M-fodder: send sms! Get fodder!

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M-fodder ('m' stands for mobile or cellphone) is a smallholder livestock farmer-friendly hydroponic information system designed to enable farmers to acquire fodder by just sending an SMS. The innovation addresses several challenges in Africa namely: 1) Escalating price of livestock feed 2) Unavailability of quality livestock feed in drylands, 3) Land fragmentation which hinders fodder cultivation and, 4) Low nutritive value of stored livestock feed.

The hydroponic system involves sprouting grass seeds in mineral solution rather than soil. The grass takes 7-10 days to reach around 45 cm high. Livestock keepers use their cellphone to order fodder 8 days in advance and can save between €0.18-0.25 per day through this system.

M-fodder system provides communication between the livestock keepers and the hydroponic feed production Centre. The platform is hosted by a premium rate service provider, which provides a short SMS code e.g. 2052 that is used by the farmer to send the SMS to the call centre. The call centre has the contact database for all hydroponic fodder producers. Once the farmer sends the fodder quantity and location to a designated SMS code, he or she waits a maximum of 3 minutes. He then receives a call from the fodder producer, who will arrange to deliver the fodder. The benefits of M-fodder include: 1) Connects smallholder farmers to fodder producers 2) Farmers can instantly inquire for feed 3)Mutual agreement between livestock keeper and fodder producer4)Affordable mode of digital communication.

Micropropagation Protocols for Mass Production of Pest Free Planting materials of Pyrethrum, Banana, Passion Fruits and Irish Potato

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Pyrethrum, banana, passion fruit, sweet potato, cassava, citrus and several other crops are vegetatively propagated. Due to cycles of propagation, pests and diseases transmitted from infected planting material accumulate contributing to the decline in yield and quality of produce, thereby constraining productivity. The pests involved include fungi, bacteria, viruses, phytoplasmas, nematodes and insects. In addition, pests affect the vigour and longevity of vegetatively propagated crops consequently, increasing the effect of other biotic and biotic factors on the plants. However, not all cells become infected and it is possible to recover non-infected plants using in vitro meristem culture alone or combined with thermotherapy or chemotherapy or