

## Helping farmers reap the benefits of tech

N RAMAKRISHNAN



ROHTASH MAL, Chairman and Managing Director, EM3

EM3 Agri Services believes farming-as-a-service is a model that will catch on

It is his stint as the CEO of a tractor manufacturer that helped him realise the enormity of the problem confronting the farm sector. One, farm labour was just not available and to make it worse, small farm holdings prevented large-scale mechanisation. Two, farmers were open to adopting technology, but were not sure those who were providing them with machines would be available for them all through.

Besides, he says, agriculture should be viewed as an industry with everything – inputs and output – scientifically measured and accounted for. Two, farm productivity should not be measured in terms of quintals per acre, as is being done in India, but in terms of net rupees per acre.

### **The *aaha* moment**

He also realised that to push tractor sales, manufacturers were actually burdening the farmers with loans, which they could hardly repay, pushing them further into indebtedness. For Rohtash Mal, who will shortly turn 64, the *aaha* moment happened, he says, when he was attending a conference on conscious capitalism. “It hit me. We have to approach the farmer on a pay-for-use basis. And, the pay-for-use universe need not be only tractors and harvesters,” says Rohtash.

Why not provide all the services that a farmer would require – land preparation, sowing, transplanting, crop management, harvest and post-harvest farm management – as a service, charging the farmer on a per-acre basis? In short, introduce the concept of farming-as-a-service (FaaS), on similar lines to companies offering software-as-a-service. That was the seed of the idea that germinated into EM3 Agri Services, which Rohtash founded after he retired from an active corporate career that included stints in car maker Maruti and tractor manufacturer Escorts.

Rohtash, Chairman and Managing Director, EM3, was joined by his son Adwitiya, CEO, who quit a career in the financial services in Hong Kong. The father-son duo took time to study the problems relating to agriculture and visited Israel and a few countries in Africa, all of which had similar issues

as in India. “The challenge statement,” says Rohtash, “is how do you get technology which is designed for large farms on to a small farm.”

You cannot, he explains, have two smaller machines trying to do the work of one large machine. The other way to do it is, instead of using a big machine in a big field, where owning it makes sense, can you use a big enough machine in a small field, but you pay only per acre, according to him. The idea behind EM3 was to take the capital load of buying equipment away from farmers and get them to pay for what they use.

Instead of sowing seeds haphazardly, it makes sense to turn crops into rows, which makes it easier to use equipment for everything, right from sowing. Getting the farmers to plant in rows required a mindset change and a few crop seasons before they adjust to the new way of doing it. You have to tell farmers why growing crops in rows makes sense, why it will raise productivity, says Rohtash. “It starts from using machines to planting seeds in rows, so that you can protect them and harvest the crops using machines,” points out Rohtash.

### **In expansion mode**

EM3 kicked off operations in July 2014 in Madhya Pradesh, with centres – called Samadhan Centres – in Gadarwara and Hoshangabad. EM3 has more than 20 centres in Madhya Pradesh and launched operations with McCain for potatoes in Gujarat and entered Uttar Pradesh earlier this year. The company has entered into an agreement with the Rajasthan government to set up 1,240 centres across the State. It has raised about ₹100 crore so far in two rounds of funding, first from Aspada in June 2015 and a second round from Aspada and Global Innovation Fund in August 2017.

Initially, EM3 relied on having its own equipment and Rohtash even made sure that the equipment were displayed at the Samadhan Centres to gain the confidence of farmers in the villages. Now, says Rohtash, the company also leases equipment. “We own a lot and we are Uberising a lot,” he adds. It has trained people to operate the machines. Mechanisation brings down costs by about 25 per cent and increases productivity by nearly 20 per cent.

As the soya harvest season drew to a close recently in Madhya Pradesh, EM3 aggregated nearly 1,100 acres a day. With just manual labour, this would have required about 9,000 workers, which number farmers would not have been able to find as labour has become scarce. Using harvesters and other machines helped complete the task with far fewer workers and in a much shorter time. Without machines available to do the job, farmers will shy away from planting crops, especially critical crops such as oilseeds. They would prefer to grow some crop that requires minimal labour.

### **Coherent farm tech**

That is why, says Rohtash, India needs a coherent farm technology answer. He points out that the software revolution in the country did not happen on its own. It was made possible by institutes that imparted computer education to graduates. That is the problem that EM3 is now grappling with. The company’s growth, says Rohtash, is incumbent on it putting up facilities to churn out 2,000-3,000 operators of equipment every year. For the Rajasthan project alone, EM3 will require 3,500-4,000 operators.

What will EM3 have to do to become a pan-India player? A lot of patience, a lot of cash and a lot of software development. “Think of what an Uber would have to do to go all India,” says Rohtash.

According to him, they never faced a challenge in convincing the farmers to use their services. The real challenge was that they would be with them right through and that the company had the farmers’ interests at heart.

For this, Rohtash insisted that the company had to integrate itself with the local community.

“It took a long time, but the quality of conversation kept shifting,” says Rohtash, with a lot of happiness. He believes that even if he manages to put just a few pieces of the huge jigsaw that is Indian agriculture in place, he would have contributed in a major way to the sector.