

[Stoves] Reviewing A.D. Karve's methane digestion device

Peter Singfield snkm at btl.net

Sun Oct 17 14:54:20 EDT 2004

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If we can get A. D. to enter into discussion -- some questions need be asked.

1: Will fresh cane juice be a good "food" for your digester?

Further investigations of my extensive archives on hard drive have derived

A.D.'s answer to this question -- above -- addressed to me personally on this same mail list -- and some time back!

So embarrassing to age and lose my mental capacities --

Here is that answer:

Date: Wed, 07 Jan 2004 19:27:25 +0530

From: "A.D. Karve" <adkarve at pn2.vsnl.net.in>

Subject: Re: [STOVES] compact biogas plant

To: Peter Singfield <snkm at btl.net>, STOVES at LISTSERV.REPP.ORG

X-Accept-Language: en-us

Dear Peter,

Our biogas plant accepts both sugarcane juice as also macerated whole

sugarcane.

In the case of the latter, the advantage is that the cellulose in the cane is also converted into gas, albeit after a retention period of about 20 days.

The maceration is done with the help of a machine called the chaff cutter, which is used for chopping stems of sorghum or maize into small pieces. One can set the machine to give different sizes of the chopped up material.

We use the setting for the smallest pieces. Under Indian conditions, where we get rains only during the four months of monsoon, sugarcane needs irrigation.

Therefore it is not such a simple crop to grow and it is also costly. There are many crops that produce starchy material (e.g. sorghum, pearl millet, sweet potato and several perennial tree species). Many of them can be grown purely under rainfed situations, and therefore starchy material is generally cheaper.

It can also be stored more easily than sugarcane juice or sirup.

I have not patented my biogas plant as I use the same standard design. The fact that one can get methane from starch or sugar is also not my invention.

This is common information to everybody in the biogas game. Many people have reported high biogas yields with oilcakes. There was however a general tendency among all workers to use only waste material such as animal dung, municipal solid waste, distillery effluent etc. as the raw material

for
making methane.

All that I did was to conduct some experiments with starchy and sugary material. When I got good results, I started to search for such material that could be used as feedstock without competing with human or animal food, and found that farmers generally have a lot of starchy and sugary material, which they considered as waste. One can of course have commercial methane production using commercially grown starchy material such as sorghum or tapioka. The farmer does not care for what his produce is being used for, after he has sold it.

In fact none of our technologies is patented, as we want them to reach the people who are need of them.

As to diversifying our operation to other areas, would certainly like to do it, if the money is made available for it.

Yours
A.D.Karve

*****in reply to*****

Peter Singfield wrote:

At 05:58 AM 1/5/2004 +0530, A.D. Karve wrote:

Several members asked me to provide more details about the compact biogas plant being developed by us. I give below the latest status of this technology.

Dear A.D.Karve;

I live in Belize, Central America, in a small village "Xaibe" -- that is literally surrounded in cane fields.

I wonder if an optimized version of your design could be made to

operate on
only fresh cane juice??

Have you tried this as of yet??

For the other stovers on the list -- sugar cane is a wonderfully productive plant for any place in the tropics. Very easy to grow. For a large percentage of the world's poorest populations it is feasible to have a small plot of cane. This certainly would solve the "where do we find all the biomass to burn" problem!

Certainly -- it would be of interest to me to pursue this topic further.

Mr. A.D.Karve -- it is commercially impossible to ship such devices around the globe. But have you considered diversifying your operation to other areas??

"Franchising" this gas producer -- based specifically on cane juice -- would be interesting and profitable.

One small cane crusher in each village would suffice for everyone's gas generator.

Though this is about gas -- and is about small stoves -- there may be a few on this list adverse to such a discussion being as it deals not with -- what to date -- is considered as standard "stove".

But then -- locking oneself into a rigid mind set is often counter productive to innovation or eventual application.

By coincidence I happen to have that "one small cane crusher" --

Peter Singfield
Belize

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