

Intro: Papaya Picker

Papays are big fruit; heavy, and often high up.

After getting the picker fingers around the fruit, you pull the string to close the flexible "fingers". Twist the fruit to break the stem, and lower the fruit to the ground.

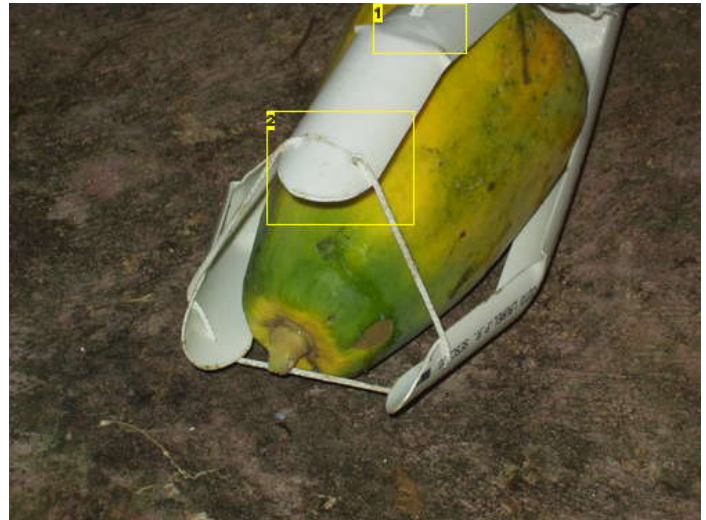


Image Notes

1. It's hard to see in this picture, but this is where the string exits the finger and continues down the side of the pipe.
2. You have some friction between the string and the plastic here. You can shape the hole edges and even use a little wax to help reduce friction.

step 1: Safety while heat forming PVC

We love plastics for what they do for us, but plastic manufacture and decay tend to pollute the environment and negatively affect our health.

Vinyl Chloride, one of the components of PVC, is carcinogenic. When it is locked up in the polymer, however, it is much safer to be around. In my years of experience working with PVC, I have not noticed any adverse effects on my health from being around it.

Always work in areas with good ventilation. If you do get caught in a cloud of smoke, hold your breath and move to clean air.

When heating PVC with a gas stove or propane torch, try not to let it burn. Smoke from burning PVC is bad. With experience one burns it less and less. Don't panic the first time you do burn some. It scorches, but doesn't immediately burst into flame. Move the material away from the flame and try again. Don't breathe the smoke. Smoke avoidance comes naturally for most people.

While heating PVC over a gas flame, keep the plastic an appropriate distance from the flame to avoid scorching the surface before the inside can warm up. It takes time for heat to travel to the center of the material being heated.

Keep the plastic moving, and keep an eye on the state of the plastic. When heated, the PVC material is flexible, like leather. Beyond this stage, you risk scorching it.

A word from James, the plastic engineer -- "Just a word of warning, PVC can handle some high heats but if it catches fire, you wont be able to put it out, it does not need oxygen to burn so don't do this inside".

I do work inside, but my house is made of cement and has good ventilation. MAKE SURE THAT YOU HAVE GOOD VENTILATION. PLAY WITH FIRE -- CAREFULLY.



step 2: Cut the fingers

I used light-weight and fairly thin-walled 2 inch diameter PVC pipe to make this picker. You can just cut the fingers into the end of a 10 ft. long piece of pipe, or make the picker head independently, with a socket in the end for inserting a separate pole. That gives you some extra length. In this picker I made the head separately.

I made the saw cuts with a back saw from a miter box, my favorite saw for making straight cuts.

The somewhat conical Styrofoam plug fits between the fingers to spread them apart.

