

# MANDY & FANNY

The Future of Sustainable Agriculture



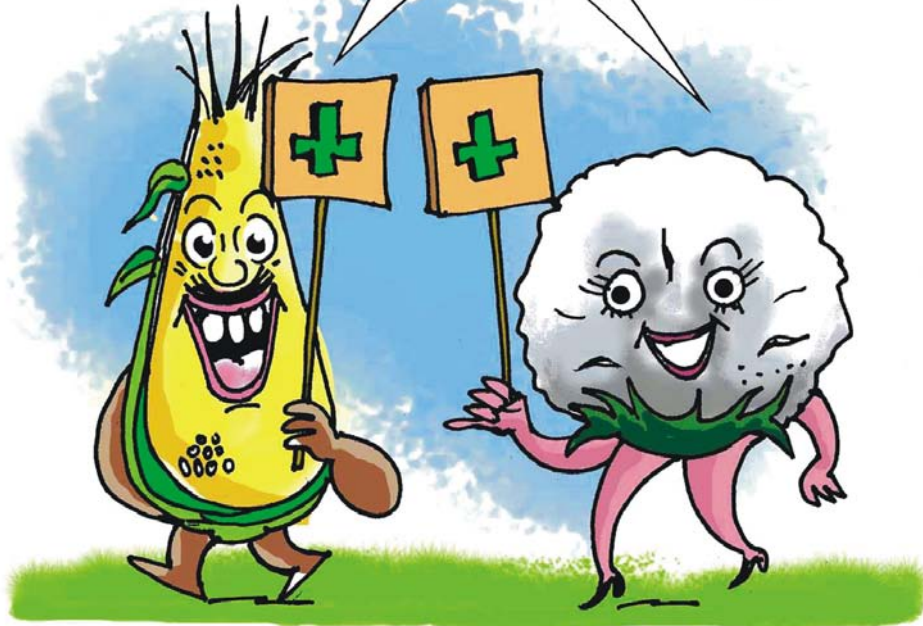
by Bhagirath Choudhary & Kadambini Gaur  
Illustrated by Irfan Khan



# MANDY & FANNY

The Future of Sustainable Agriculture

Safer, better & affordable  
food and green environment



by Bhagirath Choudhary & Kadambini Gaur  
Illustrated by Irfan Khan



## “Dedicated to Dr. Clive W. James, Glenys Menai James and ISAAA”

--- Bhagirath Choudhary & Kadambini Gaur

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**ISAAA on net:** For more information including the copy of selected images and video of Mandy & Fanny visit: [www.isaaa.org](http://www.isaaa.org) and [www.isaaa.org/india](http://www.isaaa.org/india)



Hi!! I am  
**MANDY!!!**

I provide wholesome food to little chicks that make your daily meal. I make your food healthy and nutritious.



Fresh pop corn and clean corn flakes  
brings smile on your children's face.



You love burger, nuggets, hotdogs and chicken tandoori?

They're all **VERY NICE** as they have fed on me!



you know my friend  
**FANNY** - the fluffy  
white cotton ...





The fluffy white cotton  
that dresses you in nice  
clothes, fly your kites  
and heal your  
wounds.



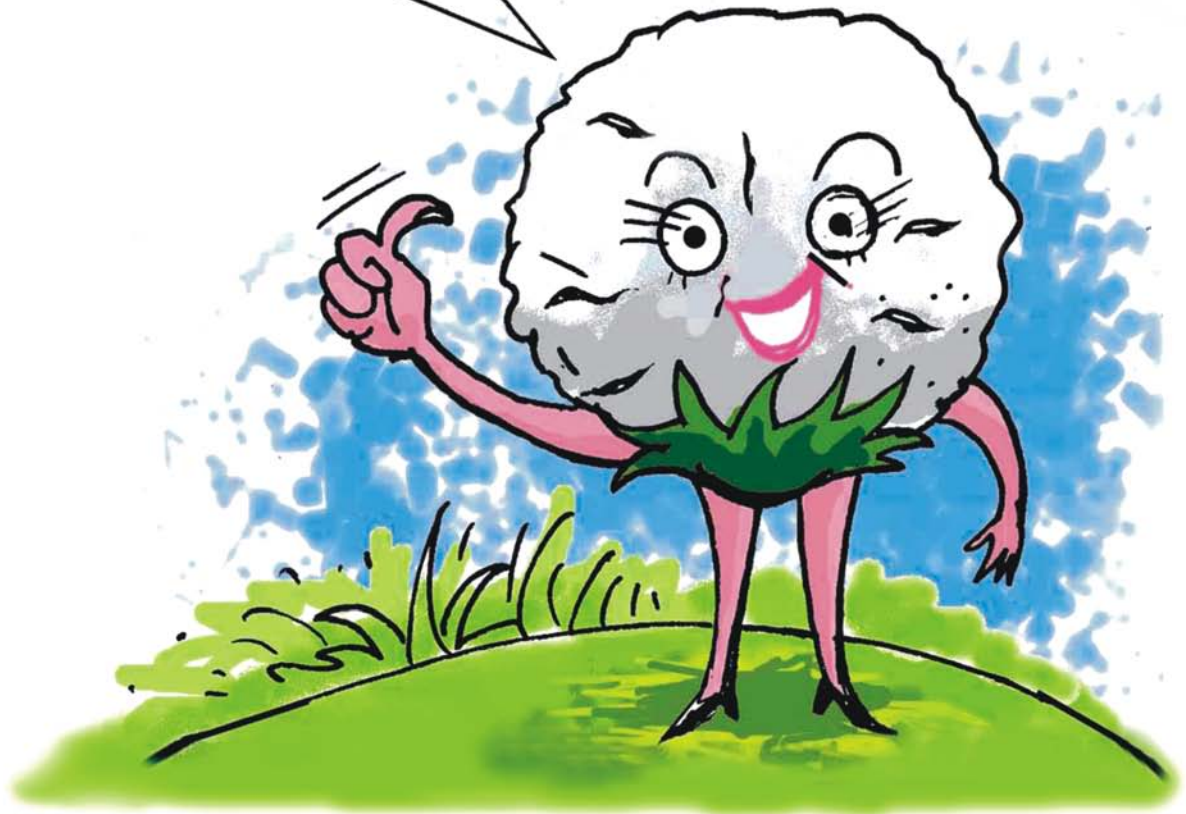
That buddy is  
like me too.



Both of us are very  
**STRONG** now-a-days.



