



1
00:00:08,419 --> 00:00:05,950
sending people to the Moon and Mars

2
00:00:11,089 --> 00:00:08,429
requires understanding how to provide

3
00:00:14,410 --> 00:00:11,099
nutrition for astronauts who may be away

4
00:00:17,240 --> 00:00:14,420
from Earth for extended periods of time

5
00:00:20,540 --> 00:00:17,250
one solution is growing food in space

6
00:00:23,120 --> 00:00:20,550
which can be challenging scientists will

7
00:00:25,640 --> 00:00:23,130
send three types of leafy greens and a

8
00:00:28,009 --> 00:00:25,650
new way to handle seeds in space to the

9
00:00:30,109 --> 00:00:28,019
International Space Station launching

10
00:00:32,840 --> 00:00:30,119
from NASA's Wallops Flight Facility in

11
00:00:35,630 --> 00:00:32,850
Virginia on north of grummons 13th

12
00:00:37,819 --> 00:00:35,640
resupply mission the veg oh three series

13
00:00:40,930 --> 00:00:37,829

of experiments will send a new crop

14

00:00:43,790 --> 00:00:40,940

amara mustard to the orbiting laboratory

15

00:00:46,310 --> 00:00:43,800

red romaine lettuce and extra Dorf bok

16

00:00:48,770 --> 00:00:46,320

choy which astronauts have grown and

17

00:00:51,200 --> 00:00:48,780

eaten in space will also return to the

18

00:00:53,569 --> 00:00:51,210

station researchers at NASA's Kennedy

19

00:00:56,060 --> 00:00:53,579

Space Center planted the POC joy and

20

00:00:59,060 --> 00:00:56,070

Ammar seeds in containers called plant

21

00:01:01,099 --> 00:00:59,070

pillows but for red romaine lettuce they

22

00:01:03,560 --> 00:01:01,109

inserted the seeds into a new type of

23

00:01:06,500 --> 00:01:03,570

seed handling material called seed film

24

00:01:08,899 --> 00:01:06,510

this water-soluble dissolving the film

25

00:01:11,899 --> 00:01:08,909

is the same material as a breath

26
00:01:13,490 --> 00:01:11,909
freshener strip it will allow the crew

27
00:01:16,280 --> 00:01:13,500
to plant the seeds into pillows

28
00:01:18,980 --> 00:01:16,290
themselves something that has never been

29
00:01:21,410 --> 00:01:18,990
done in orbit before this could allow

30
00:01:23,660 --> 00:01:21,420
astronauts to pick and choose what crops

31
00:01:26,870 --> 00:01:23,670
they want to grow from a collection of

32
00:01:29,510 --> 00:01:26,880
seeds on the space station as we venture

33
00:01:32,450 --> 00:01:29,520
farther into space giving astronauts the

34
00:01:35,179 --> 00:01:32,460
ability to store handle and plant a

35
00:01:37,069 --> 00:01:35,189
variety of fresh crops on-demand will

36
00:01:40,850 --> 00:01:37,079
allow them to supplement their diets

37
00:01:42,980 --> 00:01:40,860
with fresh nutritious produce seed film

38
00:01:45,230 --> 00:01:42,990

also may permit astronauts to grow

39

00:01:47,630 --> 00:01:45,240

microgreens in the future these are

40

00:01:49,910 --> 00:01:47,640

small vegetables harvested between one

41

00:01:52,760 --> 00:01:49,920

to two weeks after they're planted that

42

00:01:55,760 --> 00:01:52,770

are packed with nutrients and flavor

43

00:01:59,600 --> 00:01:55,770

the three plants for veg o3 will grow

44

00:02:01,550 --> 00:01:59,610

for 28 to 30 days then astronauts will

45

00:02:04,999 --> 00:02:01,560

eat half and return the other half to

46

00:02:06,859 --> 00:02:05,009

Earth for analysis this experiment will

47

00:02:09,949 --> 00:02:06,869

do more than provide the crew with a

48

00:02:12,229 --> 00:02:09,959

fresh neck its science being done on the

49

00:02:15,530 --> 00:02:12,239

world's only crude multinational

50

00:02:17,750 --> 00:02:15,540

research laboratory for almost 20 years

51
00:02:20,020 --> 00:02:17,760
it's been the place where humans have

52
00:02:22,400 --> 00:02:20,030
learned how to live and work in space

53
00:02:25,729 --> 00:02:22,410
making research breakthroughs that

54
00:02:27,740 --> 00:02:25,739
aren't possible here on earth it's those

55
00:02:29,750 --> 00:02:27,750
breakthroughs that will allow people to