

Poor crop establishment: a common problem in the developing world

Every year, mankind relies on the miraculous transformation of seeds into plants and back into seeds again. About 60% of all food crops (excluding fruit and tree crops and garden vegetables) are grown anew from seed each year, producing more than 2.3 billion tonnes of grain. Yet few people realise how fragile this transition from seed to seedling can be. To fulfil their genetic potential, seeds must germinate and seedlings emerge, quickly and uniformly throughout the field so that light, water and soil nutrients may be used with maximum efficiency.

Crops are like children – give them a good start in life and they usually grow tall, strong and healthy. But if crops germinate, emerge and grow slowly after germination, they often become stunted and sickly. Because such plants are more susceptible to damage by pests and diseases, they produce less grain and straw. Giving crops a good start is therefore of crucial importance.

Favourable crop establishment seldom occurs in the marginal environments of the semi-arid tropics. Unpredictable and erratic rainfall, poor soils, low quality



Patchy stands, such as this chickpea in Bangladesh, are all too common in developing countries