

# MAYEE MEMOIR

DR. CHARUDATTA D. MAYEE

A journey of a village boy from Maharashtra  
to the science corridors of the world



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# THE LONG WALK.....

My remarkably close family friend Late Dr Gopal Godbole whenever phoned me would repeat the same question. Charu! when will you start writing an autobiography. I was really not serious to take up such an assignment as I felt there is nothing very special to write and what I encountered in life in fact many must have done so. But he will pressurize my wife, my daughter to inspire me to take up writing. He said what others see from a distance in you may not be that you observe but we all know the problems, challenges, adventures and even the humour experienced in the long walk of your life; from village world to world-village, from the art of surviving to the science of living is unique.

During the first phase of Covid-19 pandemic on May 28, 2020, when I received a call from his son that Gopal has left this world for heavenly abode, I was totally devastated. Even in his last call a few days ago I did not reveal that I took up this assignment for him as I wanted to give him a surprise. Though belatedly I now dedicate this first-person account of my life to Late Dr Gopal Godbole.

I very well recall the day I accepted the proposal from my dear and loving friend and my partner in the South Asia Biotechnology Centre (SABC), New Delhi, Bhagirath Choudhary to document my thoughts and write the memoire. I knew that the best work required more ability than I possessed and therefore I needed help that only my Guru '**Swami Avdhutanand**' could give. My wife has a policy to take God in to working partnership in all our problems and activities and hence I told her my difficulties and she did the rest of worshipping. This is age of the fast food, fast everything around but a major element is missing and that is the sense of leisure. Our ability to think leisurely has been lost. In the bargain

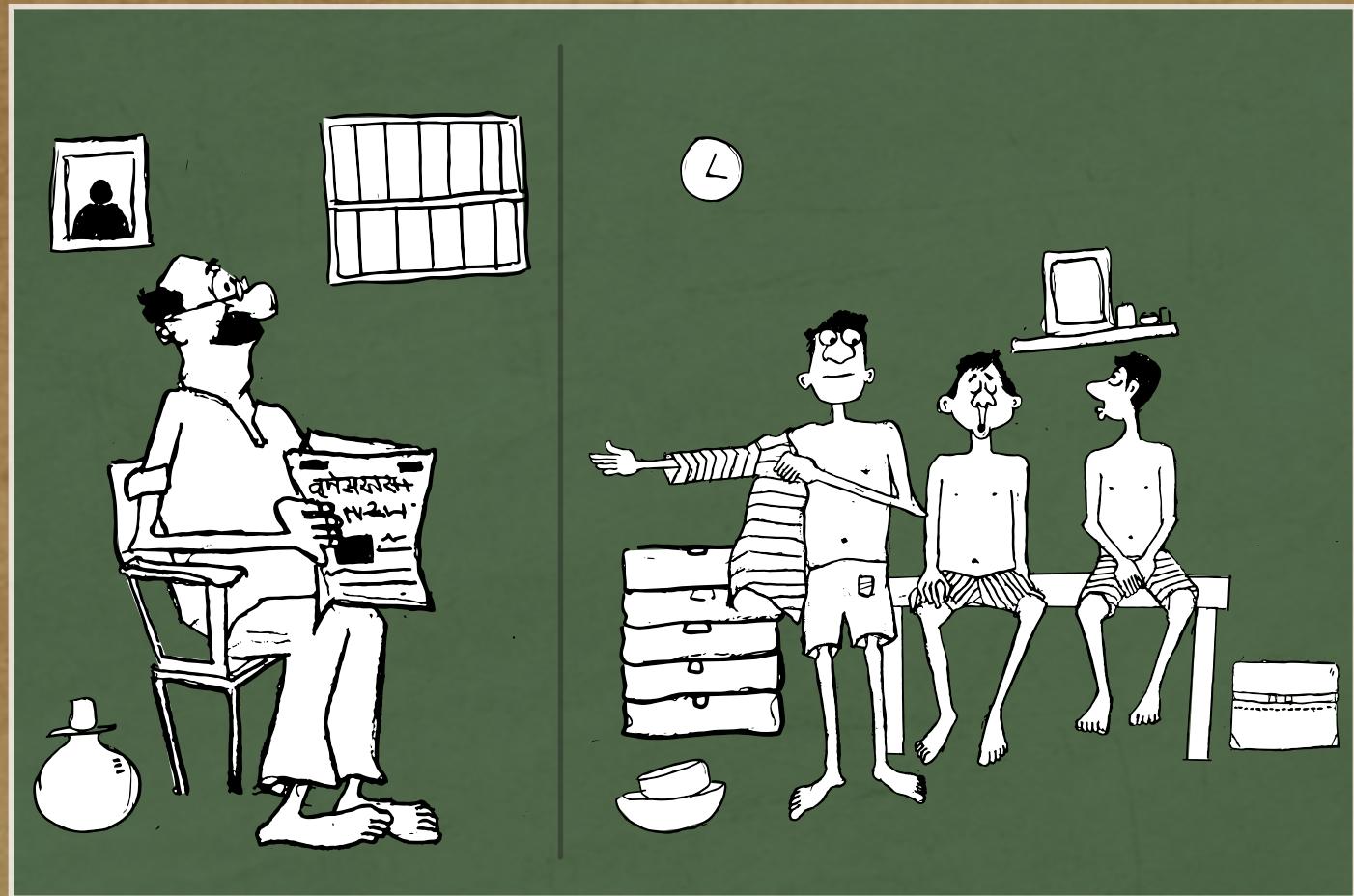


we start to think poorly and heap all the blame at the doorstep of problems and problems. As Gurudeva Tagore has put it: we think poorly and put all the blame at the doorstep of problems. Hence, I tried to avoid all the blame game. When I saw the world, I started enjoying every moment. Somebody aptly said, though we are human, we can be happy and healthy, the way is here, but one has to walk. It is unique and commendable blend of humor, pragmatism, subtle philosophy and imagining all beauty around that gives pleasure. I always saw virtues in others who came across my life; sometimes I was cheated but most of the time I succeeded in enlarging my friends-flora and that is my property today. However, get nostalgic whenever I find two flowers of the garland: the closest friends Baloo Ashtputre and Vijumama Kashikar, being prematurely taken away by God Almighty from my floral garland.

On this occasion I do not know how many of my relatives; brothers, sisters, son, daughter, cousins, daughter-in law, son-in law, friends, colleagues, companions, my teachers, and students, I need to thank for their love and affection. The list is too large to narrate, and I would prefer them to be in my heart forever.

*Charu Mayee*

# CHAPTER 1



## Shirt tale

As a young boy, I wore half pants. So did my two cousin brothers, since they were nearly the same age as I. Among us, we shared a common shirt that we wore from time to time. Our family could only provide us basic amenities – with education being the top priority. So, having a cupboard full of clothes was a luxury.

Whenever a guest came home, the eldest cousin wore the shirt and greeted the visitor. He would then come inside, take off the shirt and the other cousin would wear it and meet the guest. The act would be repeated with me as the youngest of all. This meant that at any given point of time, the three of us would never meet anyone together unless we wanted to expose ourselves – literally.

I discovered recently that my 10-year-old grandson has over 20 shirts. My friends also talk about the enviable wardrobes of their grandchildren. They often tell stories of how their cupboards spill secrets when excess clothes along with cigarette packets tumble out of the closets.

Now, when I compare my childhood with my grandchildren, my habit of purchasing clothes and toys for them in excess could mean compensating for my own childhood.



## A family of 36 members

Much has changed in the last seven decades. I was born on July 15, 1946, in Sakharkherda, a remote village in Vidarbha's Buldana district of Maharashtra. The remoteness can be gauged by the fact that the nearest railway station was 70 km from the village. The only transport was a rickety private bus that took over eight hours to reach the town. The village was electrified in 1961 and until then we all studied using kerosene lamps. My father though has no money but he took some loan and brought the electricity at home. He was also amongst the first to have old battery operated radio with hanging antenna. In front of our house the family was equally poor. To get advantage of electric light they just removed the muddy wall so as to get the advantage of street light. What a technique!

We lived in an extended family of three-dozen members that included my grandparents, parents, six siblings (one brother and five sisters), four paternal uncles, their wives and numerous cousins.

## Principled position

My grandfather Annaji Shastri Mayee, lovingly called Annaji, was a staunch *agnihotri* and he performed *agnipuja* daily. Apart from that, he followed *ekbhukti*, which meant eating only one meal in a day and that too cooked by my grandmother, Savitribai, referred to as *Tai*, or by himself.

During the freedom struggle, when Mahatma Gandhi gave a call for Swadeshi, he gave up eating sugar, as it was considered bad for health, Annaji instructed women of the house not to buy sugar. Thereon, during festivals, only jaggery was used to prepare sweets at home.

Annaji was a Sanskrit scholar and knew the Vedas by heart. He utilized most of his time in prayers and religious discourses. The Government of India recognized his service to Sanskrit by providing him financial support of Rs.1,800 annually. He wrote editorials for *Bhavitavyam*, the only Sanskrit weekly newspaper published from Nagpur in those days.

It might sound strange, but the elderly men in our village, including my grandfather, were well versed with current affairs. They had nicknamed the three Digambars of the village. While one Digambar Kulkarni was called 'Hitler'; my father, Digambar Mayee was named 'Mussolini' and Digambar Deshpande was referred to as 'Churchill'. Popular by their nicknames, many, including myself, were unaware of their real names for long. Even today, the house where Digambar Kulkarni resided is known as 'Hitler's House'.

## Inspiration and customs

As a child, I was greatly influenced by my grandfather, because he was always at home and my life revolved around him. The little Sanskrit I know is due to him, as I heard him speak until 1958, after which I left the village for further studies.

Annaji had a great sense of humor and a way of putting things across. One day, a lecturer at Nagpur College visited our house. When Annaji came to know that he was 28-years-old and still unmarried after rejecting several marriage proposals, he told him in Sanskrit, 'There's a saying, 'Vayo gatirkim vanita vilase' (roughly meaning 'there is no point in marrying when you become old').' The words had the right effect on the lecturer. He accepted the first proposal that came to him.

Unlike Annaji, my father, Digambar Mayee, affectionately called Dada, was mostly involved in farm management and had to be fairly practical to manage the household.

Since my three uncles lived in other towns and worked as a teacher, a compounder and an agriculture officer, the responsibility of farming was on my father's shoulders. So, as head of the joint family, the responsibility of searching grooms for his five daughters and ten nieces fell on him.

On growing up, when I was on slightly friendly terms with him, I asked him, why he did not follow family planning. He responded, '*Panchkanya smare nityam, maha pataka nashanam* (Taking the names of five daughters, relieves you of all sin).

*(In Hindu epics, names of five perfect chaste women – Ahalya, Draupadi, Kunti, Tara and Mandodari – are inscribed in a hymn*

*and it is believed that reciting their names dispels sin. While Ahalya, Tara and Mandodari are from Ramayana, Draupadi and Kunti are from Mahabharata.)*

### Villagers' support

My grandmother died in 1961 when I was pursuing my B.Sc. As a ritual, an agnihotri has to keep the fire lamp glowing at home 24x7, until the death of either the husband or the wife. So, after her demise, the agni puja was discontinued.

Despite Annaji being a learned Brahmin, the family remained poor. Hence, the wealthy people of the village had donated some land to him. Though he could have easily taken up the job of a teacher, he was influenced by our family guru Sri P.P. Avdhutanand Swami Maharaj, who asked him to follow the Brahmanical rituals and preach to people on matters of social harmony. Due to this, we were always in financial straits.

The family depended on agriculture income generated by planting cotton, groundnut, pigeon pea, sorghum, pearl millet and sunflower – all rain-fed crops. Out of these, the only cash crop was cotton that was sold to ginners in Khamgaon in the district of Buldana, 70 km away.

A caravan of about 50 bullock carts would carry the cotton harvest to the market, passing through hilly terrain that was infested with dacoits. It was in the early 1950s.

### Of apparels and sweets

During the journey, I remember sitting on a huge pile of seed cotton, waiting for some adventure to occur on a 16-hour one-way trip. I realize now how unwise my expectations were. For, if dacoits



had confronted us, I would have perhaps not been alive to tell my story. To protect us against any attack, the only weapons carried by elders were sticks. Fortunately, nothing untoward happened.

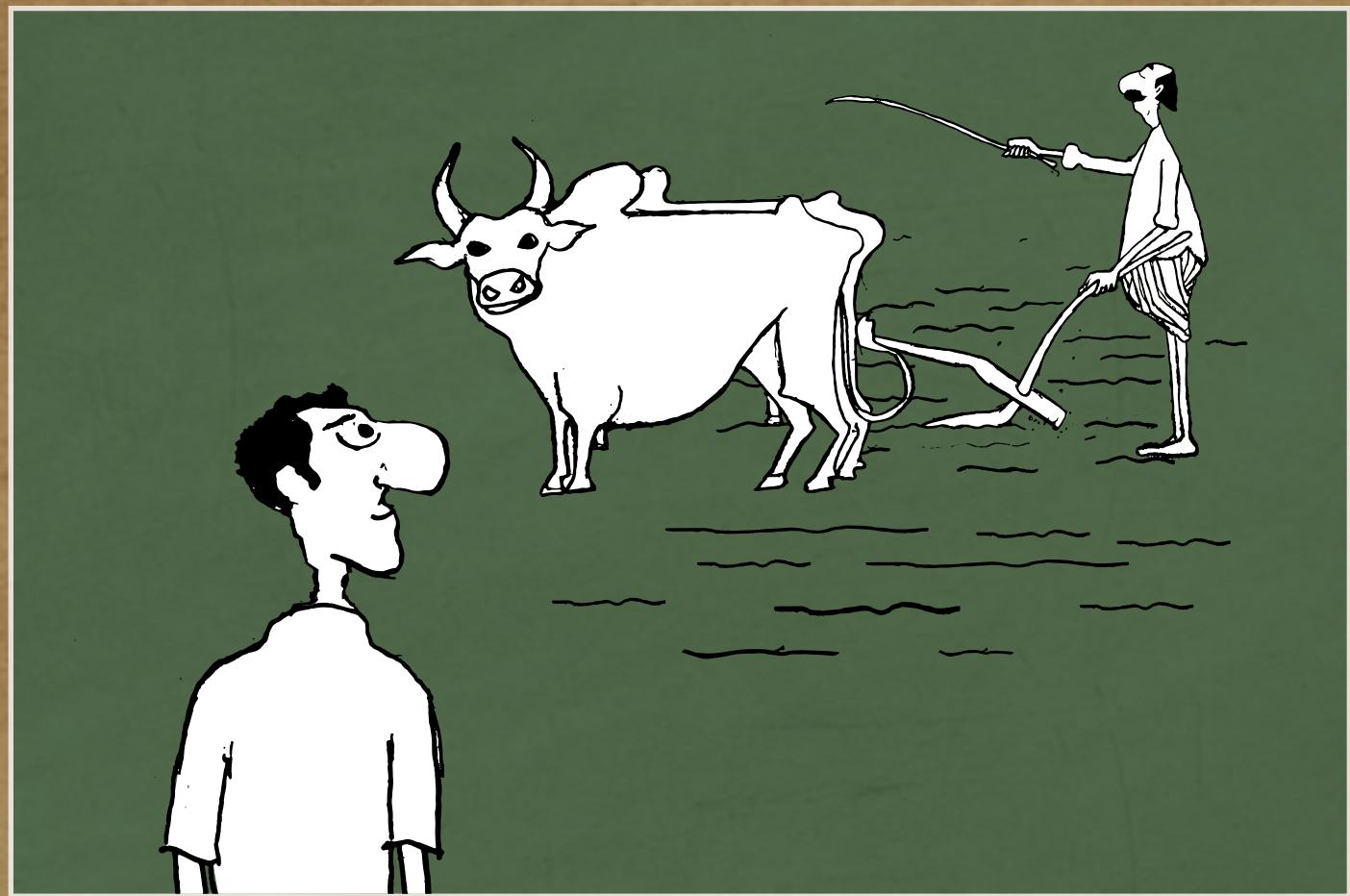
After selling the cotton crop the journey back home was on a rickety bus so as to keep our belongings like cash and gold safe.

