MAMA JANE'S LIFE HAS IMPROVED AFTER ADOPTING PUSH-PULL. HER WOMENS GROUP WANTS TO KNOW HOW SHE DID IT.

Mama Jane should share with us her secrets to success. Since the past three harvest seasons she has become wealthier and healthier.

Oh yes, even her crop seems to be happier. What have you been up to?

Well, it all started one Saturday afternoon when Mama Rose came visiting me...

My problems are “Kayongo” (Striga) and stemborers. They destroy my crops every season.

I can see that the poor soil is also affecting your crop.

Look at your maize plant. Striga has attached itself to the roots sucking away the nutrients from the plant. Stemborers are also damaging the maize.

Mama Jane, What is the problem?

My problems are “Kayongo” (Striga) and stemborers. They destroy my crops every season.
What is Push-pull?

Come, let’s go to my shamba.

**AT MAMA ROSE’S SHAMBA**...

Wow! What a lovely crop of maize. How come your field has no striga?

Because I use the Push-pull system. After three years I now harvest 12 bags on my half acre plot, and there is no striga or stemborer. Look! The soil even looks moist and soft.

**Desmodium** kills striga. Also stemborers don’t like the smell of desmodium. Stemborers like to lay their eggs on Napier grass instead of maize. Desmodium also benefits your soil.

So, what does it do to the soil?

It improves soil fertility by fixing nitrogen and adding organic matter.

Striga and stemborers may destroy up to 100% of your maize crop. Haven’t you heard of the Push-pull farming system?
Desmodium is a fodder legume. My son will show you how to plant a Push-pull field.

We cleared the land, ploughed...

...and broke down the soil until it was fine.

Using pegs and ropes, we measured the first plot of 30m x 30m. A push-pull plot can be as small as 21m x 21m, or as big as any shamba.

We used a string to measure and ensured that we had a square. We put pegs at opposite sides of the square at intervals of 75cm each. When we finished marking the plot with pegs and strings it looked like this.

I know of Napier but what is desmodium and how do I establish a Push-pull field?

ESTABLISHING A PUSH PULL PLOT

AREA FOR MAIZE AND DESMODIUM INTERCROP

1 metre path round

AREA FOR PLANTING NAPIER GRASS AROUND THE MAIZE

1 metre path round
Follow these steps when planting Napier grass in your Push-pull plot.

1. Dig holes at each peg on border of the marked plot.

2. Apply one teaspoonful of triple super phosphate fertilizer or 2 hand-fulls of well decomposed farmyard manure in each hole.

3. Place a three node cane into each hole at an angle of 30° to 40° all facing one direction.

4. Cover with soil ensuring that two nodes of the cane are well covered.

5. Repeat steps 1 to 4 for the second and third rows, ensuring that the rows are 75cm apart and 75cm between the plants within the rows.

6. If you are using root splits, place them upright into the planting holes and cover with soil.

Select healthy Napier grass for planting. Do not plant Napier grass that has stunt disease.

It looks neat! Your newly planted napier grass field should look like this.
MAMA JANE CONTINUES TO EXPLAIN TO THE GROUP . . .

Next, we planted desmodium. We mixed 250g of silverleaf desmodium seed with fine sand; one part desmodium to three parts dry sand.

Mix 3 parts sand to 1 part desmodium seed.

Desmodium Fine Sand

We drilled desmodium in the furrows at 75cm row-to-row distance.

We planted maize between desmodium rows.

Drill DAP fertilizer or farmyard manure along furrows, mix with soil using a stick, without covering or disturbing the furrow.

Weed and crop management

Early weeding is very important for the successful establishment of a Push-pull plot. We carried out the first weeding when maize was 3 weeks old, and second weeding when maize was 5 weeks old. It is important to distinguish between desmodium and weeds.

Desmodium at three weeks

Desmodium at five weeks
After 5 weeks, my crop looked like this.

My first maize harvest was 3 bags from the 30m x 30m plot.

For the past three years I have harvested 12 bags each season from my half acre plot.

AT MAMA JANE’S SHAMBA, 4 MONTHS AFTER PLANTING PUSH-PULL. A DAIRY FARMER CAME CALLING

Greetings ladies! Mama Jane could you sell me some Napier grass from your shamba?

No way Mr. John I can’t do that.

Actually you can!
Just harvest the Napier one row at a time, starting with the inner row. Give the harvested row time to grow before harvesting the next row.

Why is Mr. John interested in the Napier?

It is to feed his dairy cow.

I will buy a dairy cow. I now have enough Napier to feed one.

WHEN I FINALLY BOUGHT MY COW.

This is good progress! Feed it on desmodium too. It will increase milk production. Mix three buckets of well chopped Napier with one bucket of well chopped desmodium.

TWO WEEKS AFTER FEEDING THE COW ON DESMODIUM NAPIER MIX

Now I am able to sell more milk.

We may now proceed to my shamba. I will show you how to harvest desmodium seeds.
You harvest desmodium seeds for future use or for sale. Wear polythene over your clothes to prevent the pods sticking to you.

Winnow the threshed seeds.

Harvest desmodium after harvesting maize from the field. During the first season do not harvest desmodium until it has established well.

Why don’t you just let your cow graze in this field? Because direct grazing destroys desmodium and Napier grass.

Trimmed desmodium will regenerate for the next planting season.
Thank you for your experience Mama Jane. I think we should start a bulking site to provide desmodium seed to new members.

Let’s have a farmer field school (FSS) to teach all new members about Push-pull.

Let’s partner with the local cooperative to sell them maize and milk, and desmodium to the seed company.

We can keep chicken and feed them on desmodium too and get more eggs.

Let’s keep dairy goats and cows; there will be enough fodder from push-pull.

THE END
NAPIER GRASS

STRIGA WEED

STEMBORER

Adult
Chilo partellus

Larvae

Pupa

Adult
Busseola fusca

SILVERLEAF DESMODIUM
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