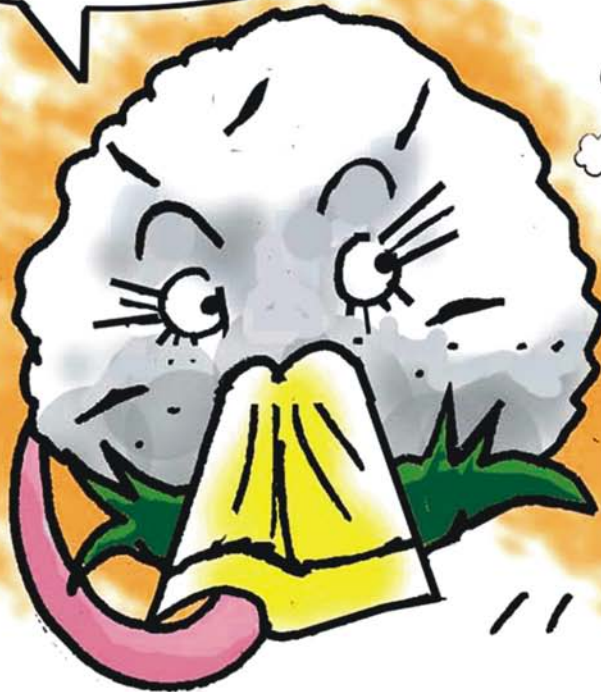
Our friends in some other countries aren't as strong and sturdy as we are. They continue to fear growing out in the field.



Insects bite them!



Insecticide sprays  
make them sick  
and dirty.





Customers out there dislike them.





It burdens their farmers who can't compete with ours.







You know  
WHY!!

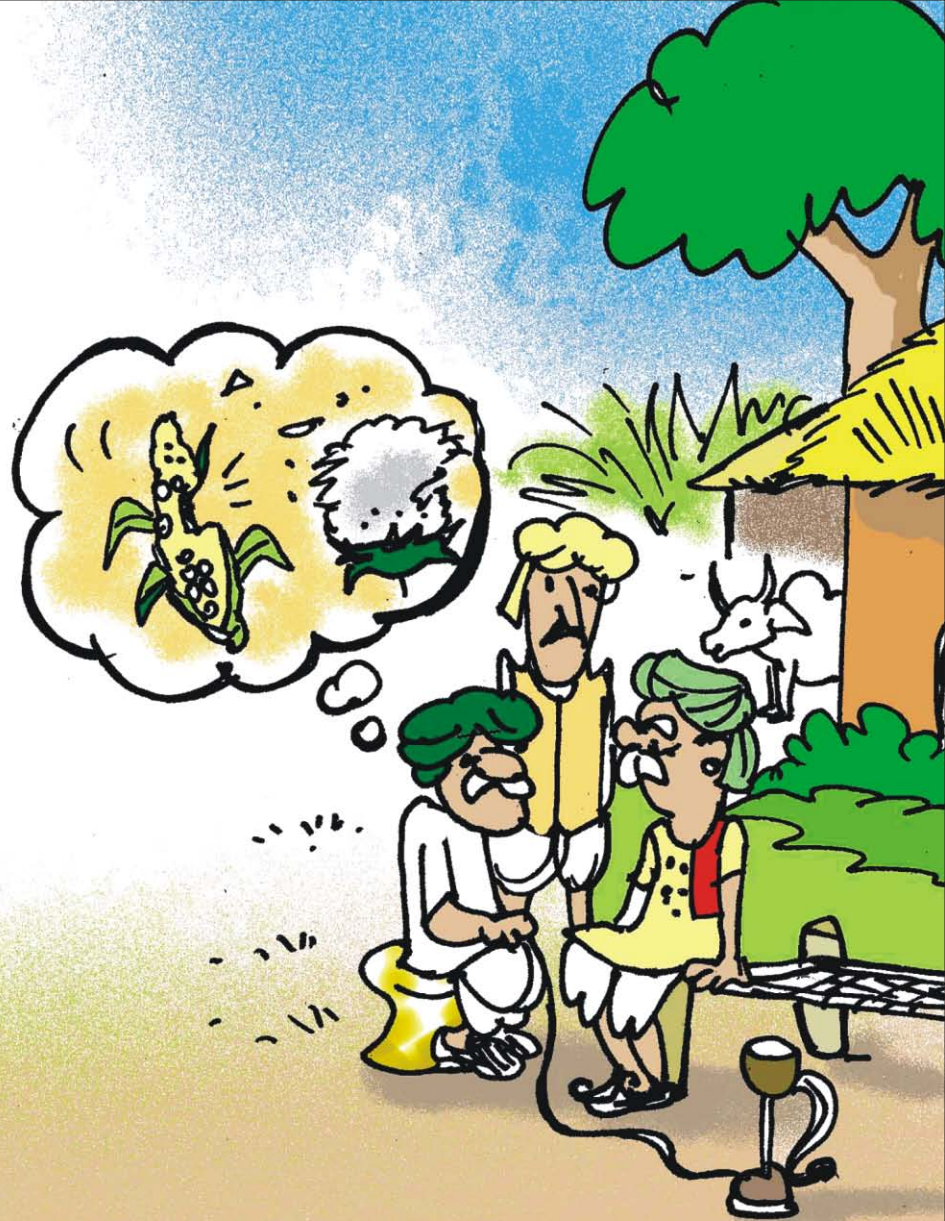
We're safe from deadly  
and greedy insects.



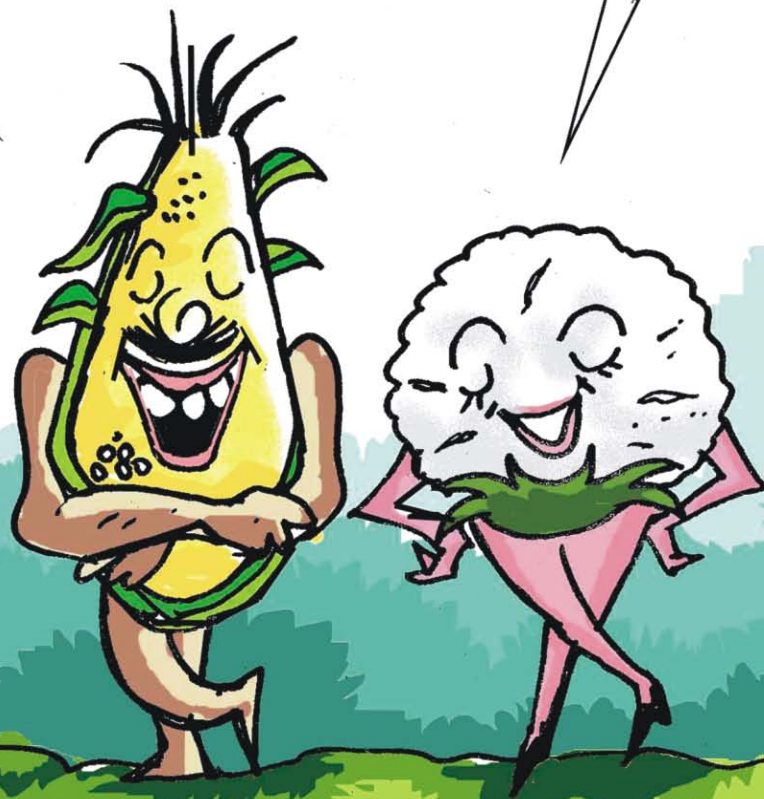
In the past, insects used to feed on us and damage us when we were at a young age. We became weak. Our growth was stunted. They even made us look ugly.



We were not liked by our growers. They disowned us for something better.



Today our growers love us and prefer us smiling in their fields.

