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Investment in Date Palm & Wood Waste Recycling Projects



Although recycled urban wood and agricultural residue were presented at the near past with substantial physical challenges, the tangible results of experimental tests and research carried out on those raw materials by experts and specialists in this field of industry , made the investors more confident that it can be used as a viable raw materials for making wood based products .The many plants over the world use this kind of waste point out the success of investment in this field of industry .

Economically, however, the un availability with stinginess and prices exaggeration of

traditional raw materials has a significant impact on the competitiveness of recycled wood and agricultural residue, presently recycled wood and A.R. became more attractive to wood based products manufacturers.

Date palm tree's waste is the more available agricultural residue in UAE . To use and benefit from such valuable waste, it has to be collected and accumulated as heaps in the farms , converted to chips by using mobile chippers taking tours all over the farms .. the palm waste afterwards transported to the plant / manufacturing site as a chips whereas the

transporting cost of the bulky palm waste will be lessened to the value of quarter by transporting it as a chips .

Recycling such wastes can play an important role in promoting methods meant to utilize these valuable wastes, as well as discovering their positive effect in protecting environment from pollution, especially in our developing countries. Constructions and building activities are vastly growing in the United Arab Emirates to the extent that it became one of the world-top countries in the field of construction development. This led to huge amounts of daily wood wastes, and hence appears the importance of making use of these wastes; they can be recycled and re-manufactured to produce valuable wanted composite products. These products feature high quality, as they are manufactured from good wood materials.

Our projects will make use of these woody wastes - all types, collect them and recycle it into a new useful woody products that can be used as building materials , furniture manufacturing and packing process.

Collecting of date palm tree's waste and all types of woody waste coming from



different resources such as construction wood waste, over used wooden pallet Packing and un-packing, carpentries wood waste and woody Markets waste ... since there is currently no use of these wood wastes in UAE, it is a good opportunity to start such line of business with these valuable waste resources. Investment in waste recycling serve and proceed in accordance with the development programs of UAE government , in addition to some other goals such as :

- ▶ Value added to the projects of date palm plantation , whereas buying the palm waste in any low price from the farmers will increase the income of farms owners then it will encourage them to take more care of such trees and plant more of it .. it serves one of the main goals of the government of UAE .
- ▶ Value added to local market by having a new source of recycled waste in UAE local market.

Elementary Machinery Cost of Nominated Projects Using the palm & wood waste as raw materials

N	Project	Capacity	Machinery Cost of European origin	Machinery Cost of South East Asian origin
1	MDF	50,000 m ³ /year	22,000,000 \$	5,000,000 \$
2	Particle Board	50,000 m ³ /year	7,000,000 \$	2,000,000 \$
3	Compressed Wood Pallet	1000 Pallet / day	8,000,000 \$	2,000,000 \$
4	WPC Door Line	300 Door / day	1,500,000 \$	400,000 \$
5	WPC Profile line		600,000 \$	150,000 \$
6	Cement Bonded Particle Board	Under Study	Under Study
7	Solid Fuel	Under Study	Under Study

Palm trees figure requirements for MDF project of 50 000 m³/year

Raw material	Number of Palm trees required
100% Palm waste (Basically the 1 m ³ of MDF needs waste of 73 palm tree)	3 650 000 tree
90% Palm waste + 10% wood waste	3 300 000 tree
80% palm waste + 20% wood waste	2 900 000 tree
70% palm waste + 30% wood waste (successful tests carried out by Eng. Fuaad M. in the pilot plant of Polimex Cekop Co. in POLAND)	2 500 000 tree
60% palm waste + 40% wood waste	2 200 000 tree
50% palm waste + 50% wood waste (successful tests carried out by the German company DIFFENBACHER, registered as invention patent)	1 800 000 tree

Some of products we have succeeded to produce from palm residue and wood waste are :

- ▶ Medium density fiber board (MDF) .
- ▶ Particle board .
- ▶ Compressed wood pallet .
- ▶ Wood plastic composite (WPC) .
- ▶ Cement bonded particle board .
- ▶ Solid fuel .

An elementary machinery / production line cost of some projects of palm and wood waste recycling is annexed .



Products From recycled wood waste and agricultural residue

MDF



Cement bonded particle board



Compressed Pallet



Particle Board



WPC Door