Since our livelihood totally depended on rain-fed crops, I saw the importance that monsoon played in our lives. Our shopping during the festive season would be directly related to the harvest. If the cotton season was good, we got to wear new clothes and were treated to sweets. If not, then we had to wait for the next season.

Every year, I saw my father being apprehensive about the fate of the crops. This was a general pattern for all those who were dependent only on farming. Those with irrigation facilities grew vegetables for local consumption and were better off in terms of regular income.



# CHAPTER 2



## Sunny side up

Seeing my family's hardship strengthened my will to work in the field of agriculture and make a difference in our lives. My childhood aspirations were to educate myself and earn money to help my father. I realized that studying agriculture would not only take me closer to the mission of raising productivity at our farms but also help the farming community, regardless of the monsoon. This would make us see the sunny side of life, whatever the weather maybe.

In order to pursue my dreams and reach the goal of becoming an agriculturist, I knew I would face many hurdles. Today, I am one of India's strongest advocates of science-based agriculture. And as a cotton scientist, I am a firm believer that development tools can help in the advancement of Indian agriculture. Although I had the typical background of ancient texts, *veda* and *agnihotra*, it did not mold me to restrict my thoughts to those and always applied the science to it. I always felt that modern agriculture is based on experiments, observations and rigorous trials and reviews and hence it would be good for the welfare of farmers. However, the credit for this success story goes to my father too.

## Education and discipline

Dada had studied up to grade-VII after which he chose to help my grandfather in the family's 80-acre rain-fed farm. Despite not pursuing studies, he had the vision and realized the power of education in molding us. 'Everyone must have a college degree,' he asserted.

Apart from being a keen learner in farming, Dada was a sportsperson – a good wrestler and volleyball player. He was also a good singer and musician, who played the *harmonium* and the *tabla* with ease. As a weekly ritual, along with 8-10 friends, referred to as the '*Bhural Bhajani Mandal*', he would sing bhajans. (In Marathi, 'bhural' means going in a trance).

On the other hand, my mother, Kamalabai, Aai to all her children, was a down-to-earth person. She was always busy with household chores – cleaning, cooking and doing laundry. There was an



interesting practice at our house: at noon every day, the bell would ring to announce the lunch break, and whoever missed hearing it meant the person would miss the meal altogether. And, oh! It was mandatory for all the family members to converse in Sanskrit during lunch.

## Festivals galore

As is the norm in most Indian families, festivals were always looked forward to. Our family celebrated *Sankranti*, *Holi*, *Dussehra* and *Diwali* with the villagers for generations. But Maharashtra's most pious and beloved 10-day *Ganapati Utsav* and *Durga Puja Utsav* would especially be reveled with great pomp and joy.

My grandfather used to conduct debates and speech contests on social topics among school students on *Saraswati Puja*. The villagers were assigned the job of selecting the best speaker from the competitors. This instilled the confidence of public speaking in us, as written notes were not allowed. It later helped me win debates in school and college.

## Education and sports

My studies at the village school ended in 1958 after passing grade-VIII because the standard of education thereafter was not up to the mark in that school.

Meanwhile, one of my elder cousins had become a teacher at a school in Mehkar, about 35 km from our village. The family then decided to shift me to that school until grade-X, as it was considered the best school in those days. Under the Vidarbha Board of Secondary Education, the system of education was 10+4. This meant, 10 years for matriculation and 4 years for degree education, including science, arts, commerce and agriculture.

Though the school concentrated on students' overall personality build-up, few teachers like our mathematics *guruji*, visited houses to monitor students on how they were coping with their studies. The initiative by some teachers made the school one of the top academics in Vidarbha.

The school bagged top honors for three consecutive years from 1961 to 1963. In my matriculation examinations in 1961, while I recorded first class with distinction in three subjects, five students from our school were in the merit list.

I also got the opportunity to exhibit my talent in sports and bagged prizes and laurels in tennis and hockey in the inter-school tournaments.

### **The ground rules**

On the home front, mindsets were changing during our growing years. Daughters of the house were doing very well in their studies. So, even at the cost of annoying our grandfather, who insisted on early marriage for girls, Dada set the ground rule: 'no graduation, no marriage!'

This led to constant friction at home, as my grandfather said, 'Girls over 16 years of age are late to marry'. But Dada refused to relent. He ensured his daughters and nieces completed their graduation before getting married. He rejoiced every time they obtained good grades.

### **Anxiety over my results**

Throughout my school days, I was good at studies. But when I stood first in matriculation, the entire village celebrated except Dada. He was rather anxious and wondered how to raise funds for



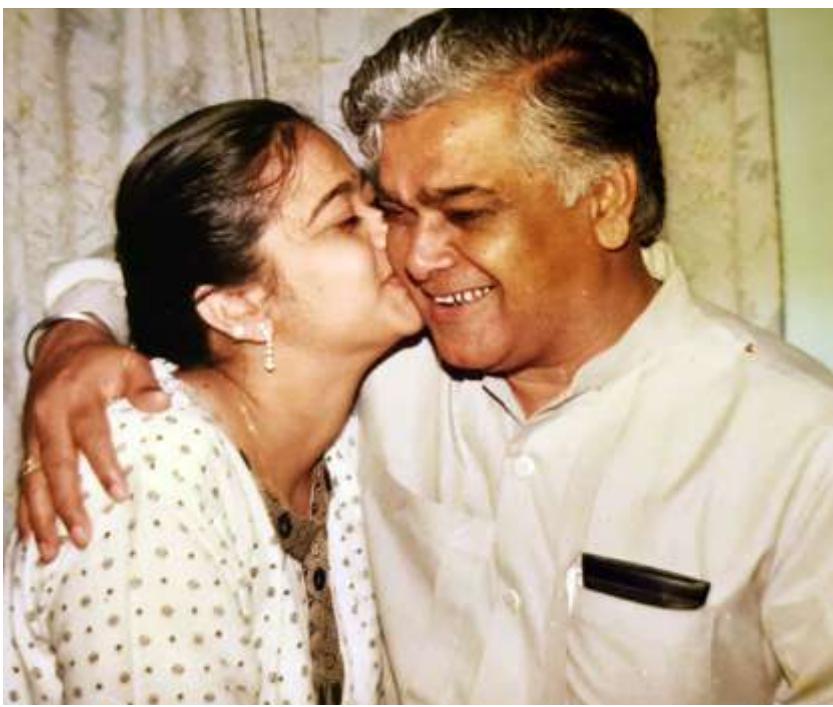
my higher education. Unlike my cousins who wished to become doctors, engineers and lawyers, my heart was set on becoming an agriculturist.

Dada stood by my decision. A man of umpteen principles, he sold a part of our ancestral land and raised money to enroll me in the College of Agriculture, Akola. Established in 1956, the college had remained without a building until 1961, the year when I sought admission. It was located 80 km from our village, so I was put up at a hostel.

### My precious slippers

My admission to the college was done under unusual circumstances. The condition set for admission was that the student must walk 5 km from the institution and back in one-and-a-half hour. This was done to assess students' physical strength, as they were expected to be fit to work in the fields.

On the day of my physical test, my father was shaken. He had purchased a pair of slippers for me to wear to college, as the city's



tarred roads were very uncomfortable to walk barefoot. My footwear gave me a special status, as until then, I had always been shoeless in my village and district schools. My father fathomed that if I walked with slippers, I would never pass the fitness test, as I was not accustomed to it. So, he sat outside the college guarding my precious 'tyre-rubber slippers'.

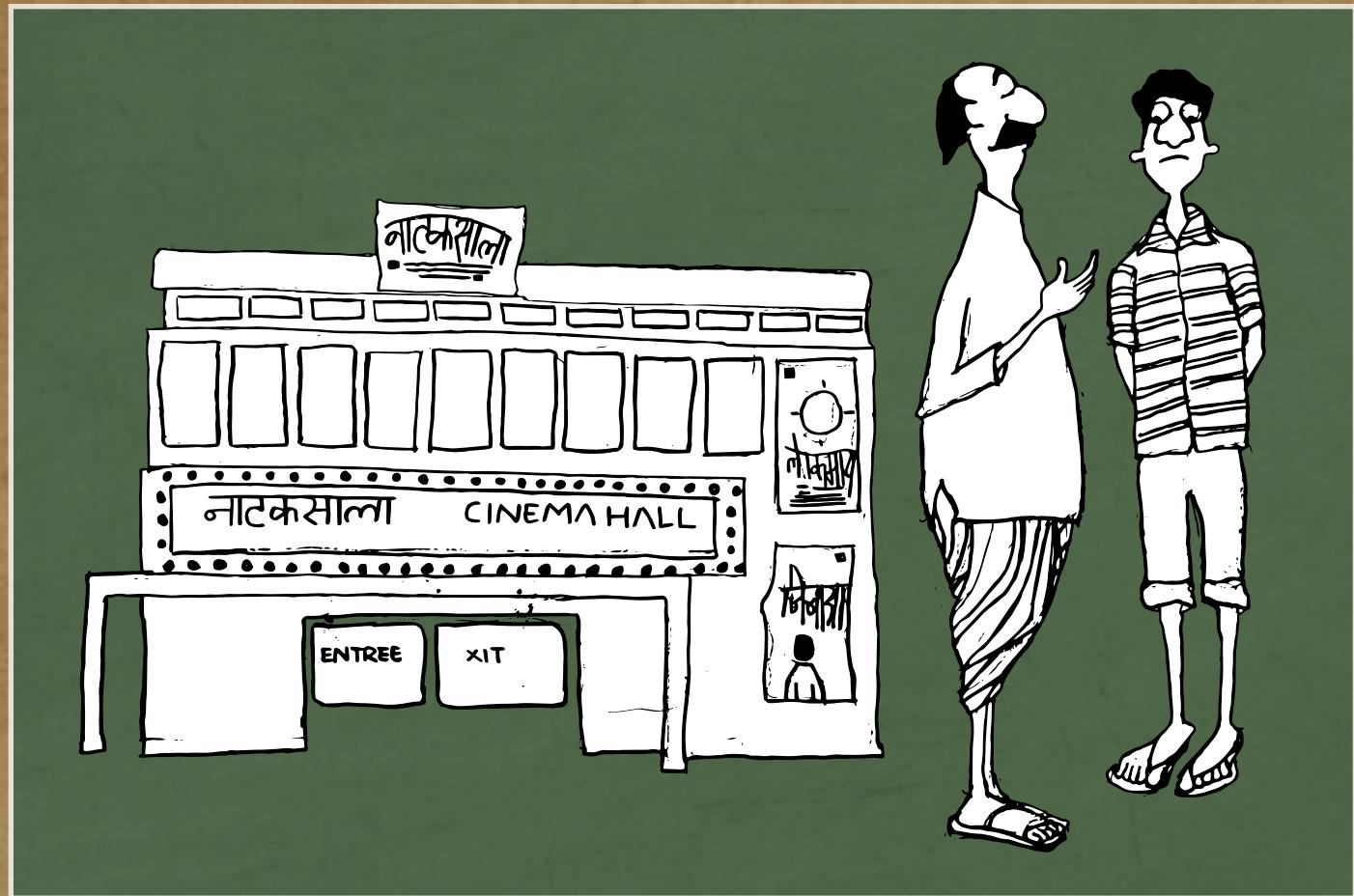
### The language barrier

My tough life and background in farming were my ticket to college. Agriculture then was the only faculty where one could get admission with both mathematics and biology as subjects. But I was stunned at the prospect of attending lectures in English. Having studied in Marathi medium, it turned out to be a hurdle. Initially, I could barely understand what was being taught in the class.

But when you know 'life is a struggle; you are ready to face obstacles.' My ambition was too strong to let any such issue pull me down. Soon, I discovered that field activities were easier for me than theory because of the communication issue. The nuances of fungi, bacteria, viruses, and such microorganisms, made me curious about biology. I decided to study these, choosing plant pathology as my major subject in post-graduation.



# CHAPTER 3



## The turning point

The ambition to study agriculture, the science of crop cultivation, led to my career in microbe-based plant pathology. The skyline of my mission was drawing close.

At the social level, being a part of an extended family, I had no inhibitions in making friends in college. It helped in a way, as the city-bred students from well-to-do families provided me financial assistance whenever I faced a financial crunch. I still maintain friendly relations with them and enjoy family meets.

At college, I participated in Marathi plays and sports activities. The experience firmed my belief that students should utilize college life for overall personality development.

Those days, I would also take time out to watch Hindi movies. Once, when my father came visiting, I hesitatingly, asked him if we could go together to watch a movie. It was a beautiful movie with hit songs and I had seen it thrice. He agreed. But halfway through, visibly upset, he got up and walked out of the theatre. I was reprimanded for wasting my time on 'such trash'. After that, I never dared to discuss cinema with him.

## Hema of Akola

When I joined the college, it was an all-boys campus. After two years, few girls sought admission. However, our pastime of visiting and standing outside all-girls colleges continued. As adrenaline peaked, we would use our contacts to gain information and access to them. Looks did not matter; we tried finding out about those girls who were good at studies, singing and dancing. We would get to meet them at the inter-college cultural competitions, as I represented my college in numerous debates and shows.