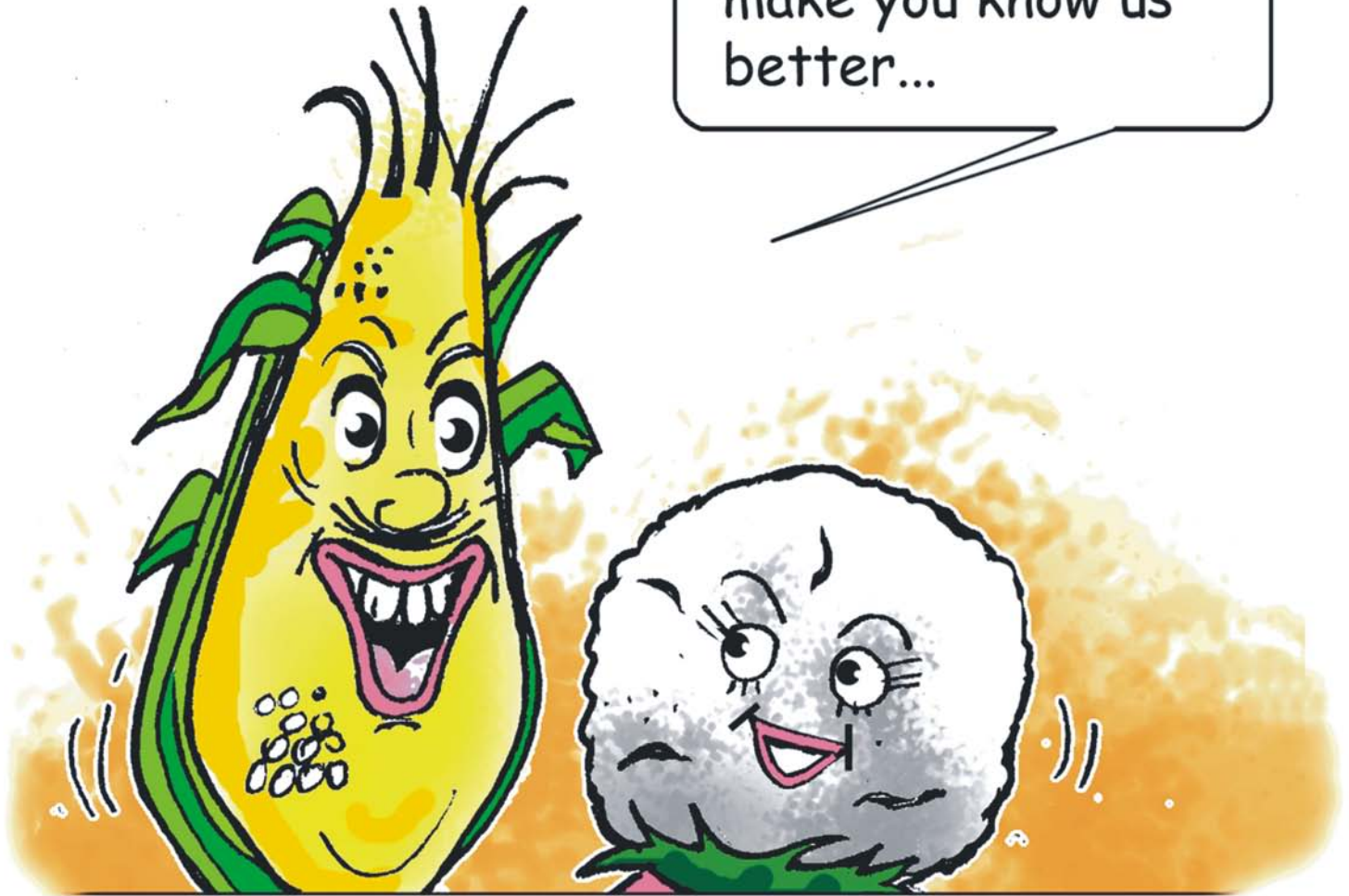




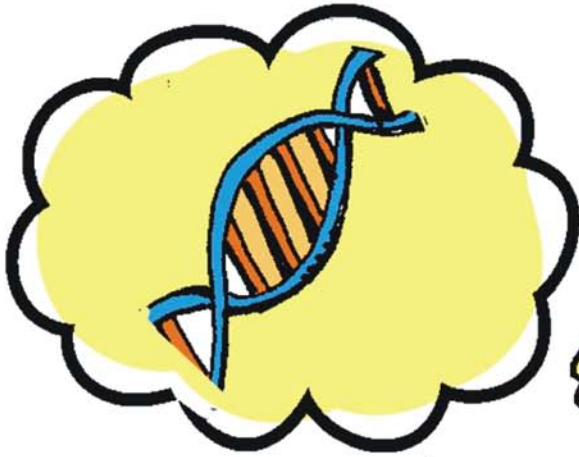
Some people still call us genetically modified. But truly, we're safer and better than what we were.



To understand this  
change, we need to  
make you know us  
better...

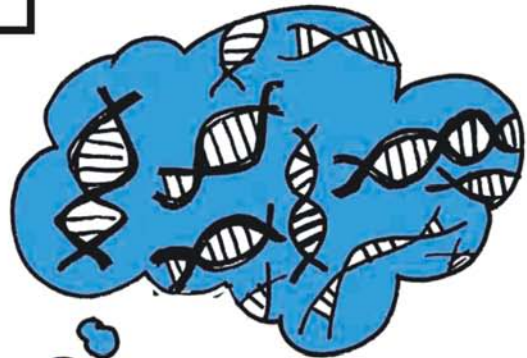


We all are made up of genes. I myself have 50,000 genes.

