
FIRST FLIGHT

1
00:00:01,760 --> 00:00:07,620
It is important to grow plants in space
because the astronauts are hungry. Plants

2
00:00:07,620 --> 00:00:11,700
provide food and they provide nutrition
that we need for deep space human

3
00:00:11,700 --> 00:00:15,480
exploration. And you need to have
flowering to be able to understand fruit

4
00:00:15,480 --> 00:00:20,550
production like tomatoes or peppers or
any other type of small fruits that you

5
00:00:20,550 --> 00:00:24,480
might want to grow in the space
environment. Most of the time the

6
00:00:24,480 --> 00:00:29,369
astronauts say oh we want things that we
can eat but I do know that Scott Kelly

7
00:00:29,369 --> 00:00:34,649
after he was in space for a very long
period of time really wanted to grow

8
00:00:34,649 --> 00:00:40,140
flowers. Hi Scott Kelly aboard the
international space station want to go

9
00:00:40,140 --> 00:00:47,969
and check on my flowers I'm growing here
in the Columbus module kind of nice to

10
00:00:47,969 --> 00:00:52,890
have some flowers up here you don't see
much that is so alive and growing

11
00:00:52,890 --> 00:00:57,390
besides the six of us here. A few days
into the experiment we actually had a

12
00:00:57,390 --> 00:01:02,100
power loss to the express rack which
shut the veggie lights off well we had

13
00:01:02,100 --> 00:01:06,439
to turn to veggie lights back on but
unbeknownst to us at the time the fan

14
00:01:06,439 --> 00:01:12,600
didn't turn back on. This led to a
buildup of water inside and so the

15
00:01:12,600 --> 00:01:19,439
plants that were growing pretty well got
extra water. I got a call at 4 in the

16
00:01:19,439 --> 00:01:23,640
morning from the operations controller are
saying that Scott says something's funny

17
00:01:23,640 --> 00:01:28,590
growing on the plants. They basically got
got so much water that fungus was able

18
00:01:28,590 --> 00:01:33,390
to enter and to start to damage and grow
on some of those plants. And so we said

19
00:01:33,390 --> 00:01:36,840
hey we got to get the fan turn to high
it was almost like going from you know a

20
00:01:36,840 --> 00:01:41,820
really really great rainy time to
beautiful bright sunny day furthermore

21
00:01:41,820 --> 00:01:45,420
Scott wants to take care of the plants
it says hey when we're on the way to

22
00:01:45,420 --> 00:01:49,049
Mars we're going to be calling home to
ask how much water to put in we're just

23
00:01:49,049 --> 00:01:53,549
going to water the plants. You know he
did a wonderful job with saving the

24
00:01:53,549 --> 00:01:58,500
zinnias and making them flourish these
flowers came out and and everyone's mood

25
00:01:58,500 --> 00:02:02,700
just perked up. On harvest day Scott was
like hey can we just do it on

26
00:02:02,700 --> 00:02:06,860
Valentine's Day which was a Sunday. It
was very very cool to be a part of

27
00:02:06,860 --> 00:02:10,679
having him do so
being so creative in space the first

28
00:02:10,679 --> 00:02:15,810
ever on-orbit flower arrangement and
then on day 300 when he and Misha took

29
00:02:15,810 --> 00:02:20,880
their photo right 300 days in space
what are you have in his hand his little

30
00:02:20,880 --> 00:02:26,970
buddy his little flower we got back the
seeds separated them out inspected them

31
00:02:26,970 --> 00:02:31,950
tried to germinate him no luck. We put
them back in the desiccator in the fridge

32
00:02:31,950 --> 00:02:36,870
to dry out and refrigerate and we didn't
think any more of it until Lane came

33
00:02:36,870 --> 00:02:40,980
along. My name is Lane Diesa so I go to
North Carolina State University and I

34
00:02:40,980 --> 00:02:47,220
study horticulture science. It makes me
feel really great that we have these

35
00:02:47,220 --> 00:02:52,530
creative interns who try new things and
push the boundaries. One of my mentors

36
00:02:52,530 --> 00:02:58,590
Matt told us that we had seeds
from space flowers stored in one of our

37
00:02:58,590 --> 00:03:04,049
science refrigerators he basically told
us that we could have at it and try to

38
00:03:04,049 --> 00:03:08,549
my surprise we had one seed germinate
for the past two years interns have

39
00:03:08,549 --> 00:03:14,970
tried hormones numerous amounts of
different techniques all I did was add

40
00:03:14,970 --> 00:03:18,870
water. When Lane first said you know
what got them to germinate we all were

41
00:03:18,870 --> 00:03:24,180
like wow that's amazing.
I was coming down and checking on the

42
00:03:24,180 --> 00:03:29,190
plants like every morning. Now we have
roughly 45 flowers growing here today at

43
00:03:29,190 --> 00:03:34,859
Kennedy Space Center it was really a
wonderful end to this whole experiment

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00:03:34,859 --> 00:03:39,329
because not only have we done two seed
to seed production in space but we've

45
00:03:39,329 --> 00:03:45,000
also learned a tremendous amount in the
process. I saw Scott's tweet when he got

46
00:03:45,000 --> 00:03:48,720
his flower back and it was a it was this
moldy flower and I don't like the ones

47
00:03:48,720 --> 00:03:52,829
that we got back by the way they look
the same and you know he's like he

48
00:03:52,829 --> 00:03:56,519
wanted to grow flowers from that flower
so I hopefully he still has the flowers

49
00:03:56,519 --> 00:03:59,480
or some of the seeds
I would tell Scott put him in the fridge