During one such event, a girl, whom I would jokingly call the Hema (Malini) of Akola, was singing an emotional Marathi song. When she sang, 'Should I come in your dreams...' I jumped from my seat and shouted, 'I am waiting for you!' The audience in the auditorium burst out laughing. But my class teacher was not impressed. To make amends for my unruly behavior, I studied hard to secure the first division in the B.Sc. examination in 1965.

All through college, I was afraid of entering the chamber of the principal. But what a coincidence! Three decades later, I was appointed principal of the same college.

## Plant protection

In the 1960s, obtaining the first rank in B.Sc. inevitably meant securing the job of an agriculture officer without an interview at the government's agriculture department. So, immediately, I was offered a job. My family was overjoyed to see my academic success. But their financial prospects had shown no improvement. I came under severe pressure to take up a job, though my mind longed for a master's degree in agriculture.

Once again, Dada stood by me. I was allowed to seek admission to the College of Agriculture in Nagpur. Since the hostel



accommodation was ruled out due to paucity of funds, I stayed with my cousin sister, whose husband was a clerk in the state's police department. They had four children.

### Taxing times

It was a difficult phase. The country was going through an upheaval, as the 1962 India-China war and the 1965 India-Pakistan war were fought. The period was very crucial for agriculture too. The droughts in few states made the situation worse and India depended on the United States (US) for the import of red wheat and pig-food milo sorghum under a scheme called PL-480. These were sold to the public through ration shops.

I knew, with her husband's meager salary, I was a burden on my cousin. To compensate, I helped bring groceries every week. It was very frustrating waiting in the queue for hours to get 5 kg of red wheat and an equal amount of milo sorghum. It saddened me to see the agricultural crisis in our country.

I often deliberated why India had to depend on the US for the shipment of wheat. In the village, we had enough food, but no cash, whereas, in the city, people had cash, but no grains. This troubled my mind constantly.

I saved some money from the monthly stipend I received. A year later, I shifted to a rented accommodation that I shared with my friends.

### Private job

In the meantime, I was gaining knowledge about plant diseases and ways to protect them. The research subject assigned to me was rice disease. I was aware of the issues related to it and cotton plants since I grew up in Vidarbha.

Despite making strides in agriculture, I had in the process dried up the family's coffers. Dada finally conceded that he could no longer support my studies. By then, my three sisters and six cousin sisters were married and Dada had sold a piece of our land to bear the expenses. I had no choice but to take up a job – at least for my own sustenance.

With my credentials, it was not difficult to get a placement after passing M.Sc. in June 1967. Within a month, the first job offer came and I joined Maharashtra Hybrid Seeds Company (Mahyco) as a research associate at Jalna in Aurangabad. It was my first private service.

### My first salary

Established by Dr. Badrinarayan Barwale, Mahyco was then the first seed company in the country. As it was located about 60 km from our village, I had the privilege of visiting home during the weekends. But my work at Mahyco had nothing to do with my ambition.

On my request, I received my first salary on July 15, my birthday, instead of the month-end. I handed over the entire salary of Rs.480 to my grandfather. It was an extremely emotional moment for the

family, and my grandfather too was moved by my gesture. He suggested that I start saving for my further studies. However, I purchased new clothes for the family and saw a ray of hope in their eyes.

After two months, I was in two minds – whether to continue working or leave my job to finish my Ph.D. One morning, I quit the job but did not have the courage to inform the family or go home. I spent the next few months with my ‘employed’ friend, who was my pal since graduation at Akola, Mr Bandu Kanitkar.

### Meeting agriculture stalwarts

I remembered having attended (in 1966) an international conference in New Delhi, where I had the opportunity to meet many agricultural scientists. Among them was Dr. S. Y. Padmanabhan, a renowned rice plant pathologist and then Director at the Central Rice Research Institute (CRRI) in Cuttack, Odisha.

I approached him. Impressed by my research work in the field of rice, he offered me a job as a research assistant at the CRRI. The monthly salary was Rs.320. When I told him about my desire to do a Ph.D. in plant pathology, he promised full assistance and assured



my deputation to the International Rice Research Institute (IRRI), Manila, in the Philippines.

Life in cities by then had turned this simple village boy into an articulated young man. I kept the job offer and moved to Cuttack without the knowledge of my family. This also meant no more visits to the village over weekends and coming up with excuses for not meeting them.

To succeed in life, I had to think differently, I felt.

### New job, old clothes

Considering I was going to a new place, I felt the need to buy new clothes. Heading towards the market I recalled the times when I shared a shirt with my cousins. To overcome that pain, I, in vengeance, purchased a lot of shirts and trousers.

Cuttack was then an extremely under-developed city, with no direct train service from Nagpur. Hence, I was to board another train at West Bengal's Kharagpur station for my remaining journey. At Nagpur, I bought a ticket to Cuttack and boarded the



train. But on getting down at Kharagpur station, to my surprise, I could not find the ticket. Requesting my co-passenger to take care of my steel trunk, I rushed to buy another ticket.

Settled on my seat, the 4-hour journey passed in no time. On getting down at Cuttack station, I suspected that the trunk had less weight. I opened it and found out that all my new clothes were missing. By then, the train had left the station. First the ticket and then the clothes, I was robbed twice on the same day.

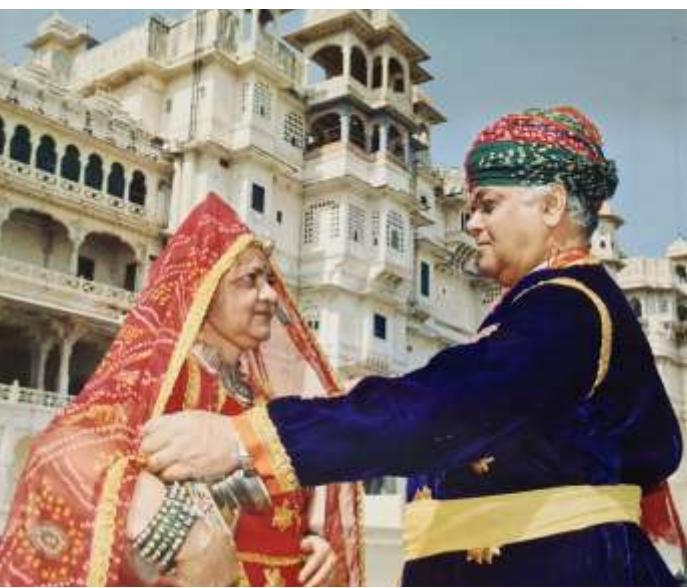
The next morning, I joined the institute wearing old crumpled clothes. Seeing me in a disheveled state, many thought I had joined as a lab attendant.

### Food for thought

Months passed and I realized that Dr. Padmanabhan barely had the time to guide me. He became more inaccessible after being appointed director of the institute. To add to my woes, I was not getting any major breakthrough in my research work.

Those days, people researching on rice plantations were sent to the IRRI in Manila. But I had no such luck. Forced to stay in shabby premises and having only rice to eat for meals, I started getting frustrated at life. Also, because of the poor diet, I began feeling weak.

When consulted, the doctor recommended I add proteins to my food intake. He suggested I eat eggs, but I had been a pure vegetarian until then. The problem was solved by daily adding a raw egg to the portion of lentils that I ate in the hostel mess. Thereafter, my health improved.



My roommate Prafulla Misra from Odisha would constantly hum Oriya songs. It not only had a soothing effect on my mind but also helped me learn the language. Even to this day, I remember some of those songs.

### Competitive examinations

In order to keep my mind occupied with positive thoughts, I decided to appear for competitive examinations. Around then, for the first time in the country, the Indian Forest Service examination (IFS) was introduced, with botany and agriculture as optional subjects and general knowledge and English as compulsory subjects. It was to my advantage that the exams were conducted at the nearby Ravenshaw College in Cuttack.

The exams were like a breeze. I passed with good grades and was asked to appear for an interview at the Union Public Service Commission (UPSC) in New Delhi.

### I followed my heart

Before appearing for the forest service examination, I had also applied for admission at the Indian Agricultural Research Institute (IARI), New Delhi, for my post-graduate studies. On being selected for IARI, I decided not to appear for the UPSC interview.

As I packed my bags to go to New Delhi, to my delight I got the news that an elder cousin P. D. Mayee was appointed as the first assistant director at the Small-Scale Industries (SISI), Government of India, in New Delhi. This gave me moral support.

Before leaving the institute, I told my decision to Dr. Padmanabhan, who felt I was doing fine at the CRRI. ‘Where’s the need to go to Delhi...?’ he enquired. He finally relented on being told that I was getting a fellowship at IARI.

# CHAPTER 4



## My calling

The IARI, commonly called the Pusa Institute, was considered an immensely prestigious organization. Admission to the institute was like a dream come true for students in the late 1960s. Agriculture research luminaries such as Dr. M. S. Swaminathan and Dr. A. B. Joshi were associated with the establishment. They were role models for agriculture students and to be associated with the stalwarts gave us a heady feeling. I knew that was my calling.

But again, I was faced with the huge task of explaining to my family about my New Delhi stint. I had actually stopped consulting anyone realizing that the more the opinions the more the confusion. They had barely settled with the knowledge that I had been living in Cuttack for months without informing them. Everyone wanted to know what was going on in my mind and why I was running from one place to another in quick succession.

So, once again, I decided to keep the job-switch a secret. Though I was no more dependent on them for finances; it also meant I was not sending home any money.

## Marathi manoos

In 1968, I landed in New Delhi and reached the Pusa Institute on a shivering cold winter night. Trying to find my accommodation in



the dark, I mistook the canteen to be one of the dormitories. There I saw some students whiling away their time. Seeing an intruder at an unearthly hour, they poked fun at me. When I said I was very tired after travelling from Cuttack, they thought I was from Odisha, and hurled the choicest of *gaalis* (abuses) at me – and that too in Marathi.

Without reacting, I politely asked them in Marathi, if someone would kindly help me find my room. Shocked! They apologized, and after realizing that I was a fellow Maharashtrian, helped me find my destination.

The stay in New Delhi was thoroughly enjoyable. I had no regrets about not appearing for the UPSC interview. Instead, I decided to do my Ph.D. in plant pathology.

### ***Macherjhol and I!***

During my stay at the institute, I was put under the guidance of Dr. Bimlendu Ganguly. He was a good human being but had little time

to impart knowledge and guidance due to his hectic schedule. At the campus, whenever I approached him for notes, he suggested providing those at his residence in East Patel Nagar, a few km away from the institute.

At home, his wife would serve me delicious Bengali cuisines like *macher jhol*. However, travel to his place and eating food, gave me little time to seek educational guidance. Later, I came to know that I was his first and last student.

Nevertheless, I learned a lot at the institute and even participated in discussions. I remember appearing for a debate on how the Indian agriculture education system had evolved over the years. I began with the American system of education and how it progressed after the first agriculture university was initiated in India in 1962-63 at Pantnagar, Uttarakhand.

My assessment was: 'We adopted the American system, administered it into the British structure, and disposed it the Indian way'. The audience applauded my analysis.



## Forthright views

I always spoke my mind and remained true to my core beliefs. Critical of certain non-productive research projects assigned to us for a doctoral dissertation, during a debate, I pointed out that while some of us were working on a disease appearing on top leaves, others were working on the middle leaves and the rest on the bottom leaves of the same crop. I questioned if there was a shortage of crops with disease problems to investigate.

Obviously, such comments were disliked and often I was reprimanded for my forthright opinions. But I never allowed these to affect my performance and let my work speak. I felt vindicated on receiving the much-coveted gold medal in my Ph.D. in plant pathology and epidemiology in less than four years.

## In Pakistan without a passport

During the 1971 India-Pakistan war, the Indian Army occupied the Sialkot territory in Pakistan. As agriculturists, we were instructed to visit the region and make observations of the varieties of wheat crops grown in that fertile land. I was working then on a temporary assignment as Research Associate, with the Ford Foundation who had a collaborative program with Pusa Institute on wheat research. After obtaining permission from the defense forces' commander stationed at Gurdaspur, Punjab, we reached our destination. Since the vast wheat cultivation area had fallen under the Indian Army, we travelled to Pakistan without a passport.

During the Green Revolution – between the 1950s and 1960s – both India and Pakistan had benefitted, due to wheat imported from Mexico. Interestingly, our research showed that while the wheat then grown in India and Pakistan were of the same variety, they were named Kalyansona and Mexipak, respectively.

*(The Green Revolution was intended to overcome food shortages in India by increasing the production of food grains, especially wheat and rice. It was also the introduction of High Yielding Variety (HYV) seeds in India. Coupled with efficient irrigation and the correct use of fertilizers, it boosted the crop yield.)*

### The Sialkot saga

During our team's crop assessment visit, one day, we spotted an elderly Pakistani couple in a deserted village. For fear of the Indian Army's intrusion in the region, the Pakistan authorities evacuated the entire village. However, to our surprise, an aging couple was left behind by their family to fend for themselves.

The sympathetic Indian troops ensured they were well looked after and provided them with meals and essential commodities. The couple fondly chatted with us and showed us photographs of their family members. They even shared memories of their loved ones by recalling interesting stories.

It was once-in-a-lifetime experience for me, as until then I had only read and heard stories of valor and compassion of our armed forces through newspapers and radio. The noble deeds of our brave hearts overwhelmed me so much that I wrote a *Letter to the Editor* in *The Indian Express*, and expressed my gratitude to the Indian Army on behalf of the Pakistani couple. The letter was published and widely appreciated by the readers and my colleagues.

### Tragedy in the family

With my thesis over, the IARI convocation was fixed in the first week of February in 1972. I was overjoyed that I would receive my Ph.D. degree with a gold medal. But then, one day my cousin dropped by and I got the heart-breaking news that Annaji had chosen January 11 as an auspicious date for *pran tyag* (giving up

life) to attain *moksha* (liberating oneself from the cycle of death and rebirth) at the age of 95.

*(In Indian philosophy, a person can attain moksha by meditating and allowing his life to leave the body towards its final journey to the heavenly abode.)*

All relatives had assembled in the village. My cousin and I were to leave immediately by train. But it took 48 hours to reach our village, by when Annaji had left for heavenly abode and was cremated in the same way Sadhus are cremated.

As a mark of respect, all male members of the family, including me, tonsured our heads. However, after returning to the institute many people, unknowingly, took my shaven head to the demise of my father and paid their condolences.

On receiving the Ph.D. degree, it felt worthy to have the prefix 'Dr.' to my name. But I was highly disappointed and it was one of the saddest events of my life that I could not show the degree and gold medal to Annaji.