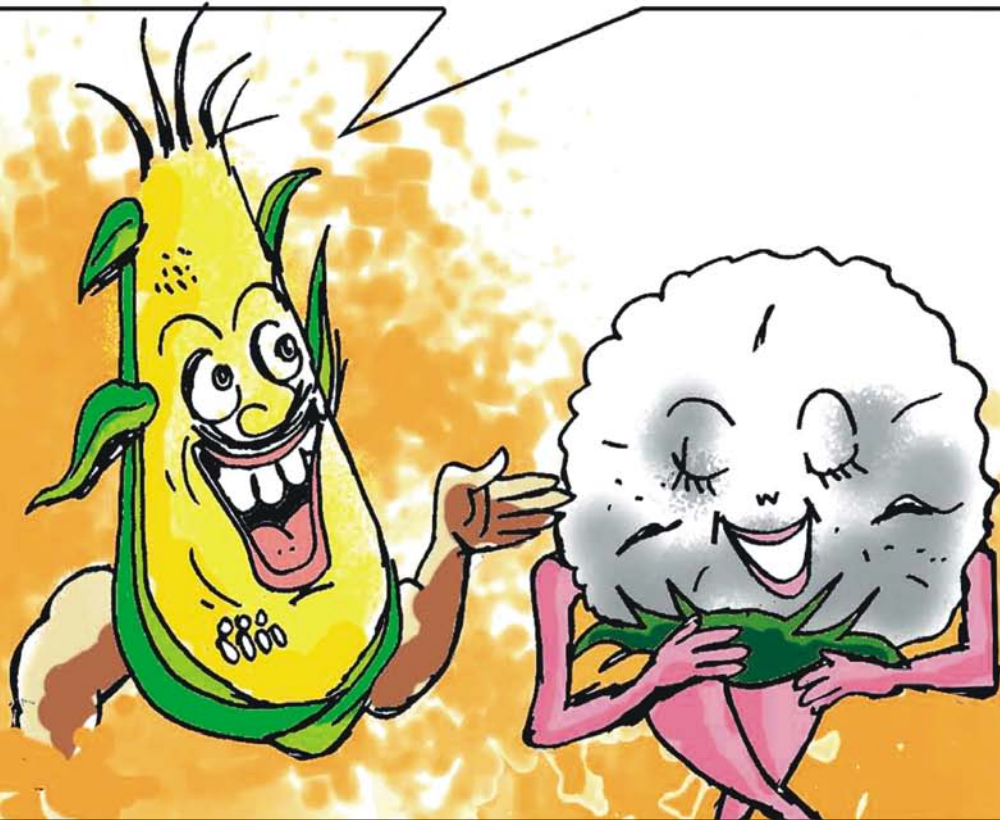




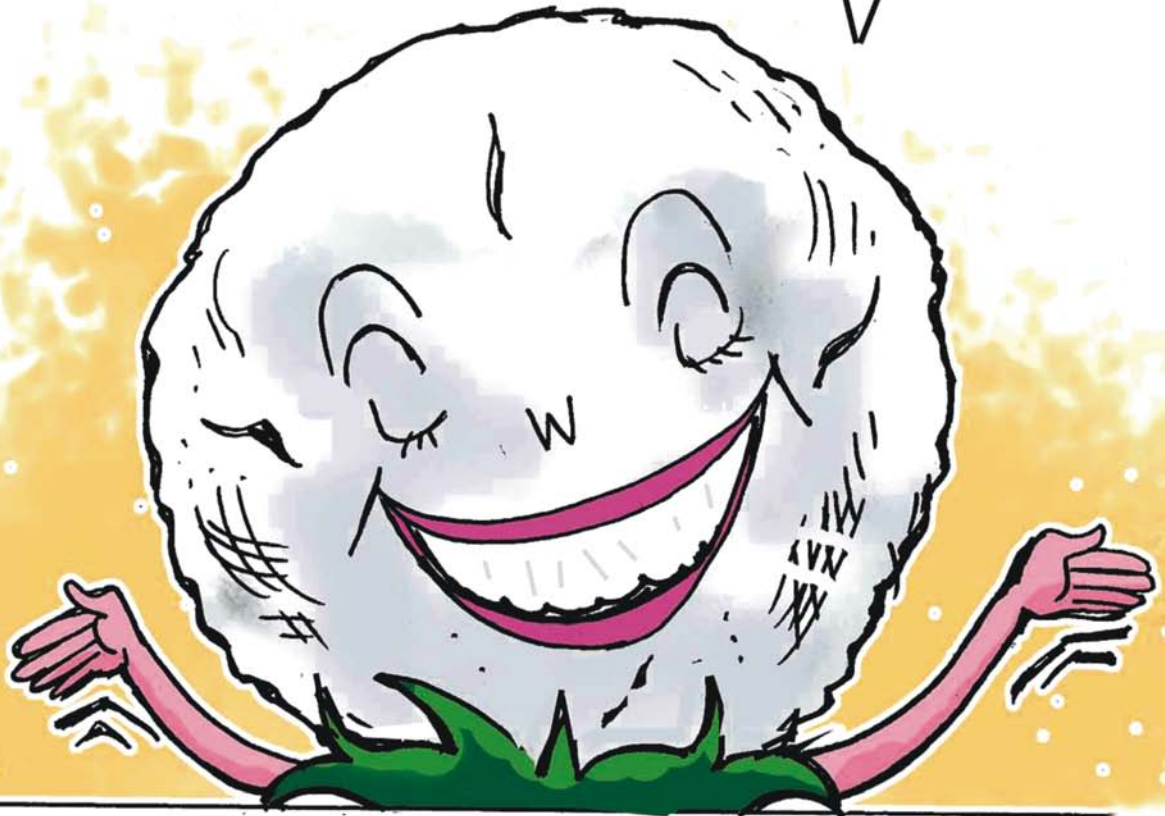
I'm made up of 59,000 genes, slightly more than my friend Fanny. These genes play a vital role in making of what we're and how we look.



Genes make our roots, stem, stalks,  
leaves, flowers, pollen and fruits.  
Genes give us life, grow us and  
look after us until we die.



In fact these tiny genes are amazing.



See, I have some unique genes that give me golden dots on my earhead.



They also make me  
straight and strong.



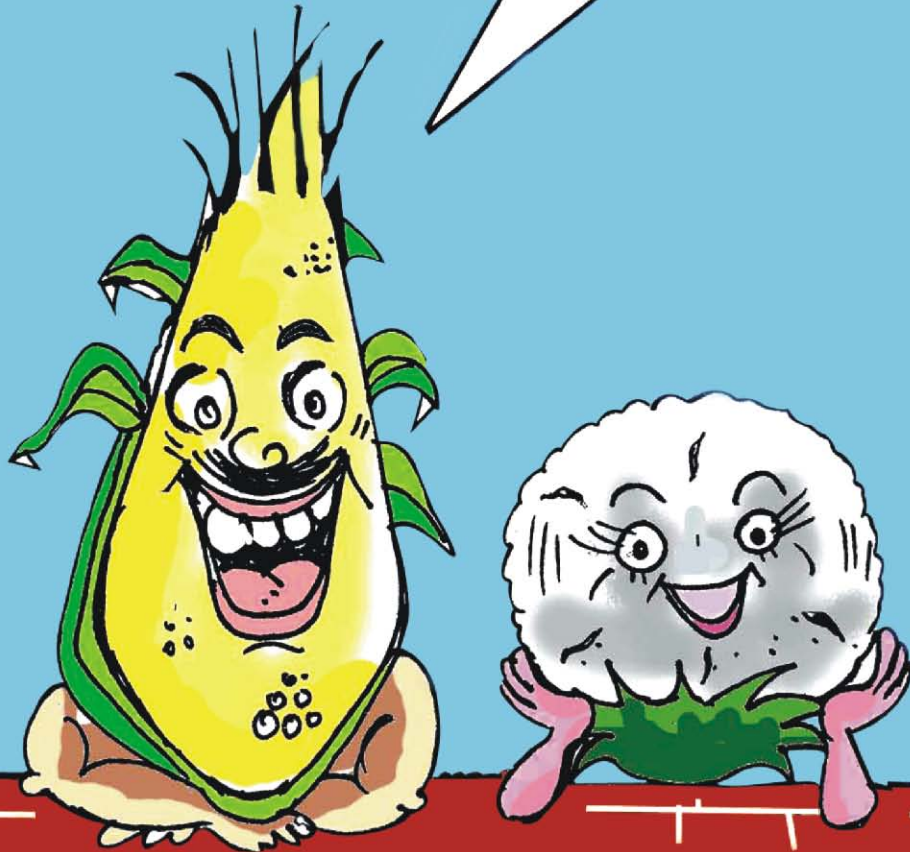
I do have some that makes  
my bolls **SOFT** and **FLUFFY**  
I'm trendy. I'm in the  
Vogue.



