

1 **News & Views article for Nature Food**

2 **Strapline:** FOOD SECURITY

3 **Title:** Safeguarding global supply chains during a pandemic

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8 **Standfirst:** A study of the grain trade during 2020 indicates that policies to protect supply  
9 chains must be enacted to avoid supply chain shocks such as COVID-19 and locust swarms  
10 exacerbating food insecurity in global regions that rely on food imports.

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12 Food insecurity is complex – there is no silver bullet of policy or market intervention  
13 that can lead to a situation where all people at all times will have continuous access to healthy,  
14 affordable diets. And though global food systems are interdependent and also complex, food  
15 insecurity in many regions has been precipitated by pestilence, environmental disaster and  
16 conflict. Pestilence is a fatal epidemic or pandemic disease affecting humans, crops or  
17 livestock that impacts food supply and production; insect and rodent plagues remain a major  
18 threat to human food security<sup>1,2,3,4,5</sup>. Recently, swarms of locusts larger than any recorded in  
19 recent decades detrimentally affected more than 330,000 hectares of land from Ethiopia to  
20 India<sup>6</sup>, whilst the COVID-19 pandemic – and the controls implemented to curb infection rates  
21 – affected food production and supply.<sup>3</sup>

22 In times of crisis, the demand for staple foods increases in ways that can destabilise  
23 local and global supply chains and cause social unrest.<sup>3,7</sup> In this issue of Nature Food,  
24 Falkendal et al.<sup>8</sup> quantify wheat, rice and maize supply chain disruption from 2020 locust  
25 swarms and COVID-19-related effects on food prices, stock levels, international trade and  
26 export restrictions. The study considers two dimensions of food security, first outlined nearly  
27 a quarter of a century ago at the World Food Summit in 1996, namely: *physical availability of*  
28 *food* (production output, stock levels and trade dynamics) and *economic and physical access*  
29 *to food* (the ability to buy food e.g. ratio of prices to income, and accessible marketing  
30 channels). The authors frame their argument in terms of *stability* and the socio-economic  
31 shocks (political instability, unemployment, drastic loss of income) that the COVID-19  
32 pandemic brings with it that will lead to greater food insecurity in the short and medium term.

33 In their model, Falkendal and colleagues find that export restrictions and  
34 precautionary purchasing in response to COVID-19 could destabilise global grain trade,  
35 leading to many low and middle-income countries that rely on grain imports to potentially  
36 experience further food insecurity exacerbating the effects felt from shocks such as COVID-  
37 19 and locust swarms. Thus, protectionist measures initiated by governments, institutions or  
38 market actors to secure national food security will affect those who are food vulnerable, and  
39 consumer support policy measures should be introduced to mitigate the risk of food insecurity.  
40 The authors call for incremental rather than blunt, binary “borders open or borders closed”  
41 food security policies, and a need for mutually agreed solutions to address food insecurity –  
42 rather than unilateral national decision-making based primarily on self-interest. Whether  
43 altruist or self-serving food security policies are implemented by governments and market  
44 actors will be demonstrated in practice over the coming months.

45 The impact of economic stabilisation policies following the 2007 economic crash  
46 highlight how individuals and households can transition instantly from a higher standard of  
47 living into a situation where they must survive with less, raising the question as to what is the  
48 minimum standard for an acceptable life.<sup>9</sup> In the UK, the last time minimum standards with  
49 regard to food for an acceptable life were determined was the food rationing legislation on 15<sup>th</sup>  
50 September 1941<sup>10</sup>– the Hansard report makes challenging reading when comparing the  
51 proposed austere diet to our typical food consumption in the UK. The UN Sustainable  
52 Development Goals also determine the dynamics of an acceptable life and multi-level  
53 consensus building and action is essential to safeguard food supply – especially if, as a global  
54 community, we seek to deliver two of the targets set of “no poverty and zero hunger”. Despite  
55 having policy and technological tools to reduce the impact of many human, zoonotic and plant  
56 diseases, collective strategic risk at local, regional and global levels cannot be ignored.  
57 Falkendal and colleagues have shown that a proactive strategy and a co-ordinated collective  
58 response with shared goals and co-operative actions is necessary as the combination of  
59 COVID-19 pandemic and natural events such as locust swarms arise in order to ensure that  
60 the grain trade remains stable, equitable and accessible to all.

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### 86 **Competing Interests**

87 The author declares no competing interests.  
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