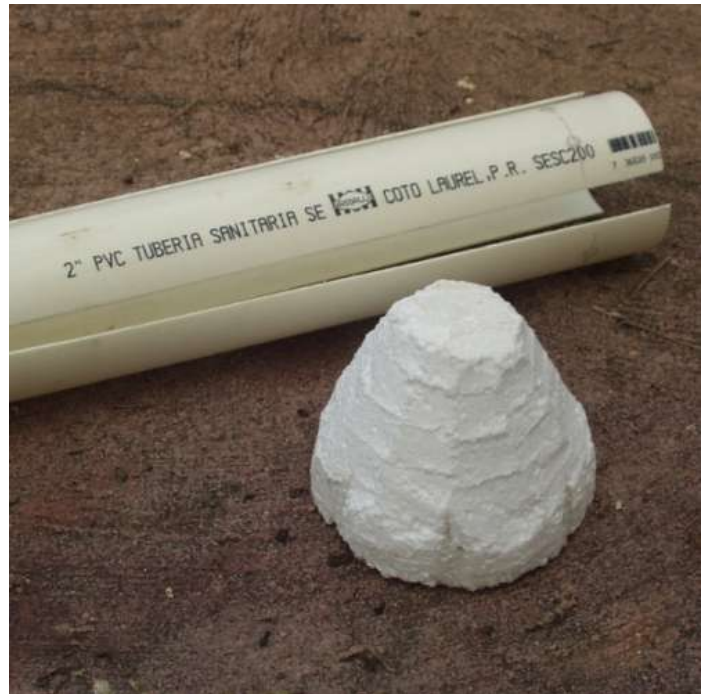
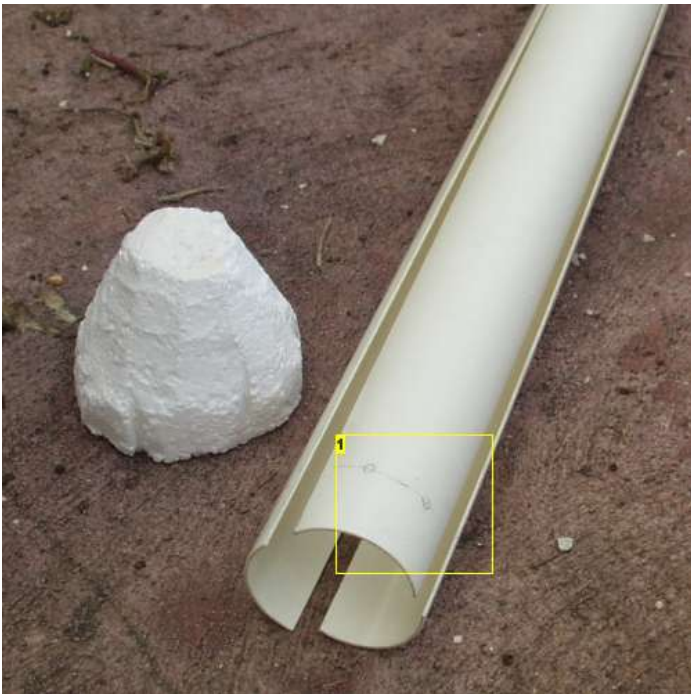


