroquet & Hickel 1997; Degenhard *et al.* 2001)
Guava, *Psidium guajava* increase (Hedström 1988; in Sharma & Jindal 1997; Lakshmi & Mohana Rao 1998; in Heard 1999)
Hog plum, Mombin, *Spondias* spp., mainly *S. mombin, S. tuberosa* increase (Dominguez Sanchez *et al.* 2002)
Jackfruit, *Artocarpus heterophyllus* (syns. *A. integrifolius, A. integrifolia* unknown (Moncur 1985; Morton 1987; in Heard 1999; Sakai & Kato 2000; Devy & Davidar 2003)
Longan, *Dimocarpus longan* (syn. *Euphoria longan, E. longana, Nephelium longan* increase (in Heard 1999; Blanche *et al.* in press)
Mammee, *Mammea americana* (syn. *Mamea americana*) increase (Morton 1987; Roubik 1995; Dunthorn 2004)
Mangosteen, *Garcinia mangostana* no increase - parthenocarpy (Morton 1987; Kanchanapoom & Kanchanapoom 1998; Richards 1990; Wieble *et al.* 1992)
Naranjillo, *Solanum quitoense* increase (Heiser *et al.* 1972; Roubik 1995; Almanza *et al.* 2006)
Passion fruit, Maracuja, *Passiflora edulis* increase (Corbert & Willmer 1980; in Free 1993; Brancher 1999; Da Silva 1999; in Delaplane & Mayer 2000; in Westerkamp & Gottsberger 2000; Almeida Lima 2002; Freitas & De Oliveira 2003)
Rambutan, *Nephelium lappaceum* increase (in Roubik 1995; in Heard 1999)
Sapote, Mamey colorado, *Pouteria sapota* (syns. *Calocarpum sapota*, *Calocarpum mammosum, Pouteria mammosa* unknown (Morton 1987; Davenport & O'Neal 2000)
Sapodilla, *Manikara zapotilla* (syn. *Manikara zapota, Achras sapota*) increase (Piatos & Knight 1975; Reddi 1989; Mickelbart 1996)
Star apple, Cainito, *Chrysophyllum* spp., mainly *C. cainito* (syn. *Achras caimito*) increase (Morton 1987; Degen *et al.* 2001)

Roots and Tubers NES (comprises 8 crops; 6 increase, 1 no increase, 1 unknown)
Arracacha (Peruvian parsnip), *Arracacia xanthorrhiza* increase - seed production (Hermann 1997)
Arrowroot, *Maranta arundinacea* increase - breeding (Ramirez 2004)
Chufa, *Cyperus esculentus* no increase - wind-pollination (Tayyar *et al.* 2003)
Sago palm, *Metroxylon* spp. increase - breeding (in Free 1993)
Oca and ullucu, *Oxalis tuberose, Ullucus tuberosus* increase - breeding (Trognitz *et al.* 1998, 2000; Trognitz & Hermann 2001)
Yam bean, jicama, *Pachyrxhizus erosus, P. angulatus* unknown (in Free 1993)
Mashua, *Tropaeolum tuberosum* increase - seed production (Grau *et al.* 2003)
Jerusalem artichoke, topinambur, *Helianthus tuberosus* increase - breeding (Westley 1993)

Pulses NES (comprises 6 crops; 3 increase, 3 unknown)
Lablab or hyacinth bean, *Dolichos* spp. increase (Garcia Neto *et al*. 1988; in Free 1993)
Jack or sword bean, *Canavalia* spp. increase (in Free 1993; Gross 1993)
Winged bean, *Psophocarpus tetragonolobus* unknown (in Free 1993)
Guar bean, Goa bean, *Cyamopsis tetragonoloba* increase (in Free 1993)
Velvet bean, *Mucuna pruriens* (syn. *Stizolobium* spp.) unknown (in Free 1993; Hennessy 1991)
Yam bean, *Pachyrrhizus erosus* unknown (in Free 1993)