There're some genes similar in both of us that help us fight with insects, some help us to grow in difficult situations.

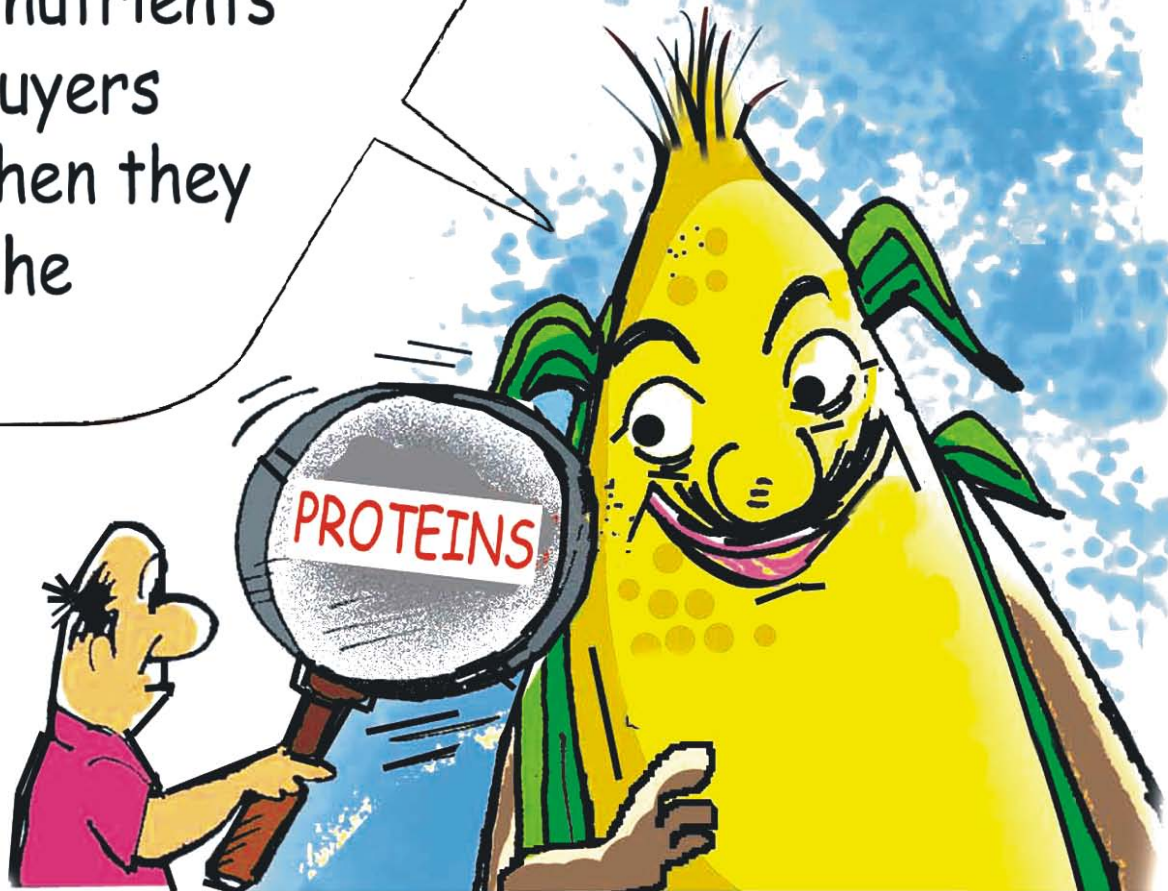


Some genes help us adapt to changing climate and some make us look beautiful.





Genes are the ones that produce proteins/vitamins and other nutrients that our buyers look for when they buy us in the market.



Hey!!! We are all  
about genes.



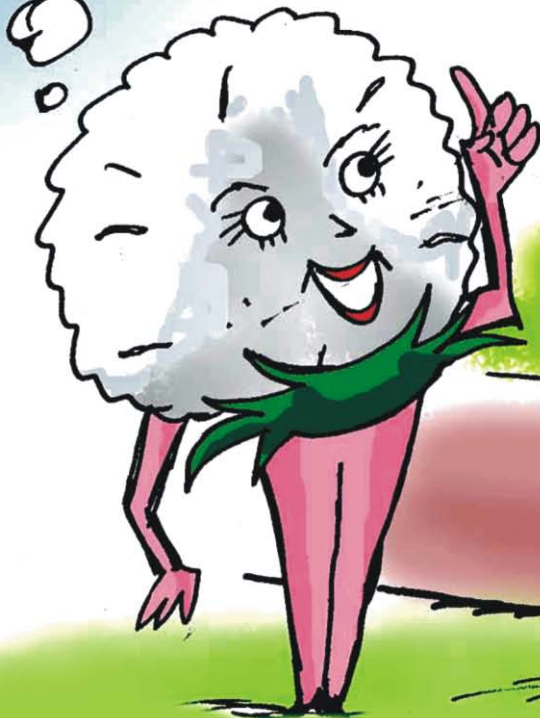
Did you know our growers have fewer genes than us. It seems they are not as smart as we are. They are made up of half the genes that we have.