Image Notes

1. Hole marks for string holes.



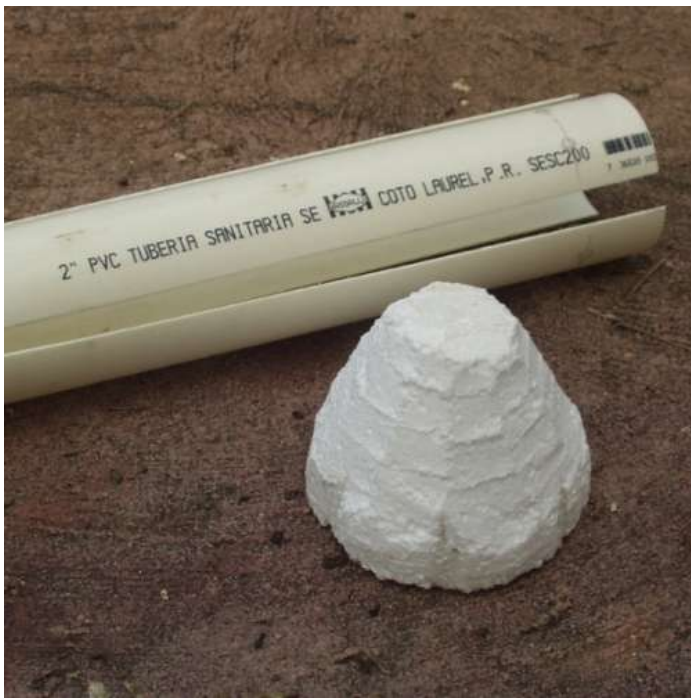
Image Notes

1. Hole marks penciled in for drilling the string holes.

step 3: Insert the Styrofoam spreader plug

I chose to use a Styrofoam spreader plug, instead of heating the base of the fingers to spread them apart without a plug. If you heat and spread the fingers, the curvature of the pipe tends to flatten out, creating a hinge line in the finger, which I consider to be weaker than the original curvature. You can see what I mean in the next step, where the finger tips are bent inward.





step 4: Bend and round the finger ends

In order to more firmly hold the papaya when you pull on it, so that it doesn't slip out the end of the conically splayed out fingers, the finger tips have to be bend in a little. Do this with a propane torch, being careful not to burn the plastic.

Heat the plastic until it becomes flexible, bend the finger tips, and wait for it to cool and rigidify again.

I used aviation snips and a file to round off the finger tips.

I did a similar design for picking oranges years ago. It was fun to use, but the fingers, which had flattened areas as joint hinges, tended to get caught in branches and break. This papaya picker does not have flattened hinge lines and is holding up well. Since there is no problem with branches, it should have good longevity.





step 5: Drill the string holes

The string has to go around the finger tips to pull them closed, and then continue down the length of the pipe. That means it has to make a 90 degree turn at the end of the first finger tip. It can do that, but friction is increased at the holes in the tip and you don't want the string to wear out. Shape the holes to be string friendly. I use an X-acto knife to round the hole edges.

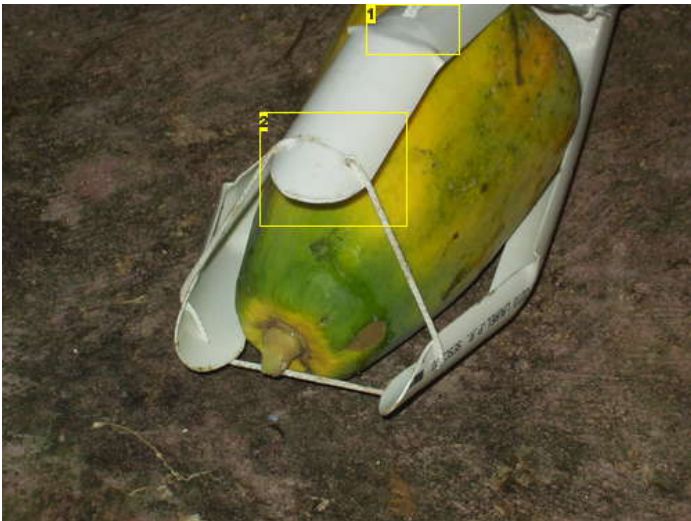


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step 6: Make the pole socket

If you chose to make the picker head separately, you now need to make a socket for the pole to fit into, if the piece of pipe did not already come with a socket.

To make the socket, heat the pole end of the picker head over a gas stove until it softens and then jam it over the end of the pole pipe. Inserting the pole into the softened end of the picker head is easier if you trim the inside of the picker head pipe with a knife and the outside of the pole pipe with a file first.

If you ever want to remove the picker head, you can hold the pole down with your foot and tap the head off with a block of wood and a hammer.

You are all set now. Go pick some fruit!



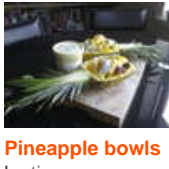
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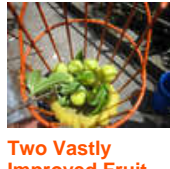


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Comments

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blake77 says:

Oh my gosh i dont know how you come up with this stuff its genius

Feb 24, 2010. 1:22 PM [REPLY](#)



Thinkenstein says:

Thanks. Glad you like it.