## Ford Foundation

While it was good to be called a doctor, the downside was that I was no more a student and was asked to vacate the hostel. I moved to rented premises and began looking for a job. The search did not last long and under the IARI's Ford Foundation scheme, I was offered a temporary designation as a research associate in wheat pathology. Here, I made observations on wheat plantations, their yield, and took notes on rust diseases. It was a huge learning curve to work in such a reputed organization.

I worked there for six months along with my two colleagues. Our mentor and in-charge, Eugene Saari, an American plant



pathologist, would call us at 6.00 am and instruct us to work until 11.30 am. Our job profile demanded us to bend over crops and soil and to take notes. It was an extremely difficult task since it led to bad posture and back pain on a daily basis.

### My first flight

In 1972, for the wheat's nursery development program, three of us were sent to Wellington, a town near Ooty in Tamil Nadu. We were excited, as it was our first air travel. We flew by Air India to Bengaluru and later hired a taxi to reach Wellington.

However, on-board the flight, we had a scary and hilarious experience. One of our colleagues got stuck in the airplane's lavatory. The poor chap could not open the door and was trapped, much to his fear and frustration. After seeing him missing for a long time, we sought the help of an airhostess who helped us open the door. Sweating profusely, our colleague swore never to fly again.



Though, later during the course of our work, we did travel together leaving behind this one-off bad experience.

## Friends and family

During my stint in New Delhi, I would visit my village only once a year, as I preferred going on excursions to Himachal Pradesh, particularly Solan and Kotgarh, where my friends, late Dr. Subhash Chaufla and late Dr. Kewal Shyam resided. This marked the beginning of a new hobby in me. I enjoyed travelling and felt at home with them. Also, my cousin, P.D. Mayee in Delhi was by then married and by visiting his house often I never sensed homesickness.

I feel blessed to have been born in a family that practices its customs and traditions to the core. My brother, Devdatta Mayee, 12 years younger than me, and a retired deputy commissioner, Tribal Welfare Department, Ministry of Tribal Affairs, took care of all the ceremonies in my absence.

## Vanishing ethics

Over the years, I find that village life has changed drastically. The transformation, I believe, began in the 1980s. People now have lost trust in each other and lack strong family ties. In the name of development, social values have vanished, and instead watching TV or browsing the Internet over mobile phones has become a new norm.

What then was a simple hamlet is now a place bubbling with commercial activities. I remember, as students whenever we visited the village for a survey, the villagers never allowed us to go without having a meal. But now, when a state employee goes there, the villagers are only interested in knowing if there is any new financial scheme the government has launched.

# CHAPTER 5



## The ideal job

Anyway, after completing my Ph.D., I had kept myself busy taking up sundry assignments. The big challenge ahead was to get an ideal job. By the end of the third quarter of 1972, I was appointed as an assistant virologist in the vegetable research department at the Punjab Agricultural University, Ludhiana. I was the second Maharashtrian in entire PAU at that time at the age of 26.

My extremely caste-conscious family was afraid that I would end up marrying a *sardarni* (a Sikh woman), who are known for their ravishing looks. So, without further delay, I was engaged to a Maharashtrian girl and got married to her three months later. It was just a coincidence that her name was Hema and out of love and affection I would often call her Hema Malini.

## Marriage proposal

Actually, during my New Delhi stint, Hema's sister Neela tai and her husband Dr. Ramakant Pitale, had become my close friends and later my co-brother-in law, became my second home in Delhi first being of my cousin Padu and Shaila Vahini. Dr Pitale whom I call as Dadasaheb, has been a man of principles and knowledge. He was not only an IES of first batch but had command on his subject of Economics. In fact, I got inspiration from him to contribute newspaper articles on policy issues as he was the a regular writer on several financial topics of national interest. One day while visiting their house in Karol Bagh, Neela tai had suggested that whenever I desired to marry, it should be with her sister. She had shown me Hema's photo. For me, it was love at the first sight – looking at her black-and-white photo.

The proposal was sent formally by Hema's family to mine in the village. Her father Baburao Bhai, an officer in the revenue department in Maharashtra, met my parents. Our horoscopes did not match as per astrology, and hence my family rejected the proposal.

On hearing this, I told my father that I did not believe in such practices and was hell-bent to marry Hema. He agreed with my views and gave his approval for our wedding. We tied the knot in December 1972 with the blessings of our families.

### Much in love

After our wedding, Hema and I were inseparable and much-in-love couple. My friends were curious to know whether it was a love marriage or an arranged one. I would teasingly say, 'Revenge marriage!' with a burst of laughter.

The difference between a Maharashtrian bride and a Punjabi bride was evident from the number of dresses the woman wore after marriage. As a Maharashtrian, while my wife had just 2-3 traditional bridal attires, any newly married Punjabi woman would have numerous *salwar-suits* and *sarees*. People close to us noticed the difference as they saw my wife wearing simple sarees. They would often ask why she was not wearing bridal dresses every day.

Apart from picking up a few Punjabi words during her interaction with our neighbors, Hema learned to cook their cuisines.

### Punjabi tadka

During my stay in Ludhiana, it was my first brush with people from the Sikh community. I found the Sikhs very jovial and positive, and absorbed their philosophy in life. Adapting to the Punjabi culture



with ease, I even began speaking the local lingo. I believe, in my entire life, I have never laughed and enjoyed so much as I did during my five-year stay there.

My landlord lived in the United Kingdom (UK) and the house in Model Town, where I resided, was rented out to me by his relative. Once on his visit to India, the landlord requested me to share the accommodation with him for a month, after which he would go back to England. I agreed as I was living alone in the house at that time. He informed me that he ran a company in the UK, and had

goras (Britishers) working for him. Strangely, though his English was pathetic, he said, ‘Main kum chala lena haan (I manage everything effortlessly).’

He narrated an incident. ‘Ik baari main Glasgow jaan di sochi, hor train da ticket le lita. Baad ich, main irada badal dita hor ticket wapas karan layi ticket counter te pahuncha. (One day, I thought of going to Glasgow and bought a train ticket. But later decided against it and went back to return the ticket).’ ‘Counter te main kehya, (At the ticket counter, I said),’ ‘I go Glasgow, but I no go. I ticket back. You money back.’

He said, ‘Knowing this much English was enough to make an Englishman understand.’ It was hilarious. Every time I recount those moments I cannot stop laughing. While in Punjab, I actually stopped speaking in English and began conversing in Punjabi.

### **And some more...**

Once I was travelling from Punjab to New Delhi by train. My co-passenger was a Sikh, who said he recently returned from Fiji. On questioning him where Fiji was on the map, he retorted, ‘(Eh te mainu bhi ni pata. Bus authe jaana te aana aunda hai (That even I don’t know. I only know how to reach there and come back).’

What an amazing methodology and a practical approach to life.

A peculiar habit I found among my Punjabi colleagues was that they would order sugarless tea with *barfi* (a type of sweetmeat). At times I would prefer to stay put at my place due to work. But someone or the other would insist saying, ‘Aa ja yaar, tu kede satellite chhadne ne (Come on friend, you are not going to launch satellites).’

## Youngest professor

Ludhiana was a cosmopolitan city and Hema and I blended with the lifestyle beautifully. But after two-and-a-half years, we shifted to Kapurthala. Though I felt, at 32, I was quite young to apply for the position of an associate professor (plant pathologist - rice) at the Rice Research Station, Punjab Agricultural University; my contemporaries suggested there was no harm in trying it.

At the outset of the interview conducted in Chandigarh, Dr. B. N. Uppal, who throughout his life had served in Maharashtra and retired as agriculture director from Pune, asked me, 'Dr. Mayee, how come you are working in Punjab?' I promptly replied, 'Sir, in the same manner as you were working in Maharashtra and are now in Punjab.' Overwhelmed by my response, he laughed heartily. The interview ended on a very positive note.





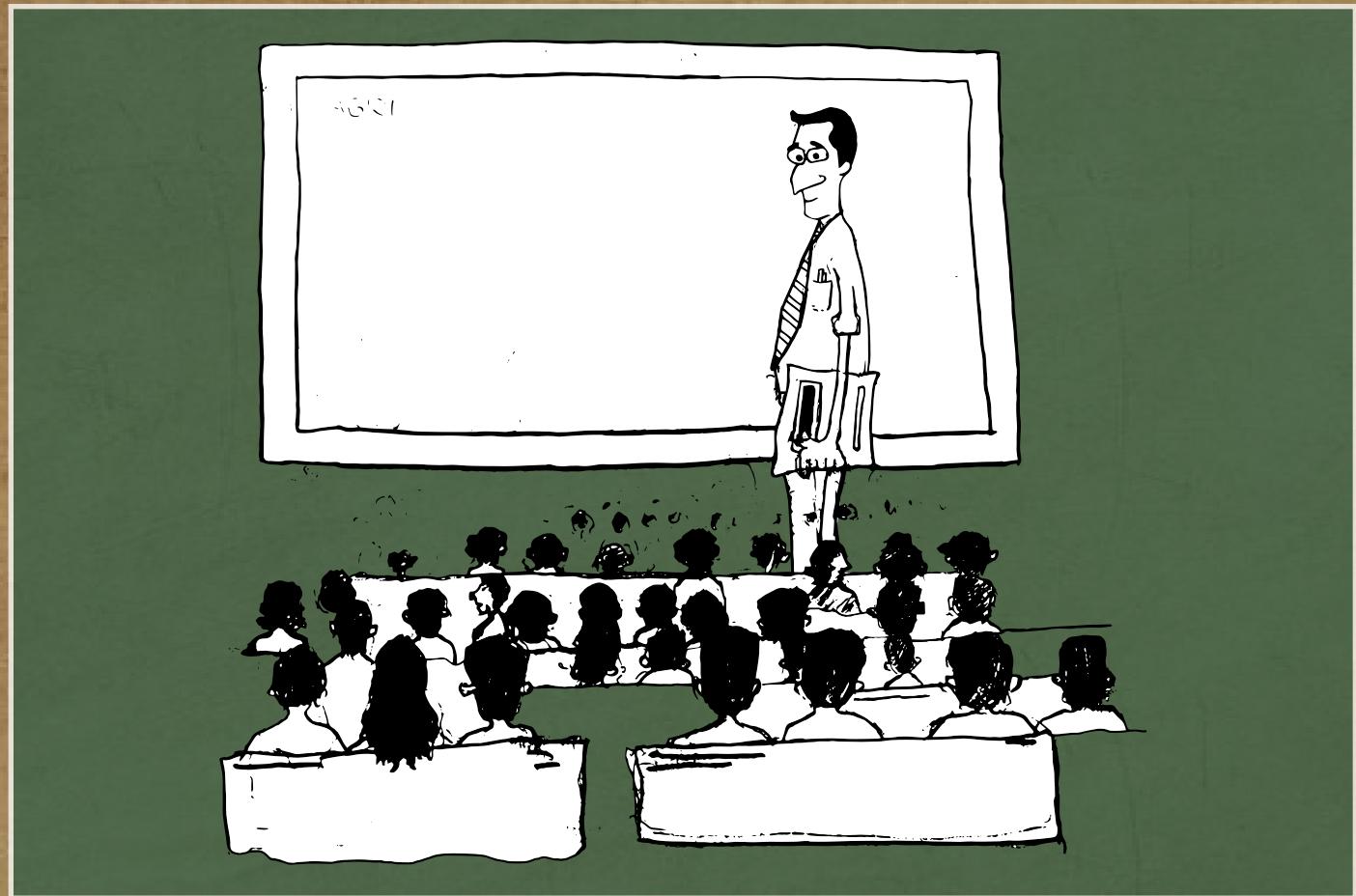


After I was selected, it was the biggest jump of my career in the shortest time. Because of my vast experience in the field of rice research in Cuttack, the elevation had come within a span of three years. Today it takes at least eight years to reach that position.

Initially, Hema found it difficult to adjust to the new surroundings in Kapurthala because it was less multi-cultural, but eventually managed. I had liked everything about Punjab, including the panoramic landscape with idyllic vast green fields. But the job was beginning to get boring.

Also, the tragedy of losing our one-year-old first child, a daughter, had shaken both Hema and I. The desire to leave the place became intense. I would often wonder how to help the farmers (like my father) in increasing their farming productivity in my own state.

# CHAPTER 6



## Back to the roots

In 1972, the Marathwada Agricultural University (MAU) was set-up in Parbhani, a small town in Maharashtra with no industries. It was a rain-fed region with approximately 85 per cent of the population working on farms.

The university's Vice-Chancellor (VC), Professor (Dr.) D. K. Salunkhe, who had come from the US on a sabbatical for a year, discovered that the local officials were clueless about research projects because there had been no research culture. He wanted to recruit scientists and teachers from the state working in different fields in prominent universities of India.

He must have come across my name, as one day I received a letter written by him. Along with it was a copy of the advertisement and an application form. He suggested I join the university.

Unaware of the new university, I enquired from a close college-time friend Dr. Gopal Godbole. He acknowledged that the institution required qualified staff. I applied for the job of a professor, and so did other Maharashtrian scientists, and teachers from across India.

During the interview, after having responded to all technical questions, Dr. Salunkhe asked me, 'Can you join from tomorrow?' I replied, 'Yes, I can.... provided you issue the orders today.' We both knew I could not join without resigning from my previous post. He was impressed by my response and I bagged the position of a professor with ease.

## Why I wept?

For me, joining a newly built university meant serving in an organization with modern facilities, better technical know-how and advancement of opportunities. But the experience was shocking.

Within few days, I discovered that I had left one of the most developed campuses in Punjab for an extremely under-developed research institute. The reason for my dismay was that the department where I worked at the PAU had an annual budget of Rs.2 crores, whereas the total budget allocated to MAU was Rs.1.90 crores.

I felt that instead of moving ahead in life, I was staring down a barrel by leaving a good job in a hope of advancement. Here, both students and faculty members were interested in consuming tea and chewing *paan* (betel leaves). Research work was alien to them. They would take one or two classes and go home to do farming. Many being locals, went to their villages on extended holidays.

Seeing the pathetic scenario of teaching and research work, one day, I wept uncontrollably. The only consolation was that my wife was glad that we were back in Maharashtra. I care a lot for Hema and felt obliged to see her happy. Her brimming face gave me strength and my tears rolled back into positive thoughts.

## Screen entertainment

To remain upbeat about the future, I drew my attention to socializing and recreation. Parbhani had only two cinema theatres – Firoze and Naaz, owned by a wealthy Parsi businessman, Feroz Parakh, fondly called Baba. Hema and I would often go there to watch Hindi and Marathi movies. During one of our visits, we met Baba, who became our close friend.