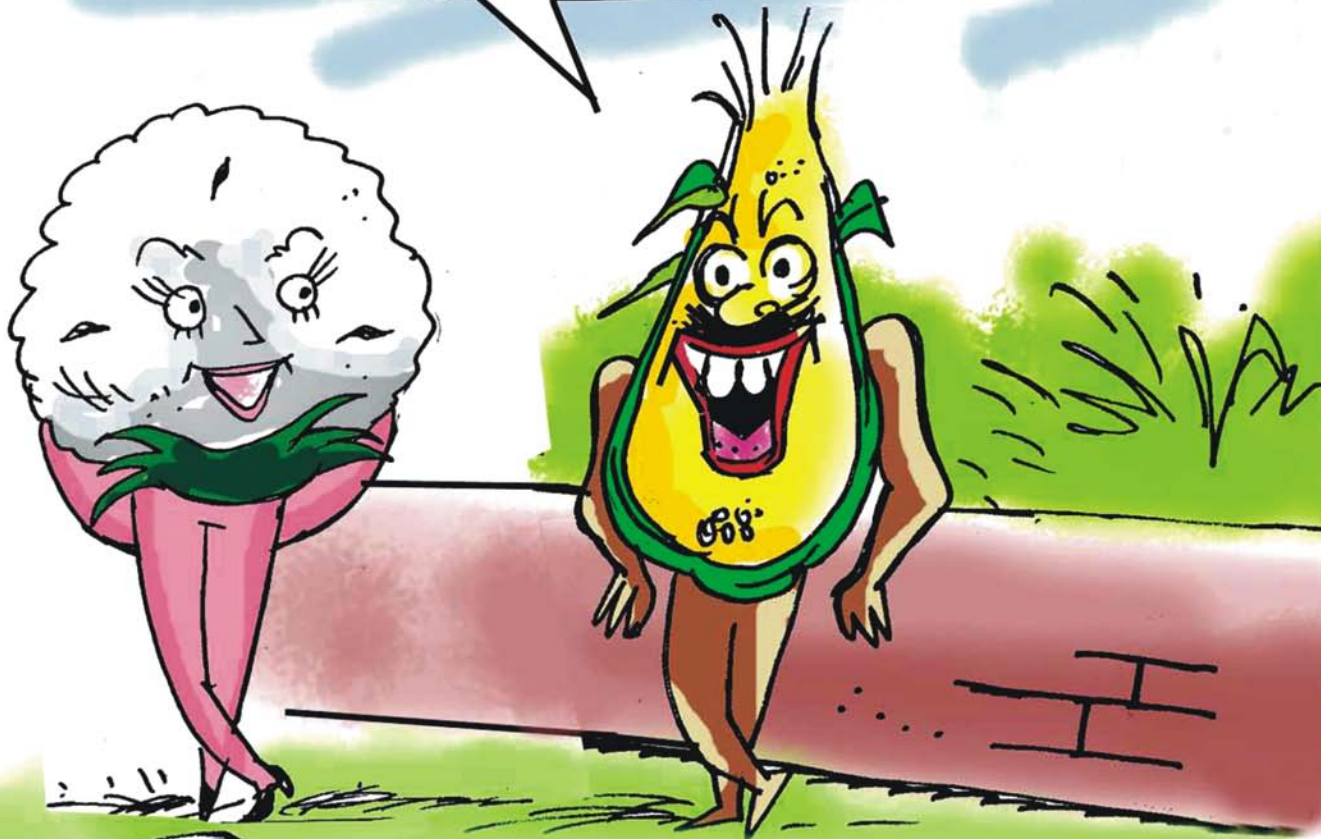
Like our growers, we also lack  
some genes that may code for  
proteins essential for protecting  
us from insects and diseases.



But Mandy our growers generally pop-a-pill when they get sick. We can't though-we're smarter than they are.



I know Fanny. These guys consume pills made up of proteins.

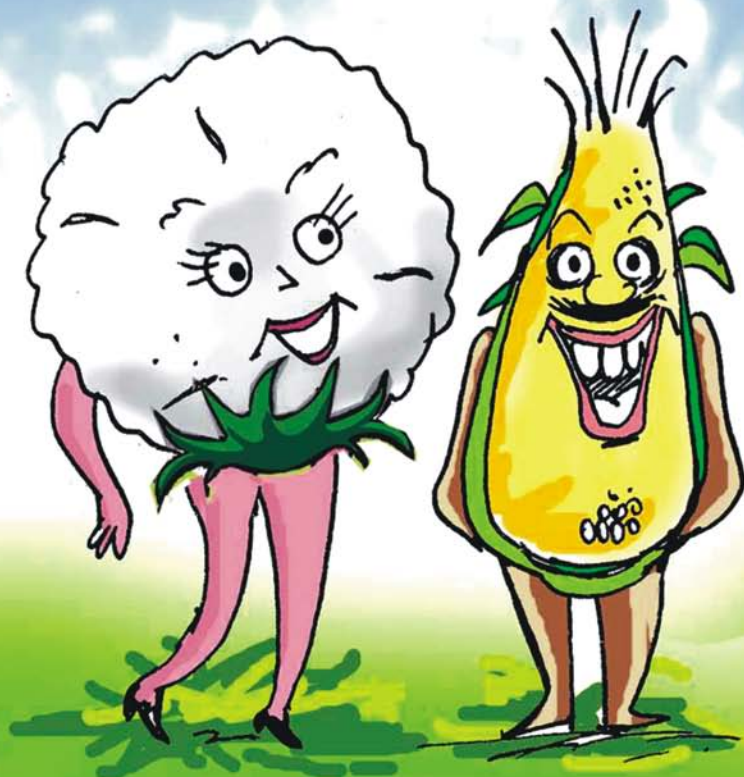


Such pills are produced by genes expressing desired proteins to cure old and new diseases more effectively than by the conventional pills.





They all are called  
biotech pills.





SO WE  
ARE!!

Oh. I see. so that's why  
these new pills  
are very  
popular  
now-a-days.



But only in those countries  
where we're grown.  
Why can't we be grown  
globally?



Well because there 're some people in those countries who rely heavily on biotech pills to cure themselves but scare and misguide the general public about us.





But what I know is that  
all of them love to wear  
clothes made of me.

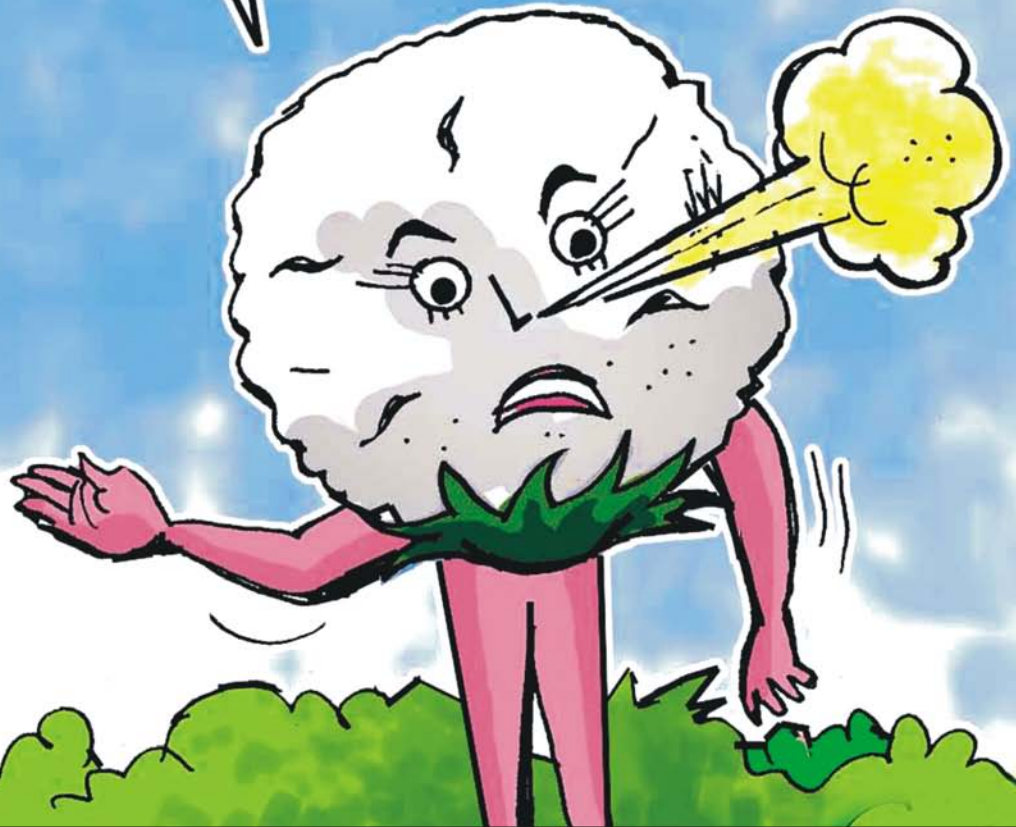


They all eat  
food produced by  
us.