Feb 24, 2010. 4:02 PM [REPLY](#)



cb92 says:

Plenty coconuts right outside my window, this is a great idea. It takes a lot of twists to get a coconut off, and this item looks like it could do the job. I have had to pay someone to take them down for me. At my job, they pose a safety hazard, and must be removed. Have a jamb cleat from a sailboat to hold the string tight while you are twisting.

Feb 16, 2010. 2:32 PM [REPLY](#)



Thinkenstein says:

This probably won't work for coconuts. You will break the PVC fingers. What you need is a pipe handle (I use 3/4" EMT) with a sharp hook welded to the end. The tip of the hook jabs into the husk as you pull on the pole. Just keep pulling and the stem will break.

I used to make the hooks by forging out some 1/2" rebar, I think, to make a sharp point. I used an acetylene torch for heating, a hammer and anvil. After you forge the point, heat the rebar and bend the hook shape. Weld the hook to the end of the pipe.

Anyway, the hook on a pole is the best coconut picking pole I have found. After you impale the husk, you can even lower the coconut to the ground under control.

Feb 16, 2010. 5:45 PM [REPLY](#)



cb92 says:

So I guess after you get the hook into the coconut, you spin it to break the stem. They are real strong, not easy to snap just pulling. I'm going to make one, have always wanted to be able to pick coconuts.

Feb 16, 2010. 7:14 PM [REPLY](#)



Thinkenstein says:

No spinning necessary. Just snag the coconut husk and pull. You are stronger than the stem is. Try not to puncture the hard inner nut with the hook, or you will get leaks. Be careful of any other coconuts that may come loose also.

Feb 17, 2010. 5:09 AM [REPLY](#)



spenfisher12 says:

you could use a hot nail to melt the edges so the string wont fray as fast.

Jan 20, 2010. 10:20 AM [REPLY](#)



rimar2000 says:

Very smart!!

Jan 17, 2010. 9:20 AM [REPLY](#)



Ninzerbean says:

This is so great because when I would use my wire picker it wold often poke holes in papayas that were hanging close together so I would ruin 3 fruits to get just one. Thanks for a great solution!.

Jan 17, 2010. 8:37 AM [REPLY](#)



LuminousObject says:

This is great. I love all of your PVC instructables.

Jan 17, 2010. 8:19 AM [REPLY](#)



Obediah says:

What about a slip connector to hold two pipes together?

Jan 16, 2010. 8:08 PM [REPLY](#)



Thinkenstein says:

A standard plumbing fitting would cost a little more, and maybe weigh a little more, but it would probably work.

Jan 16, 2010. 9:14 PM [REPLY](#)



Obediah says:

I love PVC projects and this is a great one. Have you tried using a heat gun? I've had success with that with 1/2 inch PVC, I wonder if it would work on bigger pipes like this.

Jan 16, 2010. 8:00 PM [REPLY](#)



Thinkenstein says:

I'm sure it would. They have pretty high heat settings. Give it a try.

Jan 16, 2010. 9:10 PM [REPLY](#)



Jayefuu says:

Wow. Another ingenious PVC invention. I like.

Jan 16, 2010. 1:27 AM [REPLY](#)



Jayefuu says:

Also any chance of a picture of a papaya tree and you using it?

Jan 16, 2010. 1:28 AM [REPLY](#)



Thinkenstein says:

I'll keep the request in mind, but I need a visitor to take the picture.

Jan 16, 2010. 6:54 AM [REPLY](#)



lemonie says:

Neat, I like the simplicity of it.

Jan 16, 2010. 3:44 AM [REPLY](#)

L



Doctor What says:

Picking fruit is a delicate process, and this looks like it would do the job quite nicely.

Jan 16, 2010. 12:44 AM [REPLY](#)