Fond of films, people in Parbhani would rarely miss watching any. Dr. Godbole, who is now no more, was very critical of his wife, Ragini, who was immensely keen on watching movies repeatedly. When she was nine months pregnant and continued going to the theatre, Dr. Godbole said, 'I am afraid, our child will be born in the cinema hall.' Jokingly, he told her, 'You have seen *Patthar ke Sanam*, *Lal Patthar*, *Kala Patthar* and *Phool aur Patthar*. The next movie will play at our home – *Tera Sar, Mera Patthar* (Your head, my stone).

An interesting story of Firoze theatre was that it would get flooded during the rains, since it was situated close to a water tank. Despite facing inconvenience, people would be glued to their seats continuing to watch the movie. Such scenarios lightened my mood, and made me feel less distraught.

### **Wife's strong support**

During that period, Hema stood like a rock behind me. She is a deeply religious person and a devoted housewife, who kept me grounded in life from time to time. Hema had a major role to play in the upbringing of our children. When our daughter Radha was born in July 1975, while we were in Punjab, the entire house was



filled with joy. Later the birth of our second child, Rishikesh, in September 1977, too added vibrancy to our family. He was born in Parbhani. While Hema chose the name of our daughter, I christened our son. Our big help then was my younger brother Deodatta and youngest sister, Maina who were brought by Dada to Parbhani and told that to further their education would be my responsibility. Since then, they were with us in Parbhani for junior college education.

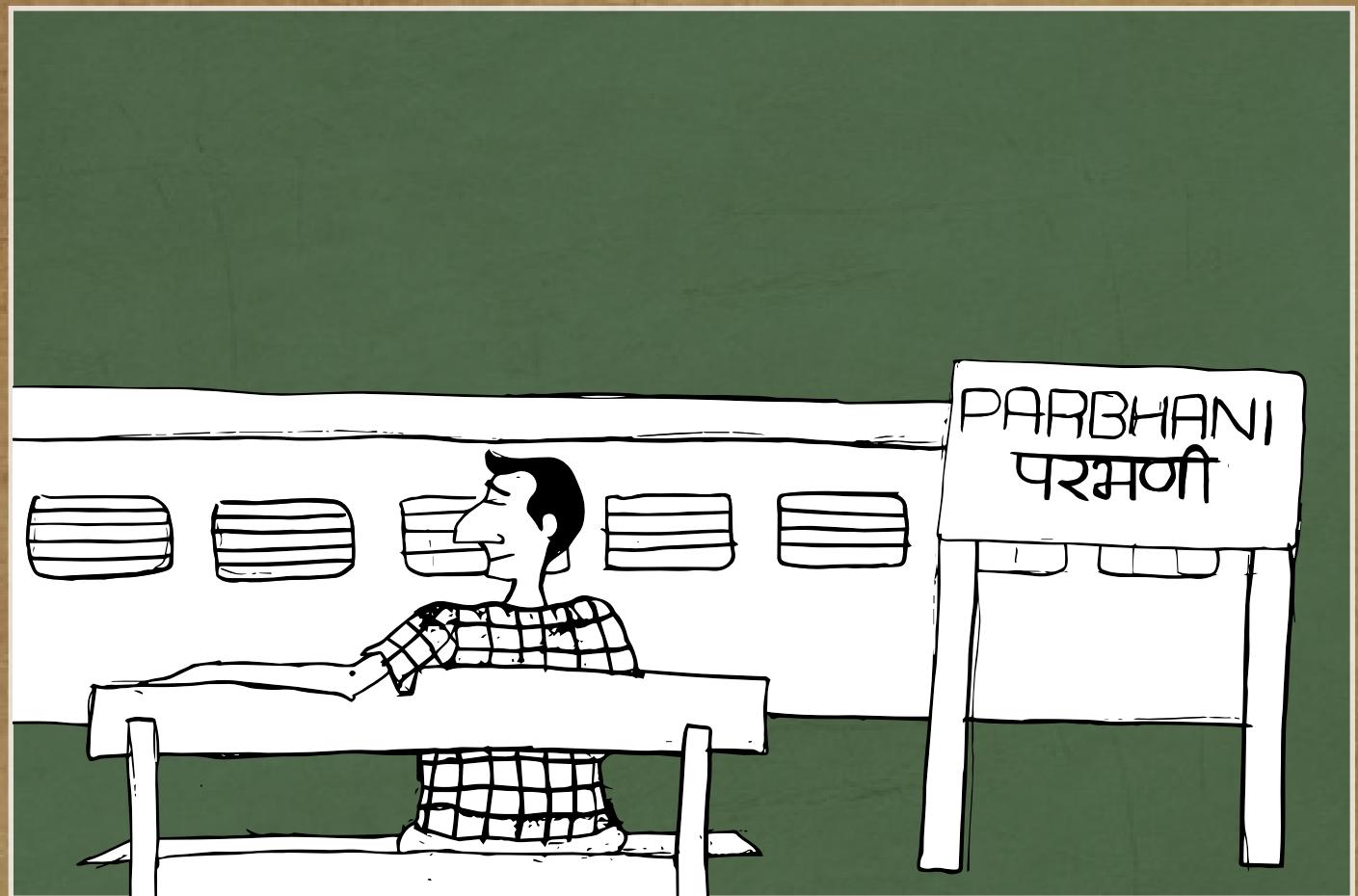
Around the time of our son's delivery, I was tied up with work. Nonetheless, I had made all arrangements to take Hema to the hospital. But one day, after I left for work and was conducting a class, my brother, Deodatta, who was staying with us for his studies, came to the class and broke the good news: 'Hema vahini (sister-in-law) has given birth to a baby boy.'

I was over the moon after hearing it, but the very next moment in a state of shock too. Hema had allowed me to go to the office, while she headed to the hospital on a cycle rickshaw with my sister.

A woman of uncompromising principles, I must admit that I am blessed to have her as my life partner. My contribution in the upbringing of our children was minimal, as Hema stepped into my shoes perfectly and gave them even father's love and care. She looked after their education and other social needs. Later, both Radha and Rishikesh excelled in their studies and became doctors from the Lokmanya Tilak Municipal Medical College, Mumbai.

Both had secured admission due to their hard work and dedication. Hema and I knew it was impossible for us to send them to any private medical college, as the monthly salary I earned as a professor then was a paltry sum compared to what a lecturer draws now after the 7th Pay Commission.

# CHAPTER 7



## Turning the tide

I always gained strength from Hema. With renewed vigor, I resolved to turn the drawbacks in Parbhani into advantages and change the circumstances that I had landed myself in. The time for reformations had come.

I began treating the organization as a training ground for planning and executing schemes and proposals. To begin with, a number of new apparatus including high-priced electron microscopes, fluorescent microscopes and binocular research microscopes were purchased.

I created requisite infrastructure facilities for the labs and introduced scientific temperament amongst the students. Once they witnessed the outcome of research work, the atmosphere changed for the better forever.

## Classic mindsets

In 1976, Dr. Salunkhe, who was instrumental in bringing many youngsters like me to join the university, left after a sabbatical and Dr. V. S. Khuspe was appointed as VC. He continued with the reforms and deputed local teachers for higher studies, particularly for Ph.D. The purpose was to expose the brighter students to gain prominence overseas by presenting their work.

The young staff members were to be trained in new disciplines like seed technology, biotechnology and molecular biology. But to our concern, we realized that students in the region had a typical



mindset of not going abroad for further studies. Almost all of them had reservations about venturing out of Marathwada, the erstwhile Nizam colony that was liberated a year after India's Independence.

One such person, who was sent on deputation to the US, returned to India within three months. Horrified, Dr. Khuspe questioned him and asked him to submit his report seeking the reason for leaving his studies mid-way. The report submitted by the student is an amusing document in the history of the university.

He wrote, 'There is no point in staying in the US. The country has a shortage of food. I did not get *bhakri* (*jowar roti* or sorghum flat bread) and vegetables to eat. So, decided to return.'

Similarly, one of my students deputed to Brisbane, Australia, to do post-doctoral research on the Colombo Plan returned after two months due to homesickness.

Many others also showed reluctance to study abroad. 'We shall happily work in Parbhani.... and instead of us, the professors can go and present our work,' they opined.

Over time, the situation changed and students now vie for an uncharted experience.

## **Memories I cherish**

The 25 years that I spent in Parbhani were the most fruitful. Culturally, the place became very rich and I had the good fortune of meeting some renowned classical singers, including Pandit Bhimsen Joshi, Pandit Jasraj, Pandit Vasantrao Deshpande, Smt. Parveen Sultana, Smt. Shubha Gurtu and Dr. Prabha Atre.

A dear friend Vasant Patil, an advocate, hosted the 3-day programs, with the result that Parbhani became famous for the ‘Tri-lingual Kavi Sammelan’, in which Hindi, Marathi and Urdu poets participated. This was introduced into cultural life of Parbhani by none other than the then collector and a good friend of mine, Mr Satish Tripathi. He was also our team met in lawn tennis of which I was very fond of.

I consider the place my *karmbhoomi* (the land where one works) and academically most productive. Although the first time I set foot there, a friend related an adage to identify Parbhani, ‘*Nal ko nahin totti, aadmi ko nahin duty, aur aurat ko nahin* beauty (No tap to a water pipe, no duty for a man and no beauty to a woman).’

There were several jokes about the town that had a village-like setting. ‘*Bani toh bani, nahin toh Parbhani* (If you succeed elsewhere, it’s fine, or else Parbhani is the destination).’ Another one goes, ‘The world has Germany, India has Parbhani.’

## **How time flies**

Fortunately, as I said, my experience of Parbhani was enjoyable. We saw our children grow up there, celebrated their birthdays, played sports, took them on excursions and travelled to cities all across India.

Once I went to Delhi alone and purchased clothes from Karol Bagh for both Radha and Rishikesh. They were delighted. But when none of the outfits fitted them, both burst out crying. They made me promise to take them along when I visited Delhi next.

It was all quite surprising for Hema and I, as neither of us is materialistic. We realized how time flew when the children went for higher studies, stayed in hostels and turned into responsible and matured persons.

### Cotton connect

On the work front, a part of my duties involved organizing farmers' rallies to educate them on various aspects of dryland crop cultivation. This was done by way of our mobile extension van that travelled to remote places to guide the farmers.

Gradually, developing facilities for agriculture students were taking shape. My early attraction to cotton, however, had not faded away. The desire to conduct research and development on this crop, in fact, became more intense. Disease management of dryland crops including sorghum, pearl, millet, groundnut, safflower and sunflower was a major challenge.



Almost every year, there was a bollworm epidemic and farmers had to resort to heavy pesticides. This doubled the production costs, which reduced the income from the cotton yield. I was determined to provide relief to the farmers and improve their profit margin.

I also developed a school and planned long-term projects where students allotted to me could work in continuation. Since my residential quarter, labs and field were all in close proximity; students doing M.Sc. and Ph.D. became a part of the large campus family. There was no fixed schedule and together we worked for late hours.

### Making Parbhani proud

From 1977 to 1997, I guided over 38 M.Sc. students and 20 Ph.D. students. I published over 200 scientific research papers in journals of repute.

In 1978, when my first international paper on management of pearl millet disease appeared in one of the most prestigious journals of American Phytopathological Society (APS), it was a matter of pride and celebration for the entire town. No one had imagined that research work done in Parbhani could ever find prominence abroad.

### Students and friends

Today, I can proudly claim that students mentored by me have all acquired exalted positions in prominent organizations all over the country due to their immense hard work and dedication. A majority of them from villages in Marathwada belonged to poor families and seeing their sufferings, I helped them overcome their financial crisis.



One of them later became a chief forest officer in Maharashtra. It was an overwhelming moment when he felicitated Hema and myself - publicly expressing his gratitude.

Two of my Iranian students are now holding prestigious positions in the Iranian government. I have had the opportunity to meet them in Tehran on several occasions.

The most remarkable facet of my life was that I believed in a casteless society and treated all students alike. Perhaps it is because of the blessings of those students that I have made accomplishments in life.

Parbhani being a small town, apart from my college circle, close bonds were formed with various sections of society, including farmers, businessmen, doctors and advocates. We formed a group of Elders Tennis Club and every morning people such as the district collector and the police chief would come to spend time and play sports with us. My fascination for tennis flourished at Parbhani and even as VC in Marathwada, I participated in matches.

### **Centre of excellence**

I feel exulted for playing my research matches on a rough pitch of Parbhani, yet scoring centuries. The department of plant pathology here acquired a grand status in India and abroad. It was considered as a center of excellence for research scholars, with students gaining knowledge under the guidance of professors and visiting dignitaries.

# CHAPTER 8



## First foreign trip

In 1980, I got the Alexander von Humboldt Fellowship to work for my post-doctoral study at the University of Hohenheim, Stuttgart, Germany as a visiting scientist along with the renowned virologist Dr. Satyabrata Sarkar. The visiting fellowship included learning of German at least for two semesters of two months each. I was allotted the Goethe Institute, Rothenburg (Ob der tauber).

Initially, I went alone and stayed there for four months with a German family in Rothenburg, a small town in Stuttgart. In the beginning, it was difficult to communicate with the people there, as a majority of Germans do not speak English. That is why it was mandatory to stay with the locals and learn the language.

Rothenburg is a small township with language schools located in the vicinity. This makes it easier for visitors to learn the German culture. My companions, staying with the same German family were from the US, Thailand, Indonesia and Iran.

It was my first international exposure and during the first four months, I became aware of many aspects of Germany. The country is famous for beer festivals and every place has its own brand of beer.

## For country's sake

My roommate from the US was a professor of political science and always ridiculed India. He often defined India as a poor country, which could not afford to make beer available for its citizens.

Tired of his daily bantering, one day, I challenged him to have a beer session with me at the festival where they served in 'litre masse' (one litre per mug). Our colleagues were asked to keep the count and see who had the power to hold on for a longer time. I was not a habitual drinker but decided to stand up for my country's prestige.

The competition began at 8 pm and after the third 'litre masse', I found the American chap losing his nerves. Around 10 pm, during the fourth round, he gave up. That night, I drank 5 liters of beer and walked back 12 km, carrying the American on my shoulders. Then onwards, he never uttered a word against India.

## Family time

After four months, when I was provided with a rented accommodation by the university, Hema, Radha and Rishikesh joined me. Every few months, I would get a break from work and we all travelled to the UK, former East Germany, Austria, Switzerland, France, Greece, Denmark, Yugoslavia and the Netherlands.

I also got the opportunity to work with people from various countries. It helped me in learning and widening my scope on crop protection with extreme climate conditions in other Continents. It almost felt like time has gone back when students from other states with different cultures mingled with one another in institutions in India.