YUMMY!



Are they hypocrites??



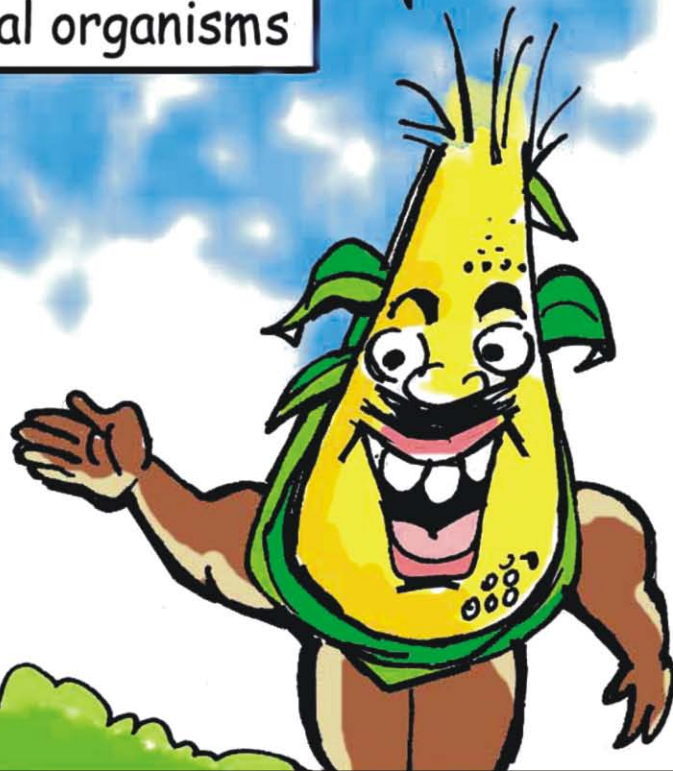


No blame game Fanny!

Then what is  
the fuss?

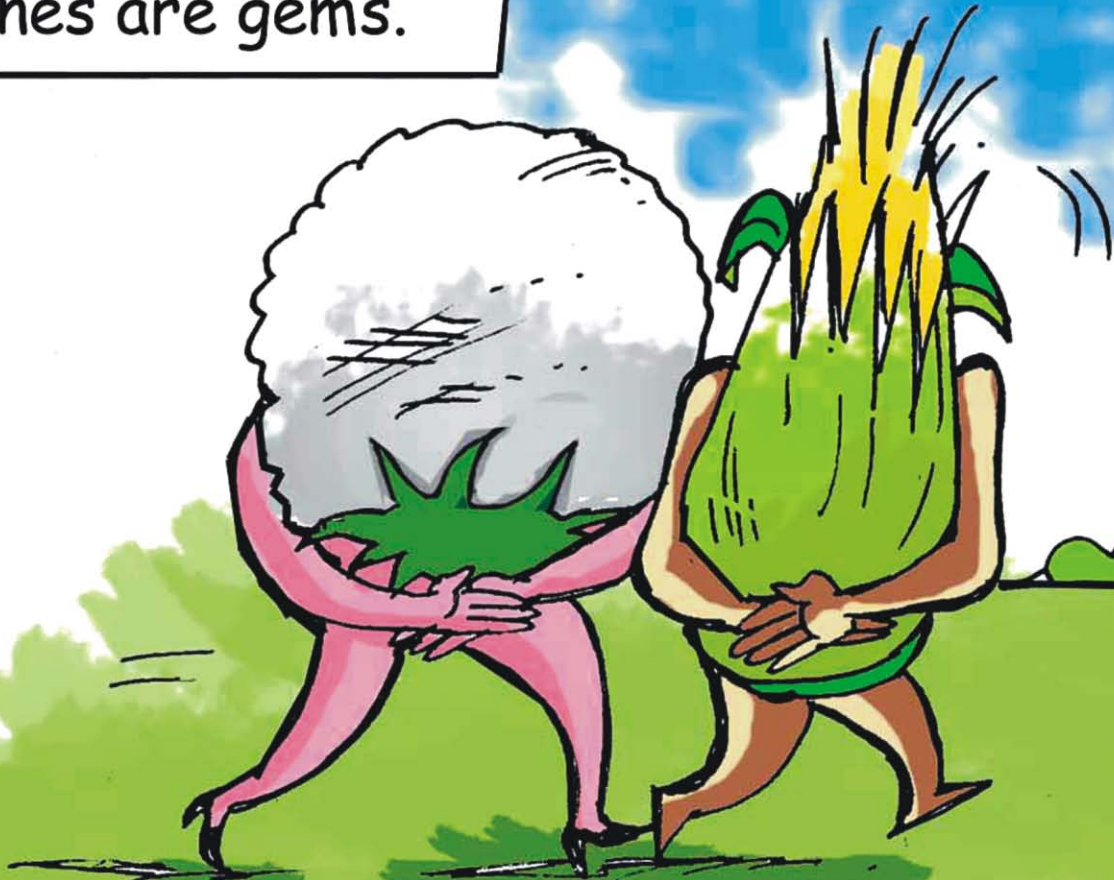
But that gene kills our major enemy only, it doesn't harm anyone else. The other tiny insects and beneficial organisms live happily with us.

