When we think of farming, the first image that springs to mind might be of a farmer working in a field under the 1.＿＿＿＿ (bake) sun. Face covered in sweat, he might be walking through the field, carefully checking his crops before deciding what needs to be done. In modern times, however, this deep-rooted image of a traditional farmer is being changed. The collaboration between farming and technology has given rise 2.＿＿＿ precision farming, an approach that equips farmers with the tools and data they need to make 3. ＿＿＿(rely) decisions with remarkable accuracy. This evolution is having a positive impact on farming, while also providing better solutions to the world's pressing food problems.

It is the advent of modern technology that has turned farming into a 4. ＿＿＿ (high) precise industry. This latest wave of innovation offers farmers information that is more detailed, measurements that are more accurate and solutions that are more effective. Therefore, precision farming is a data-driven approach to the improvement of food production with the primary goals of reducing a farm's input, increasing its output and better conserving the environment. These goals can be achieved with a 5. ＿＿＿＿ (combine) of information-gathering tools like sensors, satellites and drones, and advanced technologies such as artificial intelligence(AI). With 6.＿＿＿ (mass) amounts of data on the state of their farmland 7. ＿＿＿ (gather), analysed and processed in real time, farmers are able to give the best possible care to the crops that most need it at the most appropriate time and put their resources to the best use. As an added bonus, the decline in the amount of unnecessary chemicals 8. ＿＿＿＿ (minimum) potential threats to the environment.

Precision farming boasts a diverse range of application 9. ＿＿＿＿ (capable) at different stages of food production-monitoring, diagnosing, identifying and targeting. Soil sampling, an example of precision farming in its most fundamental form, provides an accurate means for farmers to tend their crops. Field sensors check the soil's moisture, nutrient levels and pH levels, 10. ＿＿＿＿ (enable) farmers to monitor their crops at any time, from anywhere. As the data library builds 11.＿＿＿, "a big picture" of the soil is revealed so that farmers are able to accurately assess the condition of the soil in real time, identify potential problems and work out solutions accordingly. For instance, if the soil is found to be poor in nutrients, not only do farmers know that fertilizer is needed, they can 12. ＿＿＿ calculate the exact amount. 13. ＿＿＿＿＿ (consequence), soil sampling makes 14. ＿＿＿ possible for farmers to create the ideal conditions for their crops to grow and manage their resources effectively at the same time.

While such applications are of enormous benefit, precision farming can reach a much higher level with the application of artificial intelligence. When 15. ＿＿＿ (use) in farming machines, AI does contribute to increased crop yields as well as 16. ＿＿＿ (simple) crop tracking, harvesting and processing. AI-controlled machines can now plant and harvest more crops at faster speeds 17. ＿＿＿ humans ever could, while computer vision can distinguish weeds from crops. Moreover, algorithms based on data gathered by sensors, drones and satellites can work out site-specific management of the crops. With such efficiency and accuracy, this technology is ideal for farming crops that require delicate handling. For example, cotton farmers use drones with AI technology to carry out specialized tasks: they precisely remove the cotton plants' leaves by spraying chemicals only on the parts that need them. The drones autonomously navigate the fields, taking images of the crops, which are then analysed by software. Once the exact amount needed is determined, the drones spray the chemicals, while farmers can follow the whole process on a mobile device.

Thanks to precision farming's close relationship with technology, the farming industry's capabilities can develop even further. Through the 18. ＿＿＿＿ (integrate) of 5G technology and the Internet of Things(loT), as well as advances in deep-learning technologies, not only will larger amounts of data be available, but they will be processed more efficiently. Consequently, precision farming will become more effective and have an even greater impact on how we grow our food. Without doubt, the push for future developments in precision farming will benefit all of us-it will contribute to a greener, healthier and better-fed planet.

Keys: 1. baking   **2.** to   **3.** reliable **4.** highly **5.** combination   **6.** massive   **7.** gathered   **8.** minimizes **9.** capabilities   **10.** enabling **11.** up   **12.** also   **13.** Consequently   **14.** It   **15.** used   **16.** simplified   **17.** than   **18.** integration