Meanwhile, Radha and Rishikesh, were admitted to a kindergarten school near our residence. They picked up German quickly. Hema somehow managed to communicate with the locals in her broken English. The Germans, who were equally bad in that language, praised Hema and said to me, 'Your wife speaks such good English.'

### Bond with students

My tenure as visiting professor at the university in Germany was the most productive in terms of academics. Socially too, I developed friendship with many students at the university. One of my close friends was a Vietnamese national Mac Knu Kien. He worked with me at the same lab for his Ph.D.

His family had migrated to Germany during the Vietnam War, and had set-up Asia Restaurant in the nearby township, Boeblingen, famous for manufacturing Mercedes Benz vehicles. Our families had got so attached to each other that on weekends we would enjoy meals at his restaurant.

Dr. Sarkar, an extremely humble person was married to a German woman. He often enquired about our welfare and if we had any difficulties. (I invited him twice to Parbhani to deliver lectures). Another Indian, I became very close to in Germany was Dr. Raman Revri. He would accompany Hema, kids and me on our tours.



Today, when my wife and I go out with our grandson and granddaughter, it brings back memories of Radha and Rishikesh, when they were kids and the way we enjoyed life in Germany.

I also loved the company of the technical staff of the institute at the main lab and the adjoining electron microscope building. I made it a point to meet an all-women technician team sharp at 10 am every day. They looked forward to this half-an-hour coffee break, as I would relate interesting stories and anecdotes on India.

### Of logistics and logics

Once a woman enquired about Indian roads and the time it took to travel 50 km. I jokingly said, 'Compared to Germany's *autobahnen* (expressways), travelling in India is much faster due to potholes and ditches that give vehicles a bumpy ride. This technology enables us to reach the destination quicker.' They all had a good laugh.

Another argued, 'Why India continues with its outdated 'arranged' marriage tradition?' I reasoned, 'The system of love marriage in many countries leaves many not-so-good-looking and physically challenged girls unmarried. But our conventional method ensures a proper match for all.' They were highly impressed by this logic and pointed out some spinsters in the university.

Even after 25 years, our companionship continues. A friend Frau Giesela Moll regularly conveys Christmas greetings. Also, the Alexander von Humboldt Foundation in Bonn, of which I am the Fellow, mails me their journal *Humboldtiana* that keeps me informed and updated about events in the region.

Once in a decade, the Foundation organizes a get-together, inviting Fellows from across the world to discuss the latest

innovations in science, art and commerce. They chose me for one such event held in Chennai to present the agricultural scenario in India.

## Back in India

We returned from Germany after two years in December 1981. And I resumed work at the Marathwada University again as a professor of plant pathology.

Having developed close relations with people in Germany, I availed the 'revisit' program for six months to work on some remaining projects in 1986. The experience was akin to the hostel life I had led. I stayed with young German students, apprising them of the Indian culture and traditional agricultural methods. A few graduate students even visited Parbhani and witnessed the bullock drawn farm methods of India.

## From student to principal

My evolution from academics to administration happened in 1991 on being selected for two positions – as Assistant Director General (Education) in ICAR, New Delhi, and as Associate Dean and Principal of the College of Agriculture under Dr. Panjabrao Deshmukh Krishi Vidyapeeth (PDKV) in Akola.

The transition from wearing 'tyre slippers' as a student, to wearing a pair of fancy shoes as a principal of the same college took 30 years. But except heading the institution, there was nothing worthwhile for me to do. I found the administrative duties of the principal as non-challenging.

My interest in teaching and research led me to guide and mentor M.Sc. and Ph.D. students to complete their thesis. The other

**Stakeholder Engagement to achieve the Prime Minister's  
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First Round Table Meeting

## **Role of Public Private Partnership in Agricultural Research, Technology & Innovation**

**11 June, 2018**

PTTC, ICRISAT, Hyderabad

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enjoyment during this two-year tenure was playing badminton on a wooden court of the college with a group of teachers. We also organized tournaments at the campus.

I had then not shifted my family to Akola and they continued to stay in Parbhani because both Radha and Rishikesh, studying in grade-XII and X, respectively, declined to change their school.

### Research projects

In 1993, I went back to MAU, Parbhani to my earlier position. Knowing that I had a senior designation and, hence, could not avoid shouldering administrative responsibilities, I decided to stay and continue with my research projects.

I had a collaborative project with Dr. Vijay Kumar Mehan and Dr. D. McDonald at the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) at Hyderabad on groundnut diseases. I completed the project within four months.

Being the senior-most professor, I was then offered the administrative job of associate director at the university's National Research Project (NARP) in Aurangabad, the largest city in Marathwada.

Unlike earlier, when I turned down a job offer in New Delhi when Radha and Rishikesh refused to change their school, this time I accepted the offer. By now, both were studying in a medical college in Mumbai and I was free to leave Parbhani along with Hema. An added incentive of shifting base was that my dear friends Dr. Jayant Ashtaputre and Dr. Gopal Godbole were also living in Aurangabad.

# CHAPTER 9



## The advent of technology

Around the time I worked in Aurangabad, I learned that Monsanto, a US-based company that was first approved for field trials, and had successfully conducted the use of Bt cotton in the US in 1995, had offered to share the technology with the Indian government for Rs.16 crores. But after much deliberation, India decided not to spend such a whopping amount.

It was agreed that the country will develop its own infrastructure and an amount was given to the Central Institute for Cotton Research (CICR) in Nagpur, to develop high tech laboratories. Also, few scientists were sent abroad to acquire training for the technology.

At that time, it appeared to be a sensible decision, but in the long run, proved to be a big mistake. Because it took India a long time to develop this technology. The government-style of functioning with a laid-back attitude was an impediment, compared with the quick and fast work culture of the private sector. Thus, it took 10-12 years to develop Bt cotton technology in India. The consolation was that an Indian seed company had developed the technology. The company was Mahyco.

Despite the delay in granting permission to Mahyco by the government, the results were amazing. I comprehended the potential of biotechnology, particularly the transgenic produces for agriculture growth.

### Accidental Vice Chancellor

In 1997, I was appointed the VC of MAU. I refer to it as 'accidental', because though my senior colleagues being deans and directors had applied for the post, the then honorable governor of Maharashtra P.C. Alexander rejected all four from the first list. My name, recommended by Dr. Raj Paroda, director-general of ICAR, appeared in the next list of four candidates.

After the interview, the Raj Bhavan approved my name for the post. I was probably the youngest to acquire that position at the age of 51.

The job had its own hazards. The VC was held responsible for all the wrong doings at the campus. As a professor, I had minimum interaction with politicians but as VC, had to deal with them on a



regular basis. I found that no decision could be taken independently, and every decision, including the transfer of an official, was done at the behest of politicians.

The Management Council comprised Members of the Legislative Assembly from ruling and opposition parties. They would often create hassles and pacifying them was a huge task. Since almost everyone had political connections; one political leader or the other challenged administrative decisions. It became a huge hindrance in development work.

### **Resisting pressures**

I tried my best to resist such pressures, but at times, had to cave in. It was painful to defy logic and compromise. This began affecting my health, as I was not used to unnecessary mental strain.

I am of the belief that state agricultural universities (SAUs) having so-called autonomy won't have any meaning if political leaders interfere in every matter. Because of this, the universities have not been able to make the desired progress in several spheres. It is time the ICAR's Model Act is adopted by SAUs in Maharashtra.

I recall one episode when I transferred an assistant professor from one faculty to another. On behalf of the professor, a Member of the Legislative Assembly (MLA) took the matter to then Chief Minister of Maharashtra, Late Shri Vilasrao Deshmukhji. He called me and asked me to sort it out.

I met him in Latur, with a drawing of the university's lab set-up. He was aghast when I showed him that the transfer was merely from one room to the adjoining one. He gave a dressing down to the MLA for providing him false information.

With time, I became wiser and learned to deal with people effectively. Along with administrative duties as VC for three years, I decided to do something worthwhile. The opportunity came by way of mega projects for farmers.

### Mammoth projects

Three mega projects were planned and executed under my leadership in 1998 and 1999. The first project involved the adoption of a 500-acre village, Ashta, in Nanded district, Maharashtra, for a demonstration of the cost-saving technology in cotton. It was in collaboration with ICAR-NCIPM (National Centre for Integrated Pest Management).

The cultivation tools were provided to the villagers and they were given demonstrations on how stable cotton protection could be achieved with minimum inputs. The program ran for three years and helped in increasing the farmers' profit without compromising on the crop yield.

*(The average productivity in rain-fed agriculture ranged between 20 Q per ha on 500 ha. The project found a mention in the annual report of the Planning Commission.)*

The second venture was conducted with the help of Israel. The Government of Maharashtra had sanctioned a mega cotton demonstration project under the Israel technology. It was implemented with high input and highly mechanized cotton cultivation under drip farming. Done on a 250-acres contiguous plot, the project helped farmers having limited access to water irrigation. It was one of the most successful projects of the Israel Cotton Technology Demonstration in Maharashtra.

The time and effort on both projects were immensely successful and useful. The farmers learned that the profitability of cotton could be enhanced by healthy practices. This technology has been a major accomplishment for me at the university. It was hailed as the best knowledge imparted in the history of cotton technologies in India. It was also the first experience in ‘precision cultivation technology’ in open fields.

The third project was the commercial application of tissue culture technique, coupled with micro-irrigation and polyhouse technology. It boosted the production of fruits and flowers manifold. The Maharashtra government provided finances for the construction of the state-of-the-art tissue culture facilities for commercial production of plantlets of banana and sugarcane crops.

The plantlets developed through tissue culture were sold and the funds reinvested in the project. By introducing this concept, new vistas opened for agriculture universities to generate funds for research. It also meant not being dependent on the government for financial support.





Indian Society for Cotton Improvement (ISCI)  
International Service for the Acquisition of  
Agri-biotech Applications (ISAAA)

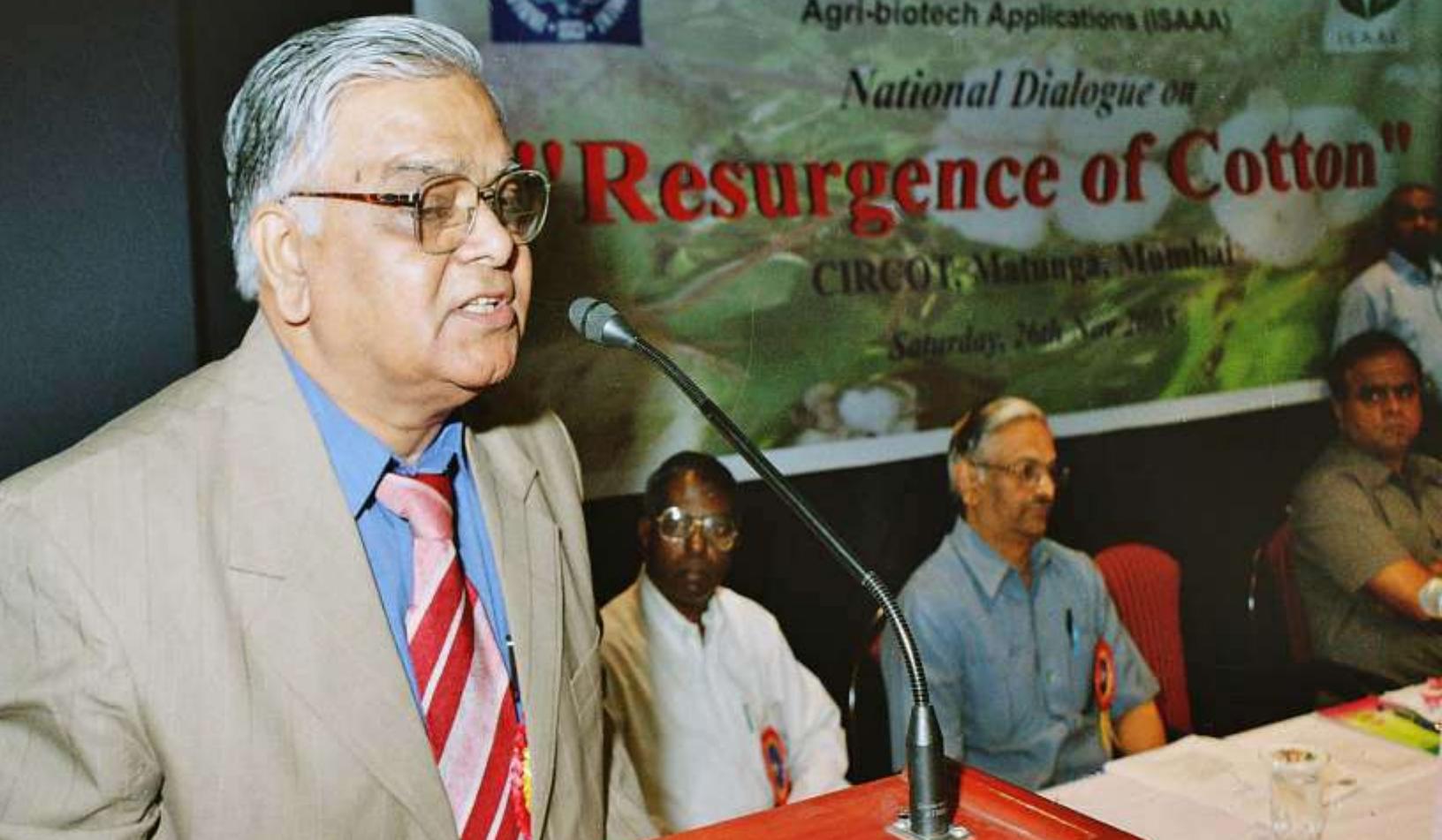


National Dialogue on

# "Resurgence of Cotton"

CIRUQI, Navi Mumbai

Saturday, 26th Nov 2005



## Induction into biotechnology

Bt cotton had given me an opportunity to learn about biotechnology as a tool to manage pests and diseases. In 1998, scientists from Mahyco Life Sciences in Jalna sent a request to conduct the Bt cotton trial at MAU, as mandated by regulatory bodies. I knew about Mahyco's contribution to commercializing the hybrid technologies in rain-fed crops, but was unaware of its utility in Indian cotton cultivation.

Between the period when I left Mahyco in 1967 (formative stages), by 1997, it had become the leading seed company of the country. Dr. Badrinarayan Barwale, chairman of Mahyco was honored with the Padma Bhushan and the World Food Prize for his contributions to the development of indigenous seed business in India. (I had worked with him during my short stint).

Since, Bt cotton technology was still new to me, I went through the subject extensively and realized that our cotton farmers would be delighted to get bollworm-resistant cotton without having to spray the crop with pesticides. I allowed Mahyco to test three Bt cotton hybrids at the university farm despite severe opposition against the trial. This was my induction to the first commercial biotech product handling.