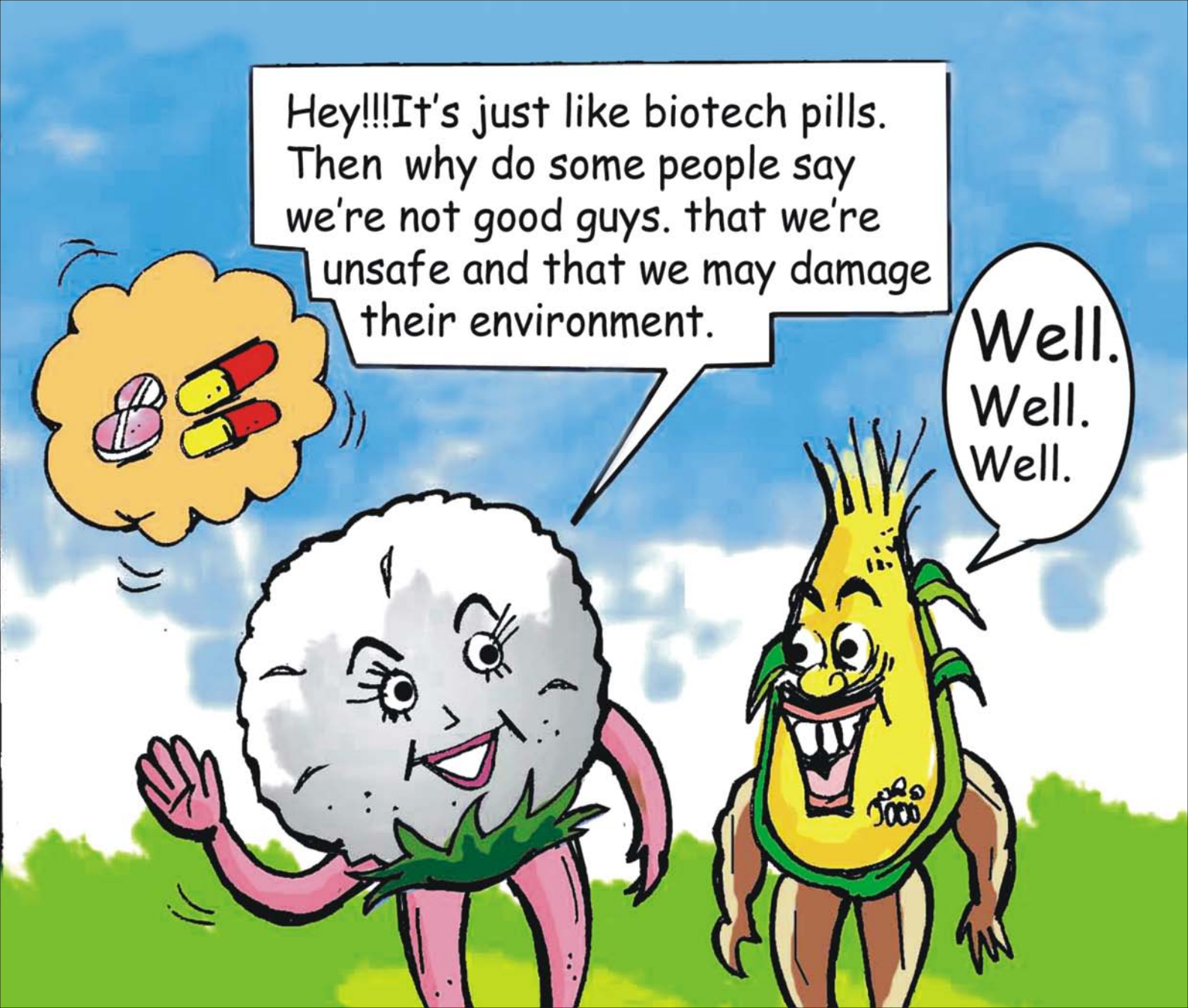
They say we have an extra gene(s) that we shouldn't have.






I know Fanny, we've to make others understand that genes are genes. Don't be scared of them. Genes are gems.





Hey!!! It's just like biotech pills.  
Then why do some people say  
we're not good guys. that we're  
unsafe and that we may damage  
their environment.

Well.  
Well.  
Well.



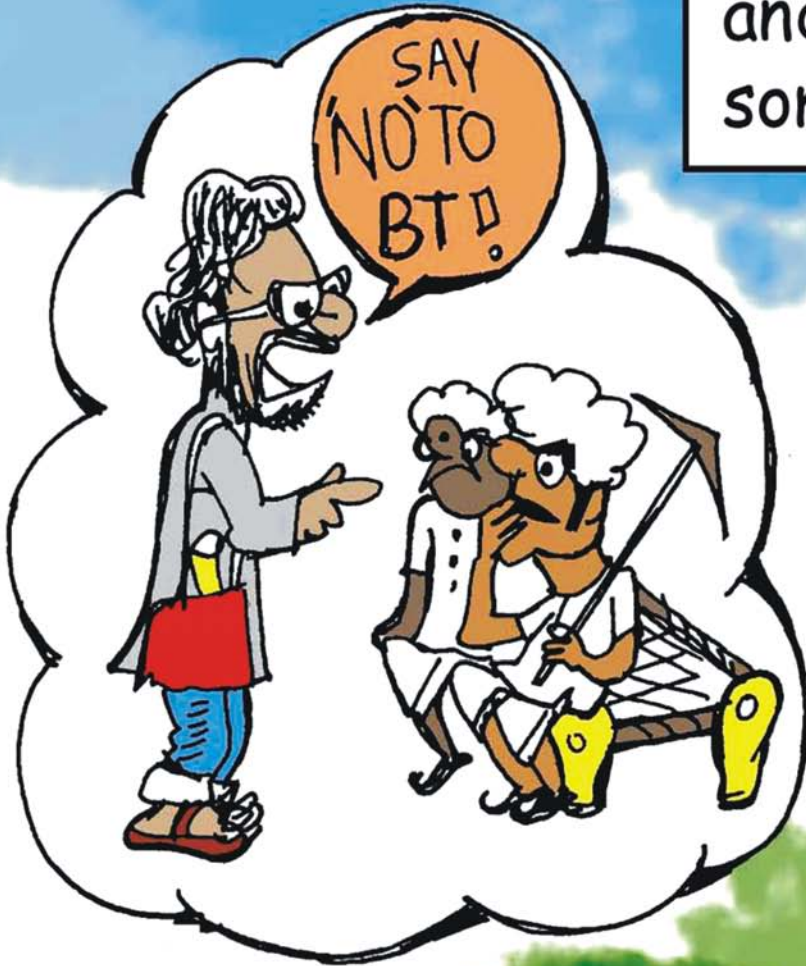
Ha ha ha. They really don't know  
that we're made to help them  
protect their environment,  
produce safe and more  
affordable food.

That's why our growers love to produce us. We help them year-after-year with reduced use of insecticide sprays. Because of us they now have more beneficial insects and friendly buddies in the field where we are grown. We help our growers reap a richer harvest and generate more income. Our growers are richer than what they used to be. They all prefer us.

They all  
love us.



It seems there are still lots of half-truths and lies spread by some people out there.



Unfortunately, yes Fanny. Those half-truths and lies continue to influence policy makers and governments in these countries. Yet the truth is that the farmers have a dire need to

grow us.



I know and it's a very sad situation. Our friends who grow out there continue to suffer unlike us.



What can we do? It is their loss. It's their farmers' loss and their economic loss. Our growers are happy and satisfied as they continue to out-compete theirs in the market.





Come on guys-wake up. There is no other way out. We are conspicuous by our absence.

We need you!



We are the **future** of  
sustainable agriculture!



## Do you remember?



Tick (✓) the right answer.

1). The names of main characters in the comic are?

- a). Mandy and Fanny
- b). Manu and Tanu
- c). Michael and Michelle
- d). Momos and Fiona

2). What inspired the authors of the comic to coin the term "Fanny" for biotech cotton?

- a). Fibre
- b). Fun
- c). Fashion
- d). Frisbee

3). The authors of the comic relate "gene" which is the basic building block of all living organisms like human beings, animal, plants etc with?

- a). Jugaad
- b). James
- c). Gems
- d). Jewellery

4). ISAAA estimates that more than a billion hectares of accumulated land is planted with biotech/genetically modified (GM) crops since its inception. In which year were biotech crops officially commercialized?

- a). 1986
- b). 1996
- c). 1998
- d). 2006

5). Dr. Norman E. Borlaug, the founder of World Food Prize and the founding patron of ISAAA was awarded the Nobel Peace Prize for a lifetime of work to feed a hungry world in 1970. What was his major contribution?

- a). White Revolution
- b). Grey Revolution
- c). Blue Revolution
- d). Green Revolution

## Answers

5). d, 4). b, 3). c, 2).c, 1). a