My tenure as VC was very gratifying because of the memorable projects that I was able to implement. On the administrative front, some of the bold decisions taken then still find no parallel.

# CHAPTER 10



## End of VC term

Even though my colleagues insisted I continue as VC even after my three-year tenure in 2000, I was adamant about leaving. At the age of 54, there was no giving up on research work and I wished to join a suitable organization.

Just then, I came across an advertisement by Agricultural Scientists Recruitment Board (ASRB) for the post of director at the ICAR's Central Institute for Cotton Research (CICR) in Nagpur. I applied and was selected.

I was given a grand farewell by the staff and the students of MAU. I remember giving a farewell speech mentioning, 'During the last three years, I gave up a lot to improve the functioning of the university. Today, I am taking back nothing except tension-induced ailments like diabetes and blood pressure.'

## My years at CICR

Amusingly, the day my tenure ended as VC, the next day I joined CICR. It was a target-oriented job since the institute had to work only on one crop and that too cotton – the crop of my choice and parental linkage.

Happy at the prospects, I tried to raise the research output of the institute using my administrative skills as a VC. To begin with, I prepared three lists – one: talented scientists (whom I gave a free

hand at work), second: those who while away time and create problems in administrative work, and third: those on the borderline who could be transformed into becoming valuable when assigned the right job.

I gathered knowledge from the Sanskrit *shloka* (verse): *Amantrakam aksharm nasti, nasti mulou manoshadham , ayogya pushonasti, yojakastatra durlabha* (There is no word without a mantra, no plant without a root having medicinal properties, and no individual who is absolutely useless. What lacks is our inability to find the right talent and entrust them with responsibilities). It worked.

The CICR released the first commercial technologies for detecting Bt cotton kits and I felt great satisfaction that some of those technologies could be patented with my efforts. The insecticide resistance management project had a logical conclusion as it was demonstrated in all the cotton-growing states. I had the satisfaction of conducting the final trials of Bt cotton at the CICR and 55 other locations in the country.

## First GM crop

These efforts raised the chances of boosting technology and made possible the commercial release of the first Genetically Modified (GM) crop, Bt cotton in India in 2002. I was fortunate enough to be a member of the apex regulatory body at the Genetic Engineering Approval Committee (GEAC), Ministry of Environment for the approval of this technology.

The period between 1999-2002 witnessed the Bt cotton testing all over India through the All India Coordinated Cotton Improvement Project. Besides, I evaluated nearly 200 field trials and helped the local farmers. The entire exercise was so rewarding that the

technology has left an imprint on my mind. I believe that farm productivity constraints due to biotic, abiotic stresses, as well as issues of quality production, could be addressed by the new breeding methods.

Millions of farmers have since benefited from this technology. In 2003-2004, cotton production flourished in the country. Within six years of using the technology, cotton production doubled and farmers' yield increased by 100 per cent.

### **Boosting technology**

The three years I spent at CICR were highly productive. With my past experiences, I established six field water tanks as measures of watershed development, launched a bio-diversity field and utilized a 50-acre barren land of the institute. Unsuitable for cotton experimentation, it was brought under the dryland fruit crops such as *amrood* (guava), *amla* (gooseberry), *ber* (plum) and *sharifa* (custard apple). All these are now giving good returns to the institute.

In 2002, many seed companies sub-licensed the Bt cotton technology from Mahyco-Mosanto biotech and developed their versions of Bt cotton. The CICR developed a protocol for testing of the new hybrids and also promoted practices such as: the time and depth of sowing, crop geometry, irrigation, pest monitoring based spray application, refuge planting and use of pheromones.

The dramatic turnover in cotton production was the result of the close working of public and private partners. The country, undoubtedly, benefitted, as the farmers' income doubled. On the other hand, scientists got the opportunity to explore new avenues of science by just commercializing useful technology.

## Life comes full circle

Looking back, I feel proud that as a son of a cotton farmer, I had assisted in the commercial release of the first genetically modified Bt cotton crop in India. I also take pride in creating the necessary infrastructure at the CICR.

Under my guidance, the institute developed the first indigenous Bt detection kit that got patented in other countries. The kit helped workers in detecting illegal Bt cotton production.

In the past few decades, India has not only become self-sufficient in farm output, but also a potential agriculture exporting country in the world. The cotton production, which was stagnant at 300 kg lint per ha for 20 years, saw a major change due to Bt technology, as productivity doubled in the first decade of the 21st Century.

## Bt cotton in India

After the release of Bt cotton in India and continuously studying its impact for the last 20 years, I firmly believe that our smallholder farmers need similar technologies to enhance their income. Pest and diseases, which damage the crops of poor farmers, can be efficiently managed by biotechnology.

In India, we have several opportunities for biotech crops such as golden rice, iron-rich banana, insect resistant maize, drought tolerant soybean and Indian mustard. These crops have traits that help in pest and disease management, nutritive food development, nutrient use efficiency, and most importantly, abiotic stress tolerance such as drought, salinity, and climate change.

But despite the multiple revolutions, India continues to face daunting challenges. The productivity of several crops is either

stagnant or declining due to climate change, water crisis, soil degradation, or lack of technology.

To meet the demand of the growing population in the country and eradicate poverty, hunger and malnutrition, modern tools of breeding; new methods of cultivation and biotechnology are needed to break the yield barriers.





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### Farmers' demand

While the farmers need the technology for biotech crops, some politicians continue to oppose it. That is the reason why such technologies are dominated by the private sector. It is time, political leaders acknowledged the competence of the Indian scientific community. I continue to be optimistic and hope that the conflicts and misunderstandings will be removed.

Today, the total transaction in the seed business of Bt cotton is more than Rs.4,000 crores. But only because the technology came from the private sector, there was a lot of resentment and criticism among the masses to speed up agricultural reforms.

My belief in the technology was further strengthened after the John Templeton Foundation sanctioned us a project to carry out a survey.

In 2013, I conducted a study of 2,400 farmers in 14 districts of Andhra Pradesh, Maharashtra and Punjab, where Bt cotton was being cultivated. All the respondents unanimously endorsed the utility of Bt cotton in the Indian context. In addition, they suggested adopting more such technologies for smallholder farmers.

# CHAPTER II



## Delhi once again

In 2003, I applied in response to an advertisement by the UPSC in New Delhi for the post of Agriculture Commissioner, Government of India. Incidentally, the interview for this happened to clash with my visit to Cape Town, in South Africa, where I was to deliver a lecture in World Cotton Research Conference.

I was in two minds, but managed to have the lecture postponed by a day. So, immediately after the interview in New Delhi, I took the flight to Cape Town. It was one of my most hectic travel schedules, but I was happy for things to have gone my way. I was chosen out of 16 candidates, and appointed as Agriculture Commissioner, Government of India.

Our children were then studying at Sion Medical College in Mumbai and I saw no issue in moving out of Nagpur along with Hema. Though she was initially reluctant, as she would often get to meet her parents in Nagpur, realization dawned about leaving her comfort zone for better prospects in life.

I joined the duties on my 57th birthday in 2003 at Krishi Bhavan, New Delhi.

### **Red light zone**

Delhi was not new to me, but the city had grown exponentially since 1972 when I first left it after my Ph.D. I was now in a typical bureaucratic set-up and ministry structure. It made me slightly uncomfortable and in the beginning I was mostly confined to my room. Interaction with others, including secretaries, additional secretaries and joint secretaries would take place only during formal meetings.

With my university and research institute background, I found it surprising that outside the rooms of all secretaries at Krishi Bhavan, there were red and green bulbs. It was intriguing to notice that most of the time the red bulbs were on. This meant the person inside was busy and no one was allowed to enter the room.

Jokingly, I would call it the 'red light area'. I avoided ever using the lights and instructed my secretary to allow anyone to meet me at any time.

My responsibility at the Centre included guiding, funding and monitoring the projects on crops at all state levels. During 2003-2004, I monitored the food security mission and technology mission on cotton and jute and it was very satisfying that cotton production grew steadily, providing succor to the farmers.

### **Association with Shri Sharad Pawarji**

In 2003, when I joined the ministry, Shri Rajnath Singhji was the Minister of Agriculture. But in 2004 General Elections, when the National Democratic Alliance (NDA) lost and the United



Progressive Alliance (UPA) came to power, Shri Sharad Pawarji was appointed the Minister of Food and Agriculture. He had known me as VC of the university in Parbhani and was happy that I was now in the ministry.

The ministry administration, one day, raised the ‘confusing’ issue that my retirement age in the university was 58 years, while I was sent to the ministry on deputation until I turned 60. The only option was that the university (from where I came on deputation) should enhance my retirement age to 60. My request, supported by Shri Pawarji, was accepted by the Maharashtra government and the dilemma was over.

It was a unique case of changing the age of retirement and I was given the opportunity to continue serving the nation. I shall always be grateful to Shri Pawarji for this, as it led me to initiate a special project for dryland agriculture, which is now called the ‘National Rainfed Authority of India’.

### **Chairman of ASRB**

My tenure as the Agriculture Commissioner was over in 2005. Thereafter, impressed by my work, I was appointed Chairman of the Agricultural Scientists Recruitment Board (ASRB). At that time, the Board was almost defunct, as the process of selection of scientists was at a standstill because of on-going litigations.

On joining, I formulated a strategy to modify the selection process and the entry-point examination of scientists and got approval from the president of the ICAR. (The Minister of Agriculture is also the president of the ICAR Society).

I had the longest term as chairman of the ASRB, and during this period over 1,500 young scientists got selected through yearly

recruitment in indirect mode. In direct mode, vacancies arising out of retirement of directors, ADGs, head of departments, project coordinators, principal, and senior scientists were filled.

Similarly, over 5,000 scientists were recruited in six years without a single dispute or court case. Importantly, the appointment of scientists at the ASRB was done with zero interference from Shri Pawarji. He never dictated terms in the selection process or any other policy matters, a rarity these days. In fact, he had made it clear to me by saying, ‘Do not choose a candidate who comes with a recommendation.’

### Weird instruction

An interesting recommendation, or rather a non-recommendation once came from an unknown woman. A day before the interview for the post of the director was to be conducted. I received a phone call from a woman requesting, ‘Please do not choose my husband who would be appearing for the interview. He has ruined my life and our children. In the same way, he will destroy the institution also.’

This was one of the most unusual recommendations that I experienced as chairman. Of course, no heed was paid to this or any such advice.

### Lessons to learn

The manner of functioning during my tenure at the ASRB should set an example for politicians who indulge in recommendations of candidates for scientific jobs, as many times merit takes a back seat and mediocre talent is promoted.

In a book published on the occasion of Shri Pawarji’s 75th birthday in 2015, I had written about my experience of working as chairman



of the ASRB. Acknowledging his vision, I mentioned that working with a mature politician like him had been a great pleasure and I feel fortunate on that count. In India to Chair a committee of selection has its own hazards as too few jobs and too many candidates induce the incumbents to search for political connections to pressurize the committee. I am proud to reconfirm, which I had also given in writing that in the entire tenure as

Chairman of ASRB, my Hon'ble Minister of Agriculture Sh Sharad Pawar ji never influenced the process. During that time, I had the joy to share my interest in the cotton crop also. Over 35 countries invited me to narrate my experiences of the Indian cotton story.

I also served as the Asian member on the board of directors on the international body International Service for the Acquisition of Agri-biotech Application (ISAAA). I had the privilege to serve as the longest president of the Indian Society for Cotton Improvement (ISCI), Mumbai and presently, I am the President Emeritus of the Society. At the same time, I was invited to join as technical member of African Biosafety Network Expertise (ABNE) of AUDA-NEPAD, Burkina Faso, West Africa to guide and advise a continent-wide biosafety service and resource network for African regulators and policymakers, supported by Gates Foundation.

### Comic account

At the ASRB, an interesting incident took place because of the unusual Maharashtrian surnames.

One day, a relative visited my office and told my secretary to inform me that *Jamadagni* (name of a *rishi*) has come to meet me. The next day, my wife's relative named *Bhoot* (ghost) came visiting too. The secretary, a north Indian was perplexed. Things climaxed on the third day when another close relative, whose surname was *Brahmarakshas* (Creator of demons) came to see me.

With a shocked expression on his face, the secretary came to me and requested that he be transferred to another department. He felt I was a man of parlok (the other world) with relatives of such names visiting me consecutively. I pacified him and explained about unique Maharashtrian surnames. My stay in Delhi continued until the age of 65.



## Post-retirement

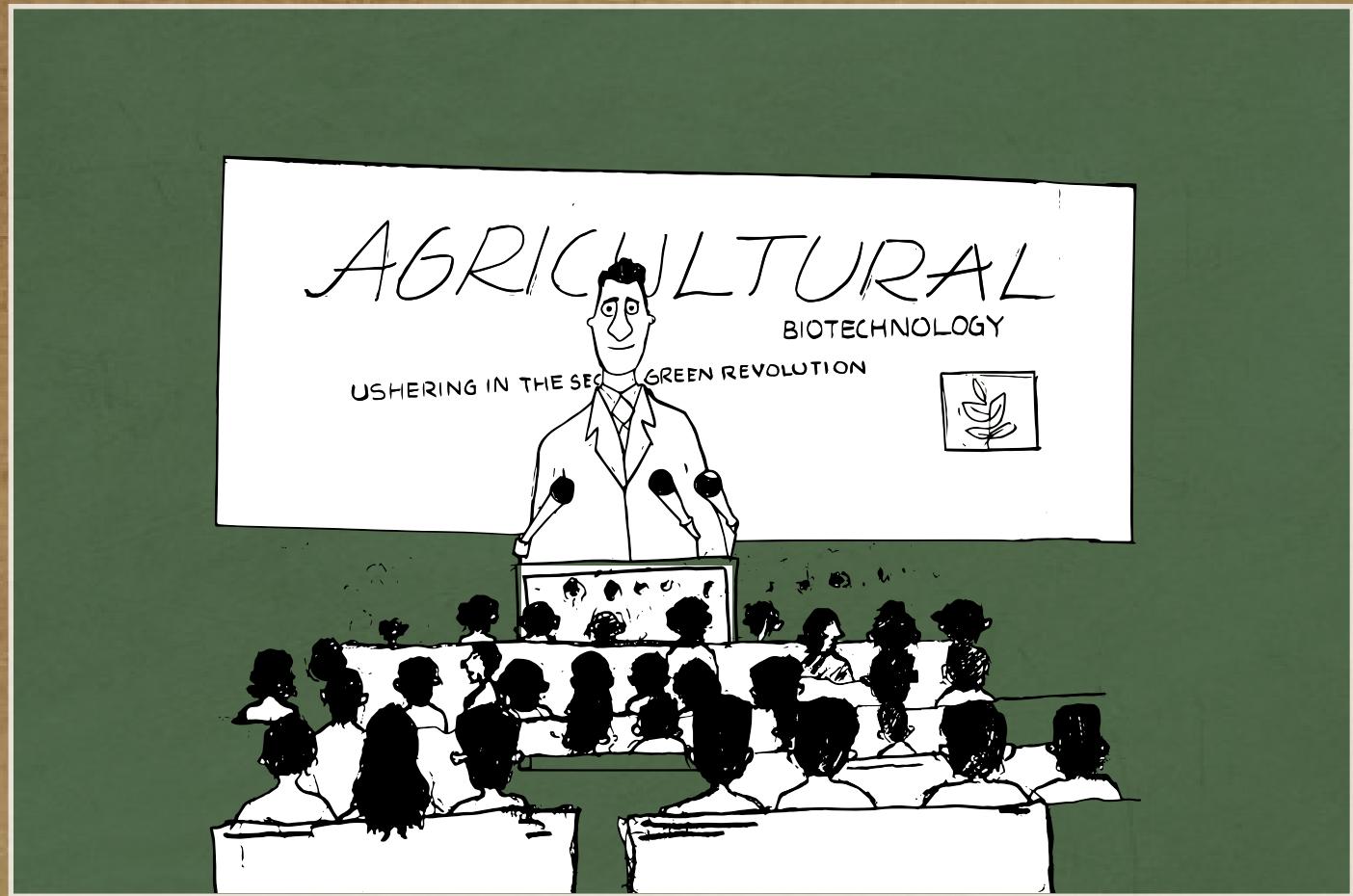
My journey in life has been a rollercoaster ride. But with god's grace, hard work and support from my family, I have achieved a lot, and the time has come for me to pass the baton to the next generation.

On retiring from service in 2011, I decided to settle in Nagpur, as Rishikesh, now an eye surgeon, had set-up his eye care hospital there. He has a 10-year-old son, Idhant, and an eight-year-old daughter, Arohi. Our daughter-in-law, Dr. Pratiksha too is a working woman. She obtained her Ph.D. degree in biotechnology from TERI (The Energy and Resources Institute) University, when we were in Delhi. Now, as grandparents, Hema and I have ample time to spend with our grandchildren.

Radha is married into the Saodekar family that runs a hospital in Amravati, a town near Nagpur. Her husband Dr. Hrishikesh Saodekar is an orthopedic surgeon. They too have a son, Shreyas, 16, and a daughter, Tannushree, 14. When the children were 5-6 years old, they would visit us in New Delhi during holidays. After returning home from the office, I would take them to swim and cycling at the NAAS campus.

Even now, I play cricket, badminton and football with my grandchildren. At home, we enjoy a game of cards and carom too. During my travel days, I used to bring toys for my grandchildren. These included different types of cars, trucks, tractors, auto-rickshaws, planes and boats for my grandson, and a collection of nearly 25 types of dolls for my granddaughter.

# CHAPTER 12



## Uniting with new minds

The field of biotechnology changed my life. In 2015, I set up a not-for-profit scientific organization, South Asia Biotechnology Centre (SABC) in New Delhi. It is the brainchild of my close friend Bhagirath Choudhary, a seasoned technocrat with over two decades of experience in the agriculture, food, and biotechnology sector in India and abroad.

Bhagirath, who is almost half my age, is now a close and dear friend and like a family member. I remember meeting him for the first time in 2004 while serving as an agriculture commissioner of the Government of India. He visited my office at Krishi Bhawan and invited me to deliver a talk at the '*International Conference on Agricultural Biotechnology - Ushering in the Second Green Revolution*'. He had organized the function that was attended by the who's who in the agricultural field and biotechnology experts across the world.



I admit I was highly impressed by his knowledge of the agrarian turf. His friendly behavior and connections with national and international agriculturists were remarkable. The conference paved the way for a friendship triangle between Bhagirath, Sanjay Deshpande (who works with Mahyco), and myself. It led us to travel together to about two-dozen countries for varied schemes and projects related to the welfare of the farming community. We are also grateful to Raju Barwale of Mahyco, and his family for their immense support in this context.

### The Biotechnology Centre

The South Asia Biotechnology Centre, SABC identifies, scales up, and commercializes farm technologies that are necessary to provide solutions to stem out the problems that cannot be tackled by conventional methods. In a short span, it has created a niche in the agricultural development sector and promoted many



technologies for the benefit of the farmers. The organization runs pan-India programs on pest management, judicious and safe use of crop protection, and promotes IPM based bio-control on native and invasive pests to ensure quality production and increase farmers' income.

It implements programs and activities in close collaboration with both public and private sector institutions to create multiplier impact. It contributes to the countrywide adoption of farm innovations, its vitally important contribution to food, feed and fibre security, and growth prospects for the bio-economy of the country.

I continue to concentrate on the subject by nurturing young scientists of SABC, who are adding to the transfer of farm innovations and bridging the gap between science and society.



## International feats

For years, I have been involved with several farmers' associations. While in 2004, I had conducted the International Cotton Genome Initiative meet as an organizing secretary, in 2011, my appointment as President of the Indian Society for Cotton Research proved highly fruitful. I organized the 5th World Cotton Research Conference, drawing international attention of scientists to cotton research in India. In 2017, I steered the Asian Cotton Research and Development Network.

The African Biosafety Network Expertise Committee took note of my work in Bt cotton and biotechnology and invited me as a technical member to guide their program for six years. For 10 years,

I was a board member of the International Service for the Acquisition of Agri-biotech Applications (ISAAA), an organization based at Cornell University, US.

From 2000 to 2019, along with Bhagirath, I visited almost every continent for the presentation and promotional activities of Bt cotton. We came in contact with a large number of cotton workers, scientists, biotechnologists, and researchers from all over the world. My last visits were to Uzbekistan and Kenya.

### **Present assignments**

As President of SABC, I guide a team of professionals led by Bhagirath to implement agriculturally important, socially relevant, and high impact grassroots projects across India. Whether it is about the native pest Pink Bollworm (PBW) or migratory pest desert locust or invasive Fall Armyworm (FAW), I have been devising, guiding, and implementing the country's mega field demonstrations, on-farm activities, scientific control measures, and outreach to the growers.

In the past six years, SABC has engaged with farmers by organizing training programs, field demonstrations, and technology deployment to ensure speedy delivery of improved crops.

I have also guided SABC to sign an MOU with the Department of Biotechnology (DBT), Ministry of Environment, Forests and Climate Change (MOEF&CC) and ICAR.

SABC has also expanded its footprints to advance farm innovations such as biotechnology and genome editing, facilitate biotechnological applications in agriculture and advocate for a policy framework, and enabling regulatory environment. Bridging the perceptual gap between the public and private institutions,

the organization has become a pivot to harness and strengthen these sectors on the basis of *Atmanirbhar Bharat* and sustainable agriculture.

### Scientific campaigns

While with SABC, I have carried out major farm demonstrations and campaigns, including Whitefly (WF) management in north India, PBW management in central India, a ravenous migratory pest Desert Locust (DL) in western India, and pan-India management of FAW. These new enemies of farmers have been responsible for increasing the cost of raising crops and leading to lower yields.

The campaign for White Fly was conducted at Bhatinda and Abohar (Punjab), and Sirsa (Haryana) in 2016-2017, and for PBW in



all districts of Vidarbha in the last four years, 2017 to 2020. Educating farmers about the invasive FAW was the key objective of a pan-India outreach program Safeguarding Agriculture and Farmers against Fall Armyworm (SAFFAL), which was implemented successfully in 2018 to 2020.

Project SAFFAL facilitated the involvement of troika stakeholders - the farmers, the academicians, and the government, mobilizing them across the maize growing areas of the country. As a result of sustained campaigns including workshops, education programs for universities, colleges, local government institutions, schools, and Agri science centres, my efforts contributed to instilling awareness among farmers and resulted in significant control of PBW and FAW. The campaigns continue even now.

A classic example of ground-level work is reflected in the fact that SABC was the first to implement the 'maize yield maximization project' to improve the grain yield and farmers' income in the dryland areas of Aurangabad, Jalna, and Jalgaon districts of Maharashtra in 2016 to 2018.

I was also able to carve out collaboration with the private sector institutions and ICARs KVks. SABC is now collaborating with DBT and ICAR-National Research Centre on Seed Spices (NRCSS) of the Government of India and has set up a Biotech Kisan Hub (BKH) for the Western Dry Region and a tinkering laboratory at Jodhpur, Rajasthan. Kisan Hub is helping smallholder farmers to adopt good agricultural practices, including using bio-controls to minimize the application of pesticides in seed spices like cumin, fennel, coriander, fenugreek and, isabgol.

As part of the Kisan Hub project, SABC has extended the existing Memorandum of Association (MOA) with KVks, and is partnering

with the Department of Agriculture, the Spices Board of India and SAUs in the Western Dry Region.

SABC has achieved more than what I expected from a not-for-profit organization. A dedicated team, a professional working environment, and technical know-how are the hallmarks of its smooth functioning.

Looking at its track record, I feel so proud that the team is fulfilling its aim to nurture an organization that I set up post my retirement.

### Farmers Engagement:

As a technical advisor to Agrovision, every year, I help conduct central India's largest exhibition in Nagpur, where farmers learn about new technologies in agriculture. Nearly 4-5 lakh farmers participate and attend workshops organized on farm innovations. I am also the Secretary of Agrovision Foundation, which conducts monthly training programs for farmers on varied subjects.



In 2012, I found that Shri Nitin Gadkariji, who introduced agrarian reforms in Maharashtra, including water conservation and several other farmers' welfare projects was organizing a mega exhibition to educate, empower and encourage farmers of Vidarbha to deter them from taking such drastic steps of committing suicide. I considered it the right opportunity to serve the rainfed farmers of the region. I began conducting workshops on agrovision and created a monthly advisory forum for training the farmers in the diversification offarming.

### Other associations

I worked as the vice president of one of the most elite academic bodies called the National Academy of Agriculture Sciences (NAAS) in New Delhi. The organization is involved in the preparation of policy documents on all agriculture subjects for the benefit of the state governments.

This has helped the central government to formulate significant policies related to issues like soil testing kits, neem-coated urea, market-linked cultivation and management of excess farm produce. The NAAS also produced a policy brief for the government on how the country could attain self-sufficiency in vegetable oils.

I am also Adjunct Professor, Indian Agriculture Research Institute (IARI), New Delhi; Chairman, AFC India Ltd formerly Agriculture Finance Corporation (AFC), Mumbai; Board Member, Agricultural and Processed Foods Export Development Authority (APEDA), Ministry of Commerce and Industry, Govt of India; Board Member, Maharashtra Knowledge Corporation Ltd, Pune; Member, Rajiv Gandhi Science and Technology Commission, Govt Maharashtra, Mumbai; Chairman, Science and Technology Resource Centre, Gondwana University, Gadchiroli and Board Member of Dr.

Panjabrao Deshmukh Krishi Vidyapeeth (PDKV), Akola; Sher-e-Kashmir University of Agricultural Sciences and Technology (SKAUST), Srinagar, Jammu & Kashmir and Indira Gandhi Krishi Vishwa Vidhyalaya (IGKV), Raipur, Chhattisgarh.

## Hobbies

I have always been fond of sports, especially hockey and tennis. On foreign trips, I would go for deep-sea swimming in Mauritius and the Philippines. During my school and college days, I was a fan of actor Dev Anand and would even imitate him. I also enjoyed watching movies of Amitabh Bachchan and Amol Palekar.

Films like *Guide*, *Padosan*, *Mere Mehboob*, *Anand*, *Golmaal* and *3 Idiots* are my all-time favorites. Among Hollywood films, *Secrets of Santa Vittoria*, *Guns of Navarone* and *Mackenna's Gold* are the most watched ones. During the Covid-19 pandemic and subsequent lockdowns, My grandson, Idhant suggested me to see comedy movies and south Indian movies which have wonderful fight sequences like *Dangerous Khiladi 1,2,3,4*, *Golimar* etc., and all Govinda movies. . In fact, this suggestion was so wonderful that lockdown related diseases and mental tensions never touched me



I also like reading Marathi and English novels. And contribute articles on policy issues to Marathi and English periodicals. I am also a consultant to AgroSpectrum magazine that provides information and updates on the most pressing issues of the agricultural sector.

### Social vision

With my years of experience, I implore the present-day agriculturists and the younger generation to try and emulate my vision of life. The most important being – never hesitate to stand up for what is right. You may be criticized and pilloried by powerful people and groups, but learn to never waver in speaking and acting for what is truth.

I experienced people doing practically nothing in organizations but portraying as if they handled the entire *karobaar* (business of work). The truth was that while they made good use of the *kar* (official vehicle) for their personal work, the entire official *bhar* (workload) was put on the shoulders of their subordinates.

I call everyone, especially those entrusted with leading and guiding others, to be more responsible and extend their hands by sharing the good fortune with the less fortunate. Inspired by those who helped me, I showed deep concern for those who lacked support. Together, we should set examples and inspire others.

### Pay it forward

Whenever I get an opportunity to help the poor and the needy, I do step in to do my part. I have constructed a three-bedroom tenement at my village for Deosthan Pujari of our family guru and spiritual teacher, Sri P.P. Avdhutanand Swami Maharaj. I also saw to it that my driver was able to acquire his house after many years in service.



I pay obeisance to our family guru, my parents, teachers, relatives, friends, students and well-wishers. In them, I see the Almighty. I feel very blessed for the relationships that were developed and the opportunities that came my way in all these decades.

Merely saying thank you to all those who touched my life, I feel, is not enough. I very humbly bow my head in gratitude to everyone for their countless blessings. When @75 I was given the “LIFETIME ACHIEVEMENT AWARD” by FICCI on 17th March 2021, I felt it was all the blessings of my all well-wishers of life till now.

**For me, the most pious thing one  
can do to attain eternal bliss is to  
serve humanity. As Lord Shri Krishna  
narrated to Arjuna in *Srimad  
Bhagavad Gita*:**

***Karmanyे Vadhikaraste  
Ma phaleshou kada chana  
Ma Karma Phala Hetur  
Bhurmatey Sangostva Akarmani***

(You have a right to perform your prescribed duty, but you are not entitled to the fruits of your actions. Never consider yourself to be the cause of the results of your activities, nor be attached to inaction).

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# GLIMPSES

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# THANK YOU

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MAYEE  
MEMOIR

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